

AGENDA
LACEY PLANNING COMMISSION MEETING
Tuesday, May 18, 2021 – 5:00 p.m.
MEETING WILL BE CONDUCTED REMOTELY, NOT IN-PERSON

Register in advance for this webinar:
https://us02web.zoom.us/webinar/register/WN_fhCB9zeoQgyAluxzysSQRQ

After registering, you will receive a confirmation email containing information about joining the webinar.

Call to Order: 5:00 p.m.

Approval of Agenda & Consent Items: 5:01 p.m.

- A. Approval of Agenda
- B. Approval of May 4 Meeting Minutes

Public Comments: 5:02 p.m.

Commission Members Reports: 5:04 p.m.

Director's Report: 5:05 p.m.

Public Hearings: 5:10 p.m.

6-Year Transportation Improvement Plan: Martin Hoppe, Transportation Manager. The Planning Commission will conduct a public hearing on the proposed 2022 Six-Year Transportation Improvement Plan and make a recommendation to the City Council.

2021 Comprehensive Plan Amendments: Ryan Andrews, Planning Manager; Jessica Brandt, Associate Planner. The Planning Commission will conduct a public hearing to take public testimony on the 2021 Comprehensive Plan Amendments. After the public hearing, the Planning Commission is requested to make a formal recommendation on the amendments to the City Council or schedule a follow-up work session for additional deliberation.

Thurston Climate Mitigation Plan: Proposed Comprehensive Plan amendment to adopt the Thurston Climate Mitigation Plan as an appendix to the Environment Element.

Housing Action Plan: Proposed Comprehensive Plan Amendment to adopt the City of Lacey's Housing Action Plan as an appendix to the Housing Element of the Comprehensive Plan.

Urban Forest Management Plan and Associated Regulations: A proposed update to the City of Lacey's Urban Forest Management Plan and associated regulations contained in Lacey Municipal Code 14.32.

Communications and Announcements: 5:55 p.m.

Next Meeting: June 1, 2021.

Adjournment: 6:00 p.m.

5/5/21

CITY OF LACEY PLANNING COMMISSION WORK SCHEDULE

**Planning Commission Meeting
May 18, 2021**

Packets due: May 13, 2021

1. **Public Hearing:** Climate Mitigation Plan
2. **Public Hearing:** Housing Action Plan
3. **Public Hearing:** Urban Forest Management Plan, LMC 14.32
4. **Public Hearing:** Transportation Improvement Plan

**Planning Commission Meeting
June 1, 2021**

Packets due: May 27, 2021

1. **Work Session:** Council Retreat Debrief
2. **Work Session:** Comprehensive Plan Amendment Follow-up (if needed)

**Planning Commission Meeting
June 15, 2021**

Packets due: June 10, 2021

1. **Work Session:** Water Comprehensive Plan

**Planning Commission Meeting
July 6, 2021**

Packets due: July 1, 2021

- 1.

Pending Items:

MINUTES

Lacey Planning Commission Meeting
Tuesday, May 4, 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, and Robin Vasquez. Staff present: Rick Walk, Ryan Andrews and Scott Egger.

Dave noted a quorum present.

Peg Evans-Brown made a motion, seconded by Mark Mininger, to approve the agenda for tonight's meeting and the April 20 meeting minutes. All were in favor, the motion carried.

1. Public Comments:

- Wayne Olsen spoke in support of the Thurston Climate Mitigation Plan and reported on a petition signed by himself and many other Panorama residents urging the City to adopt the Plan.
- Maryanne Thompkins commented positively on the virtual open house, and noted that some people found it difficult to add comments.

2. Commission Members Reports:

- Mark noted that he has been spending a lot of time in Lacey parks, Rainier Vista in particular, and has been amazed at the large number of people using the park daily and what a great job the parks maintenance staff does to maintain the parks.
- Peg also commented on the high volume of use at the park and Frisbee field by Long Lake, and thanked parks maintenance crews for the upkeep.
- Robin reported on her attendance at the new food truck depot.
- Gail commented on the City's great response to an emergency water line break in her neighborhood.
- Dave reported on his attendance at the food truck depot. Dave reported that he and Mayor Ryder visited the "tiny home" site at the Port of Olympia.

3. Director's Report:

- Rick reported on items discussed at the Council retreat which included a possible partnership with MJR, City of Lacey, and Saint Martin's University; police department expansion; and the Council's role in quasi-judicial process.
- Rick reported that the food truck depot has been very successful and recognized all the staff and various others who have made it possible.
- Rick reported on upcoming annexations.

4. New Business:

Urban Forest Management Plan Update and LMC 14.32 Revisions: Ryan Andrews, Planning Manager.

- Ryan gave an overview and some background information.
- Ryan discussed the issues identified by the survey and comments from the virtual open house.
- Ryan went over the draft amendments and answered questions from Planning Commissioners.

5. Communications and Announcements:

Mark noted that public hearings are scheduled for the next Planning Commission, and asked that Commissioners have an opportunity to move and vote on items at a future meeting instead of at the end of the hearing. Ryan and Dave agreed and said that will definitely be an option.

6. Next meeting: May 18, 2021.

7. Adjournment: 6:20 p.m.



PLANNING COMMISSION
May 18, 2021

SUBJECT: 2022 Six-Year Transportation Improvement Program (TIP)

RECOMMENDATION: Hold a Public Hearing for the proposed 2022 Six-Year Transportation Improvement Program and make a recommendation to the City Council.

STAFF CONTACT: Scott Egger, Director of Public Works *SE*
Roger Schoessel, City Engineer *RAS*
Martin Hoppe, Transportation Manager *MH*
Tyson Poeckh, Project Administrator *TP*

ORIGINATED BY: Public Works Department

ATTACHMENTS: TIP Summary

**BUDGET IMPACT/
SOURCE OF FUNDS:** None

**PRIOR COUNCIL/
COMMITTEE REVIEW:** Annual Requirement

BACKGROUND:

The City is required to prepare an annual Transportation Improvement Program (TIP) and submit it to the Washington State Department of Transportation (WSDOT) and Thurston Regional Planning Council (TRPC). The primary purpose of the TIP is to track transportation grant funds and regionally significant projects. The funds shown on the TIP do not obligate the City to any specific amount of matching dollars. All projects on the TIP are consistent with the Transportation Comprehensive Plan.

The Public Hearing is scheduled for May 18, 2021.

ADVANTAGES: The TIP will allow the City to comply with state regulations and apply for grants on specific projects.

DISADVANTAGES: None



CITY COUNCIL
ANDY RYDER
Mayor
CYNTHIA PRATT
Deputy Mayor

LENNY GREENSTEIN
MICHAEL STEADMAN
CAROLYN COX
ED KUNKEL
MALCOLM MILLER

CITY MANAGER
SCOTT SPENCE

DATE: May 1, 2021
TO: Interested Citizen
FROM: City of Lacey Public Works Department

SUBJECT: City of Lacey Six-Year Transportation Improvement Program

Each year the cities and counties in the State of Washington are required to submit their Six-Year Transportation Program. A draft summary of the proposed program for years 2022-2027 is attached.

The City Council, Planning Commission, and your Public Works staff appreciate your continuing interest and support. A public hearing to take testimony on the Six-Year Transportation Program will be held during the virtual Planning Commission meeting on Tuesday, May 18, 2021, at 5:00 p.m.

Persons wishing to provide oral testimony on the Transportation Improvement Plan must preregister to speak at <https://bit.ly/Lacey-TIP>. Instructions and access details will be provided once registration is complete. Registration closes at 12:00 p.m. on May 18, 2021.

Persons wishing to provide written testimony on the Transportation Improvement Plan may send their comments to randrews@ci.lacey.wa.us no later than 12:00 p.m. on May 18, 2021. Written testimony will be provided to the Planning Commission and made part of the public record. For more information, please contact Ryan Andrews, Planning Manager, at (360) 491-5642.

Please call me at 491-5600, and I will be happy to answer any questions you may have about the program.

Sincerely,

Martin A. Hoppe, PE, PTOE
Transportation Manager

Enclosure

2022 SIX YEAR TRANSPORTATION IMPROVEMENT PROGRAM SUMMARY

Current Process	LACEY STIP ID	PROJECT TITLE	2022 Total Project Cost
Planned	11-010	Carpenter Rd Capacity and Safety Improvements Pacific to Shady Lane	\$ 4,711,000
Planned	11-013	Marvin Road from Britton Parkway to Columbia Drive	\$ 16,640,000
Planned	11-014	Martin Way / I-5 Interchange Improvements	\$ 45,600,000
Planned	11-015	Carpenter Road Widening from Martin Way to Britton Parkway	\$ 20,452,000
Planned	11-016	Rainier Road from Yelm Hwy to City Limits (near Beckonridge)	\$ 3,062,000
Planned	11-018	Britton Parkway -- Phase II	\$ 2,500,000
Planned	11-021	College Street Corridor Improvements	\$ 40,000,000
Planned	11-024	Yelm Highway Improvements from Ruddell Rd to Amtrak Bridge	\$ 5,300,000
Planned	11-025	Martin Way East Roadway Improvements	\$ 5,500,000
Planned	11-026	Lacey Hawks Prairie Business District (LHPBD) Commercial Corridors	\$ 11,000,000
Right of Way	19-001	College St Corridor -- Phase 3 (College St and 16th Ave Roundabout)	\$ 6,000,000
Construction	19-002	Electric Vehicle Charging Stations	\$ 300,000
Awarded	20-001	College St Corridor -- Phase 4 (College St and 29th Roundabout)	\$ 1,709,419
Awarded	20-002	Citywide Signal ITS Detection Upgrades	\$ 345,000
Pending Grant	20-003	Willamette Dr and Campus Glen Dr Roundabout	\$ 2,000,000
Total TIP Costs			\$ 165,119,419

Projects to be Removed

Funded	11-005	College Street Extension NE	\$ 4,800,000
Planned	11-020	Sleater-Kinney at 14th Ave Improvements	\$ 940,000
Combined	14-001	Willamette Drive / Campus Glen Drive Roundabout	\$ 1,700,000

Indicates Changes



PLANNING COMMISSION STAFF REPORT

May 18, 2021

SUBJECT: Thurston Regional Climate Mitigation Plan

RECOMMENDATION: Conduct a public hearing and make a formal recommendation to City Council on adoption of the Thurston Climate Mitigation Plan. Staff recommends adoption.

TO: Lacey Planning Commission

STAFF CONTACTS: Rick Walk, Community and Economic Development Director
Ryan Andrews, Planning Manager *RA*
Jessica Brandt, Associate Planner *JB*

ATTACHMENT(S):

1. [Thurston Climate Action Plan](#)
2. Open House Comments
3. Survey Results
4. Written comments received

**PRIOR COUNCIL/
COMMISSION/
COMMITTEE REVIEW:**

February 16, 2021 Planning Commission
February 11, 2021 City Council Worksession
January 21, 2021 City Council Meeting
December 10, 2020 City Council Worksession
September 3, 2020 City Council Worksession
September 1, 2020 Planning Commission
June 23, 2020 General Government Committee
December 12, 2019 City Council Worksession
October 1, 2019 Planning Commission
October 11, 2018 City Council Meeting
September 20, 2018, City Council Worksession
June 21, 2018, City Council Worksession
April 12, 2018 City Council Meeting
March 15, 2018 City Council Worksession

BACKGROUND:

The City Council signed an interlocal agreement with Thurston County, Olympia, and Tumwater in April 2018 to complete Phase 1 of a Regional Climate Mitigation Plan. Phase 1

focused on assessing existing policies and targets of each jurisdiction for gaps and consistencies, recommending a regional emissions target, identifying each jurisdictions implemented mitigations actions to date, and recommend regional emissions reduction targets.

The recommended targets were adopted July 12, 2019. The targets are as follows:

- Achieve a 45% reduction of 2015 greenhouse gas levels by 2030.
- Achieve an 85% reduction of 2015 greenhouse gas levels by 2050.

Phase 1

Phase 1 adopted targets and produced a recommended scope of work for Phase 2, which included a public engagement strategy, assessment of actions sufficient to reach shared emissions targets, and implementation strategies. On October 11, 2018, the Council approved the ILA for Phase 2. In February 2019, TRPC hired a consultant team, Cascadia Consulting, to assist with Phase 2.

Phase 2

Phase 2 of the planning process, which started in early 2019 and has just concluded, included the following steps:

1. Develop steering committee and charter (January 2019)
2. Develop stakeholder advisory committee (February – March 2019)
3. Engage the general public and develop potential actions list (July – Sept 2019)
4. Assess potential actions and develop scenarios (September – June 2019)
5. Develop plan and strategies (March – July 2020)
6. Engage the general public (September 2020)
7. Accept plan and strategies (October – December 2020)

The City Council accepted the TCMP January 21, 2021 and placed it on the 2021 Planning Commission work plan. The City will formally adopt the TCMP through the Planning Commission's Comprehensive Plan Amendment process this year. In conjunction with that process, city staff will convene to determine implementation resource needs, costs of implementation and prioritization options. Regional implementation coordination will also continue under a Phase 3 interlocal agreement between the cities of Lacey, Olympia and Tumwater, Thurston County and Thurston Regional Planning Council.

Phase 3

Phase 3 is a one-year agreement and scope of work that will focus on regional implementation options and approaches. This does not preclude jurisdictions from prioritizing and implementing actions individually. The agreement provides funds for Thurston Regional Planning Council staff to continue convening, researching, engaging, and monitoring as directed by partner jurisdictions. The major tasks in the scope of work include:

1. Convening a climate action implementation committee and multijurisdictional staff team
2. Supporting policy research
3. Developing a monitoring and assessment program

4. Conducting public outreach

Phase 3 with is ongoing, in parallel, with the City's local actions review and implementation planning.

The Planning Commission received an introduction to the Regional Climate Mitigation Plan in February 2021 and discussed potential options for public outreach and worked with staff to draft a Public Participation Plan. A key need was to educate the public about the actions listed in Thurston Climate Mitigation Plan. The Planning Commission was interested in feedback about which actions the community is most interested in the City pursuing. From that feedback, staff can then begin to prioritize and develop costs estimates for high priority actions. The open house website closed 4/30 and the community survey closes 5/15. Cost estimation is ongoing and a draft will be complete by July 2021. Recognizing that this plan has a 30 year time horizon, ongoing community conversations around the plan is expected. If and when any specific actions are pursued by the City, community outreach will be needed and expected as well.

Community Outreach

Per the Public Participation Plan, the community was invited to a virtual open house April 1-30, 2021. An online survey was available from April 1-May 15.

The City used a variety of notification methods throughout the project, to get the word out to the public, including:

- Social media – as noted, we posted on our channels, and were re-posted by many partners.
- Coordinated with Lacey Cares campaign
- Elected and appointed officials shared links with their networks
- Community presentations to Olympia Master Builders, Panorama, and Thurston Climate Action Team
- Notice about the plan in the Spring 2021 Stream Team Newsletter
- Story in Lacey Utility insert “Lacey Life” for April 2021– 25,500 households distribution
- We did not do a mailing (not included in our budget), but Planning Commissioners handed out postcards at locations throughout the city
- Notice in the NTPS “Peach Jar” announcements

Outcomes of the outreach in summarized below:

Method	Timing	Participation
Online Survey	April 1- May 15	142 as of 5/10
Community presentations	April/May	OMB, Panorama, TCAT
Online Open House	April 2021	113 unique comments
Email list	Throughout project	53 new email contacts

Email Comments	January -April	Panorama petition – 130 individuals 9 written comments
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The Open House website comments are provided in Attachment 2.

The Climate survey provided insight into the community's interests and priorities, in Attachment 3.

In general, the vast majority (more than 70%) of the community was supportive of climate actions by the City and stated they were willing to take their own actions as well.

The Thurston Climate Mitigation Plan will be integrated into the Environmental Element of the Comprehensive Plan once adopted. The TCMP is a policy framework to guide the city in achieving carbon reduction targets.

RECOMMENDATION

The Planning Commission will conduct a public hearing on the Thurston Climate Mitigation Plan. The Planning Commission has the responsibility and authority to recommend action to the Lacey City Council on the proposed amendments. Based upon public comments, staff analysis, review of the Comprehensive Plan, and other applicable information, the Commission requested to make a formal recommendation on the amendments to the City Council or schedule a follow-up work session for additional deliberation

#001

Posted by **Randy** on **04/01/2021** at **6:14pm** [Comment ID: 11] - [Link](#)

Type: *Suggestion*

Agree: 4, Disagree: 0

Lacey should incentivize property owners to convert empty office and retail space to high-density residential. Small and studio apartments. There's no reason to go looking for land when we have vacant buildings waiting to be utilized.

#002

Posted by **Marianne** on **04/01/2021** at **6:25pm** [Comment ID: 14] - [Link](#)

Type: *Suggestion*

Agree: 3, Disagree: 0

We need to build up instead of out, preserving as much native land as possible. We do not need sprawling warehouses that remove every established tree and habitat, and then replace the natural habitat with a landscape that needs constant maintenance.

Reply by **7509L** on **04/24/2021** at **9:02am** [Comment ID: 51] - [Link](#)

Agree: 0, Disagree: 0

Totally agree. Well said. These sprawling warehouses add heat islands, rather than cutting down on emissions and climate improvement, create light pollution (using LED lights at lower cost does not fix this), and their huge footprint creates pollution.

#003

Posted by **Wayne** on **04/12/2021** at **12:20am** [Comment ID: 33] - [Link](#)

Type: Question

Agree: 0, Disagree: 0

Solar panels on municipal buildings having good sun exposure is the best "low hanging fruit" for quickly reducing carbon emissions (from PSE power generation) and cost. Action item B5.3 also included schools in its description. Will these public comments and public ranking also apply to North Thurston School District budget decisions, or at least forwarded to them for their consideration?

#004

Posted by **Tish Levee** on **04/30/2021** at **3:50pm** [Comment ID: 107] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

While incentives for cool roofs are a great idea, what about incentives for cool parking lots (and eventually streets). There is now a slurry, sealer available in a light gray that has been used very successfully in Los Angeles, dropping temps about 10 degrees.

#005

Posted by **7509L** on **04/24/2021** at **9:08am** [Comment ID: 55] - [Link](#)

Agree: 0, Disagree: 0

Yes!

#006

Posted by **7509L** on **04/24/2021** at **9:08am** [Comment ID: 54] - [Link](#)

Agree: 1, Disagree: 0

Yes!

#007

Posted by **7509L** on **04/24/2021** at **9:07am** [Comment ID: 53] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

Solar is great idea. Rooftop gardens and wall gardens on buildings create more green space and "lungs" for the air, as well as help cool, and provide habitat for displaced birds.

#008

Posted by **7509L** on **04/24/2021** at **9:06am** [Comment ID: 52] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

LED lights inside buildings is good option if they turn off the lights at night. Parking

areas, streets do not need to have 24/7 lighting for the full footprint. Turn off every other light outside or turn them all off from midnight to 4am. LED lights outside have a light pollution effect - do street lights need to be on all night? LED lights are very bright and interfere with bird migrations and also are hard on older human eyes. The lights should have shields so as not to shine into residential windows at night or up into the sky. Education of residents and commercial enterprises on effects of lights at night and how to reduce the effects and light pollution yet still have desired lighting for safety and esthetics.

#009

Posted by **7509L** on **04/24/2021** at **9:08am** [Comment ID: 56] - [Link](#)

Agree: 1, Disagree: 0

Yes, encourage and educate.

#010

Posted by **7509L** on **04/24/2021** at **11:43pm** [Comment ID: 93] - [Link](#)

Agree: 0, Disagree: 0

Size of new buildings must consider teleworkers and shared space = smaller building size and less energy, less parking space, smaller footprint.

#011

Posted by **7509L** on **04/24/2021** at **3:58pm** [Comment ID: 91] - [Link](#)

Agree: 0, Disagree: 0

Buildings not being used, have gone out of business, etc. can be repurposed and retrofitted. The Sears building - changed into something such as restaurant or a warehouse - the warehouses continue to be constructed on Hawks Prairie with the loss of groves of trees. Areas already built out can be assessed for current use and future use. An inventory of buildings that are no longer with tenants should be created as a beginning to see what "inventory" there is and how it can be better utilized - BEFORE new permits are allowed and any rezoning is considered.

#012

Posted by **7509L** on **04/24/2021** at **9:11am** [Comment ID: 57] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Self reporting from building managers with set dates and annual inspections may be helpful and keep costs lower. New construction would have this built in for building inspector- just another item to check, not a new position needed. LED lighting saves money but doesn't need to flood the area with bright blue-white lights. Less is more. LED lights are hard on older human eyes and too many lights, especially bright LED ones cause light pollution. Please refer to Inter'l Dark Sky information and suggestions: <https://www.darksky.org/light-pollution/>

#013

Posted by **7509L** on **04/24/2021** at **9:17am** [Comment ID: 58] - [Link](#)

Agree: 0, Disagree: 0

What do you mean by land incentives here? We need to preserve the groves of trees, not rubber stamp all these massive construction projects. Unused empty buildings should be used or repurposed. Builders can change an existing building to fill their need and change it to fit their logo or public facade. New construction can also be in existing massive parking lot rather than selecting a new piece of land and clear cutting it. Smaller footprint of buildings and parking for future due to telework and sharing work stations; telecommuting work areas, etc.

#014

Posted by **Sally** on **04/03/2021** at **1:29pm** [Comment ID: 23] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

Ban the use of gas in new construction.

#001

Posted by **Barakgale** on **04/29/2021** at **8:10pm** [Comment ID: 94] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Climate Change is not just an environmental emergency; it's an emergency of public health, extreme weather events, agriculture, national security. We have got to take bold action .

#002

Posted by **Randy** on **04/01/2021** at **5:43pm** [Comment ID: 4] - [Link](#)

Agree: 0, Disagree: 0

our Lacey household is fully committed to reducing our footprint and we consider the impact of our decisions daily. We support the community and City efforts to meet these goals.

#003

Posted by **Marianne** on **04/01/2021** at **6:21pm** [Comment ID: 12] - [Link](#)

Agree: 2, Disagree: 0

This is absolutely necessary, and have our full support. I only wish we/ Thurston County had started years ago before climate change reached an emergency.

#004

Posted by **Carolyn** on **04/30/2021** at **2:56pm** [Comment ID: 104] - [Link](#)

Agree: 0, Disagree: 0

Climate change is already affecting us, and the velocity of climate change is ever increasing. IF--and it's a HUGE IF--we are to escape irreversible climate catastrophe, we have to meet and exceed the TCMP's stated targets. Our time for making a difference is almost out.

#005

Posted by **Carolyn** on **04/30/2021** at **3:08pm** [Comment ID: 106] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

Indigenous elders and Tribes have a great deal to teach us about living in harmony with natural ecosystems so as to preserve our planet for the next seven generations. Please add indigenous people to the planning teams, and LISTEN to them! Plan ALL our climate action with the well-being of our great, great, great, great, great grandchildren in mind.

#006

Posted by **Marianne** on **04/01/2021** at **6:23pm** [Comment ID: 13] - [Link](#)

Agree: 0, Disagree: 0

The science is telling us we need to act NOW.

#007

Posted by **Barakgale** on **04/29/2021** at **8:14pm** [Comment ID: 95] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

You can see where business as usual is leading us - all of us - to and unlivable planet. We have to turn this around. Every level of society has to do their part.

#008

Posted by **Barakgale** on **04/29/2021** at **8:18pm** [Comment ID: 96] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Bravo State of Washington! I am proud that our state has enacted these laws. It provides a strong foundation for us to build upon.

#009

Posted by **Randy** on **04/01/2021** at **5:50pm** [Comment ID: 5] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

Please educate the community: there is no reason to warm-up a vehicle. It made sense in 1970, it doesn't today. We have a neighbor who runs his car 10 - 15 minutes every day before leaving for work. Year-round. It's just pumping emissions and wasting fuel.

#010

Posted by **Barakgale** on **04/29/2021** at **8:25pm** [Comment ID: 97] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

I am a happy owner of a Bolt Plug- in vehicle. I believe the appeal of Ev's will rise fast as people come to appreciate the cost saving of virtually no maintenance, the excellent drivability, and the competitive cost.

#011

Posted by **Wayne** on **04/01/2021** at **1:47am** [Comment ID: 2] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

Need to label this hatched area ("offsets") as sequestration (reforestation, afforestation, regenerative agricultural techniques). Absolutely necessary to get to 85% carbon emission reduction goal. It would help to have larger boxes in the legend to see that "offsets" refers to the hatched area (as well as the other colors).

Reply by **SiteAdmin** on **04/01/2021** at **11:03am** [Comment ID: 3] - [Link](#)

Type: *Resolution*

Agree: 0, Disagree: 0

A tooltip below, a little icon, has been added to clarify. Thanks!

#001

Posted by **Marianne** on **04/01/2021** at **6:38pm** [Comment ID: 18] - [Link](#)

Agree: 2, Disagree: 0

I am so glad you added this to the plan. We need to make sure this is fair and equitable for everyone.

#002

Posted by **Roy** on **04/30/2021** at **2:46pm** [Comment ID: 103] - [Link](#)

Agree: 0, Disagree: 0

I thoroughly support this section on equity. Social justice and equity will help address climate change more fairly and effectively.

#003

Posted by **Connie Campbell** on **04/01/2021** at **11:52pm** [Comment ID: 21] - [Link](#)

Agree: 1, Disagree: 0

Often those who have the fewest resources to deal with climate change are the hardest hit. It's very important that all climate mitigation efforts be equitable for all.

#004

Posted by **Tish Levee** on **04/30/2021** at **4:09pm** [Comment ID: 111] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

A suggestion about the design of this page. White type against a light to medium blue background is very difficult to read. Whenever we are trying to reach the public, we need to take such things as readability into consideration.

#005

Posted by **Tish Levee** on **04/30/2021** at **4:11pm** [Comment ID: 112] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

This page is SO difficult to read! Tiny type, lack of contrast, and, frankly pretty much gobblydegook language makes it seems as if only lip service is being given to climate equity and climate justice. I would hope that we would do better in the future.

#006

Posted by **Carolyn** on **04/30/2021** at **3:06pm** [Comment ID: 105] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

Indigenous elders and Tribes have a great deal to teach us about living in harmony with natural ecosystems so as to preserve our planet for the next seven generations.

Please add indigenous people to the planning teams, and LISTEN to them! Plan ALL our climate action with the well-being of our great, great, great, great, great grandchildren in mind.

#007

Posted by **7509L** on **04/24/2021** at **3:02pm** [Comment ID: 85] - [Link](#)

Agree: 1, Disagree: 0

Yes, this is very important.

#008

Posted by **7509L** on **04/24/2021** at **3:04pm** [Comment ID: 86] - [Link](#)

Agree: 0, Disagree: 0

We do need affordable housing and close to transit so we rely less on personal vehicles. Walking paths that are comfortable with some sheltered resting spots.

Reply by **Karen** on **04/24/2021** at **5:01pm** [Comment ID: 92] - [Link](#)

Type: *Suggestion*

Agree: 0, Disagree: 0

Yes- when public entities develop housing they need to locate it near transit. A car is a big budget item and if someone can avoid owning one they have more funds for the basics such as rent and food. Offering low income housing away from transit and services requires those residents to either own a car or rely on others for transport. While locating public funded housing away from transit may seem like it is saving money it actually passes the transportation cost onto those who can least afford it.

#009

Posted by **7509L** on **04/24/2021** at **3:02pm** [Comment ID: 84] - [Link](#)

Agree: 0, Disagree: 0

Fabulous!! Important to remember we are always moving into the future. We need to hear from the youth and keep them involved.

Score Each Action with 1-3 Stars

Action Name	Average Score
Convert to EV Fleets	93
Green building technical assistance	89
LED Lighting	89
Energy efficiency to water systems	85
Long term infill development	85
Flexible Electric Vehicle regulations	85
Telework/Flex Work	82
Solar ready building	82
20-Minute neighborhoods	82
Municipal Solar	82
Middle-density housing	74
Accessory Dwelling Units	74
Municipal tree canopy	74
Tree canopy preservation	74
Car free zones	71
Cool roofs	71
Free EV parking	67
Water audits	67
SolSmart Certification	67
Group solar purchasing	67
Eco districts	60

#001

Posted by **Wayne** on **04/12/2021** at **1:34am** [Comment ID: 39] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Too late now, but I suggest that somehow the public also be allowed to rank the 21 action items that are in the "regionally coordinated" category, since Lacey has a vote to fund or not fund your share of the decisions of the Steering Committee.

Reply by **SiteAdmin** on **04/12/2021** at **7:55am** [Comment ID: 43] - [Link](#)

Type: Resolution

Agree: 0, Disagree: 0

Thank you for your suggestion. We'll be working on more public engagement with the regional actions this year. Stay tuned!

#002

Posted by **Wayne** on **04/12/2021** at **1:19am** [Comment ID: 37] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

EV prices are expected to be roughly the same as gas-powered equivalent cars by about 2022 or 2023, with prices continuing to drop. Much lower maintenance cost for EVs, plus EVs can go more than twice as far on a \$1 of electricity than a gas-powered car can go on \$1 of gas.

#003

Posted by **Wayne** on **04/06/2021** at **4:11pm** [Comment ID: 25] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Solar panel prices are continuing to drop, so overall cost is becoming much more affordable. With good roof and relative lack of trees or other obstructions to block sun's rays, a PV system is one of the BEST ways to reduce carbon emissions rapidly. I had solar panels put on my home at Bonney Lake in 2015 resulting in essentially no electricity bill, saving about \$1000 a year, and producing more electricity than my family consumed, with enough extra generated per year (3 Megawatt-hrs) to charge an electric vehicle for about 10,000 miles per year. This solution beats buying green energy from PSE, since once you have the panels, the sun power is free.

#004

Posted by **Wayne** on **04/06/2021** at **4:23pm** [Comment ID: 26] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

The PSE Direct Buy for municipal operations is good for carbon reduction now; however, presently they are just buying the solar power from a third party rather than investing in their own solar farms. Cost to the customer may be unreasonably high over a 20 year contract, since wholesale cost to utilities is expected to decrease by about 50% by 2030.

#005

Posted by **Wayne** on **04/12/2021** at **1:27am** [Comment ID: 38] - [Link](#)

Agree: 0, Disagree: 0

Your estimate of cost (L, M, H) for many of these action items appear to be based on the amount of staff time needed, especially for public hearings, or staff time to develop a plan, rather than the cost of the action itself.

#006

Posted by **Wayne** on **04/11/2021** at **10:22pm** [Comment ID: 32] - [Link](#)

Type: Question

Agree: 0, Disagree: 0

Good. How close are you to being completed already on this action item? This is a big money saver on electricity usage and thus carbon emission reduction.

#007

Posted by **Cor0811** on **04/21/2021** at **3:27pm** [Comment ID: 48] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

For new constructions rooftop gardens & wall gardens and retention of existing large, old trees should be required. Building inspectors would add this to checklist. Self Reporting requirement with timelines, for existing buildings, may be an easier way to begin implementation

#008

Posted by **Cor0811** on **04/21/2021** at **3:12pm** [Comment ID: 47] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

LEDs save money but also have their own issues. Please refer to: <https://www.darksky.org/our-work/lighting/lighting-for-citizens/led-guide/> Also consider having "dark times" when street lights are off.

#009

Posted by **Wayne** on **04/12/2021** at **1:12am** [Comment ID: 36] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

I believe that flat-roofed commercial buildings that are the target for "cool roof" incentives would get much more effective use of those roofs by putting solar panels on them. Example: None of the big warehouses at Hawk's Prairie have any panels on them. That square area would produce much more electricity with panels, saving much more carbon emissions and enhancing the electricity grid, than a cool roof would save on electricity cost for a/c and carbon emissions saved.

#010

Posted by **Wayne** on **04/12/2021** at **1:40am** [Comment ID: 40] - [Link](#)

Agree: 0, Disagree: 0

I don't seen anything in this municipal category that will 'break the bank" raising home prices. Making a new construction home solar-ready is also minimal.

#011

Posted by **Cor0811** on **04/21/2021** at **3:48pm** [Comment ID: 49] - [Link](#)
Agree: 0, Disagree: 0
Public engagement needed

#012

Posted by **Cor0811** on **04/21/2021** at **3:49pm** [Comment ID: 50] - [Link](#)
Agree: 0, Disagree: 0
pubic engagement needed and desired with zoning changes. Surprises many times create anger and much discussion on NextDoor boards and neighborhood groups.

#013

Posted by **Tish Levee** on **04/30/2021** at **4:27pm** [Comment ID: 113] - [Link](#)
Type: Suggestion
Agree: 0, Disagree: 0
At the same time of prioritiziing sites for EV charging, seriously limit (if not completely eliminate) all NEW fossil fuel charging stations. If we are to really reduce fossil fuel consumption, we have to start by reduciing the number of fossil fuel stations. We really don't need them on every corner!

#001

Posted by **Marianne** on **04/01/2021** at **6:30pm** [Comment ID: 15] - [Link](#)

Agree: 1, Disagree: 0

Definitely agree with land use strategies for transit, walking and biking. Roads are a key to harming our ecosystems and species (roadless rule act). They create more congestion than alleviate it.

#002

Posted by **Randy** on **04/01/2021** at **6:10pm** [Comment ID: 10] - [Link](#)

Type: Suggestion

Agree: 2, Disagree: 0

Fully electric vehicles work! The City should never again purchase an ICE vehicle. Lacey will save money and help meet climate goals.

- no emissions
- very low maintenance
- quiet

#003

Posted by **Tish Levee** on **04/30/2021** at **3:58pm** [Comment ID: 109] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

We need to do everything we can to support and encourage tele-commuting wherever possible. We have seen during COVID what a difference that can make.

#004

Posted by **Tish Levee** on **04/30/2021** at **3:56pm** [Comment ID: 108] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Agree that we need to really focus on public transit. I recently moved to Lacey from N. California, but I wrote an article for a local periodical there when Olympia/Lacey introduced no fare bus service. It is wonderful; we need to keep expanding service, but we need to put some money into really marketing the transit services we have here.

#005

Posted by **7509L** on **04/24/2021** at **3:50pm** [Comment ID: 89] - [Link](#)

Agree: 0, Disagree: 0

Less is more - when ordering vehicles consider less and more sharing of them.

#006

Posted by **7509L** on **04/24/2021** at **3:53pm** [Comment ID: 90] - [Link](#)

Agree: 0, Disagree: 0

The production of electric vehicles does cause CO2 emissions and the batteries have a "life" and will have to be disposed of eventually, or technology created to reuse them. Public transportation, sharing vehicles (ride share but also of individual vehicles, bicycles and motorbikes can be added into consideration.

#007

Posted by **Roy** on **04/30/2021** at **2:23pm** [Comment ID: 98] - [Link](#)

Agree: 1, Disagree: 0

Public transit is the most important improvement needed to enhance efficiency of getting people around in and around Lacey and reducing carbon emissions. Please focus on public transit and not more roads and highways.

#008

Posted by **7509L** on **04/24/2021** at **9:25am** [Comment ID: 60] - [Link](#)

Agree: 0, Disagree: 0

Telecommuting has been proven effective during this pandemic. Managers have found the work is readily accomplished and workers more effective. We already have huge traffic issues in the Puget Sound area. Any IT solutions that can help businesses will help work-at-home and cut down on traffic=emissions=building energy=lighting=sanitation=in building cleaning.....

#009

Posted by **7509L** on **04/24/2021** at **9:20am** [Comment ID: 59] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

If Lacey intends to rezone areas, there needs to be wide communication and public comment. The notices need to be disseminated in such a manner that residents are alerted prior, not once decision is made.

#010

Posted by **Dan Jones** on **04/14/2021** at **10:03am** [Comment ID: 44] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

This seems to make a lot of sense. Why drive if we can accomplish our work remotely.

#011

Posted by **Dan Jones** on **04/14/2021** at **10:04am** [Comment ID: 45] - [Link](#)

Agree: 0, Disagree: 0

Great idea... Pre-approved accessory dwelling unit designs?

#012

Posted by **Randy** on **04/01/2021** at **6:07pm** [Comment ID: 9] - [Link](#)

Type: Suggestion

Agree: 2, Disagree: 0

Add crosswalks and increase traffic enforcement. Too many drivers in Lacey do not acknowledge pedestrian right-of-way.

#013

Posted by **Connie Campbell** on **04/01/2021** at **11:38pm** [Comment ID: 19] - [Link](#)

Agree: 1, Disagree: 0

I definitely support the city using EV and Hybrid vehicles ASAP! We need a cleaner environment!

#014

Posted by **Karen** on **04/08/2021** at **11:37am** [Comment ID: 30] - [Link](#)

Type: *Suggestion*

Agree: 1, Disagree: 0

When new streets are developed they need to have practical connections for walking to transit and services. Gridded street networks accomplish this. Housing that is fenced off from surrounding streets, neighborhoods, services does not support active transportation. Make connection in new developments and retrofit existing neighborhood areas for maximum connectivity.

#015

Posted by **Dan Jones** on **04/14/2021** at **10:06am** [Comment ID: 46] - [Link](#)

Agree: 2, Disagree: 0

Trails throughout a city are wonderful... (Bend, McCall, Sunriver) are all better because of the trail systems. Not only for community members (current and future) but for tourism also...

#016

Posted by **7509L** on **04/24/2021** at **3:49pm** [Comment ID: 88] - [Link](#)

Agree: 0, Disagree: 0

It is important to remember that although electric cars don't emit CO2, they still do emit it in the stages of production of them; also the batteries eventually end, and then where do they go? Landfill. Technologies have to be created to reuse these lithium batteries or dispose of them. Public transportation is best option. Less vehicles overall for the city, per division...not sure how it is handled now, but scheduling use of less vehicles over a greater group of employees.

#017

Posted by **Karen** on **04/08/2021** at **11:29am** [Comment ID: 27] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Put the highest priority on active transportation in regional funding cycles. Only fund street/road projects that will be Complete Streets and will increase safety for people who walk and cycle.

#018

Posted by **Wayne** on **04/12/2021** at **12:38am** [Comment ID: 34] - [Link](#)

Type: Question

Agree: 1, Disagree: 0

Why are you including the action EV-ready to be handled at the regional level rather than municipal level? You have new construction to be solar-ready on the municipal list. What's the difference?

Reply by **SiteAdmin** on **04/12/2021** at **7:45am** [Comment ID: 42] - [Link](#)

Type: Answer

Agree: 0, Disagree: 0

Our participating jurisdictions thought it would be helpful if we collaborated on standards, but then, yes, each code would have to be adopted locally. Thanks!

#019

Posted by **Wayne** on **04/12/2021** at **12:44am** [Comment ID: 35] - [Link](#)

Type: Question

Agree: 0, Disagree: 0

How will you be tracking and funding each of these action items that you have designated as regional? You aren't giving us a chance to rank these! Will they be included in the Comp Plan piecemeal as agreement in the ILA3 meetings is reached? What happens if there is no agreement on some of these ... then it is back to the municipal level for action?

Reply by **SiteAdmin** on **04/12/2021** at **7:44am** [Comment ID: 41] - [Link](#)

Type: Answer

Agree: 0, Disagree: 0

Thank you for your question. This online open house and survey are just one tool we're using, right now, to keep the community conversation going on climate change. Regionally, we will also be doing more community engagement, led by TRPC. We appreciate your willingness to participate in this important conversation. Thanks!

#020

Posted by **7509L** on **04/24/2021** at **9:33am** [Comment ID: 63] - [Link](#)

Agree: 0, Disagree: 0

Yes. Telecommuting, IT solutions to assist; training in IT solutions; telecommute stations in communities (fitted with pandemic in mind).

#021

Posted by **Marianne** on **04/24/2021** at **11:28am** [Comment ID: 75] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

Our green spaces is what draws people to the area—housing developers should know this. It's a fact that young people and families want natural places with walking and biking trails because they are using more mass transit, walking, biking and ride sharing to get around. The future is fewer cars, car sharing and ride sharing.

And the science is telling us that we need to protect our green spaces to sequester carbon and to reach our carbon goals by 2030 and 2050. Building to accommodate more auto traffic is not going to help with our goals—it increases pollution. It also doesn't make for desirable, clean, quiet neighborhoods.

Putting more roads in our infrastructure makes it harder to opt for non-motorized travel. Roads do not make walkers or cyclists feel safe.

#022

Posted by **Karen** on **04/08/2021** at **11:43am** [Comment ID: 31] - [Link](#)

Type: Suggestion

Agree: 1, Disagree: 0

Add this to the regional list of actions: Reduce the amount of residential development in the rural area. This would reduce vehicle miles traveled and preserve farm land. This means the cities should encourage the County to change zoning in rural areas. Land use is a major part of how we can reduce transportation emissions.

#023

Posted by **Karen** on **04/08/2021** at **11:32am** [Comment ID: 29] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Simply making it easier to commute long distances does not reduce emissions. Ride sharing and van pools can make sense for rural connections. Bus routes in rural areas could increase emissions.

#024

Posted by **Marianne** on **04/24/2021** at **11:23am** [Comment ID: 73] - [Link](#)

Agree: 0, Disagree: 0

Agree

#025

Posted by **7509L** on **04/24/2021** at **9:32am** [Comment ID: 62] - [Link](#)

Agree: 0, Disagree: 0

The more lanes that have been added to freeways across the U.S. just has created more traffic. Easy public transportation; affordable; change the mind set; encourage companies to have work from home policies to cut traffic and energy costs. When there is a void, it will be filled, so adding more lanes or longer entrance ramps is not going to "mitigate."

#026

Posted by **7509L** on **04/24/2021** at **9:28am** [Comment ID: 61] - [Link](#)

Agree: 2, Disagree: 0

Large commercial buildings don't need large parking lots and a space for each employee. Alternating work days and space for employees means less parking and smaller buildings. When permits are let for new buildings, this has to be taken into consideration. Rather than allow a huge building which may only be 1/2 used, details on how they plan to use telecommuting should be incorporated into the plan and the permits Lacey allows.

#027

Posted by **Marianne** on **04/24/2021** at **11:23am** [Comment ID: 72] - [Link](#)

Agree: 2, Disagree: 0

We need more outreach and education. Often residents do not know, or are not involved until they find out too late about an issue that effects them. How do you propose to solve this problem?

#028

Posted by **Karen** on **04/08/2021** at **11:31am** [Comment ID: 28] - [Link](#)

Agree: 1, Disagree: 0

Mitigating congestion does not necessarily make transportation more efficient. It could induce more traffic and increase miles driven. Making streets more efficient means moving more people, not just cars. So adding capacity for transit and people who walk and cycle is the way to reduce congestion.

Reply by **Marianne** on **04/24/2021** at **11:25am** [Comment ID: 74] - [Link](#)

Agree: 1, Disagree: 0

It's been proven that more roads actually create more congestion. We need a more walkable city.

#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.

#001

Posted by **Marianne** on **04/01/2021** at **6:37pm** [Comment ID: 17] - [Link](#)

Type: Suggestion

Agree: 2, Disagree: 0

Encourage rain barrels. Make your lawn area smaller. Keep the height higher in the summer to retain moisture. Install Ecolawns that attract wildlife. Let your lawn go dormant in the summer.

Reply by **7509L** on **04/24/2021** at **2:19pm** [Comment ID: 80] - [Link](#)

Agree: 1, Disagree: 0

Yes, yes, yes. HOAs don't agree with dormant lawns though and if it was a requirement or more minimal "green" to lawns was required then HOAs could reduce their strict enforcement.

#002

Posted by **7509L** on **04/24/2021** at **2:36pm** [Comment ID: 82] - [Link](#)

Agree: 0, Disagree: 0

What methods would be used to reduce this? It includes the creation of concrete for buildings (heat), meat producers and consumers, huge buildings and their electricity, water, heat....Beef producers create more greenhouse gases than the equivalent amount from pork or chicken. A campaign to educate people? Do we need huge warehouses that are empty, or are not 24/7 operations? Can industry and commerce utilize various forms of job sharing to reduce footprint (smaller buildings with shared workspace and telecommuting, so thus smaller parking lots, less traffic, less building energy, working from home)?

#003

Posted by **7509L** on **04/24/2021** at **2:45pm** [Comment ID: 83] - [Link](#)

Agree: 0, Disagree: 0

The recycling program can be quite confusing even with the flyers that are available. Seems that first recycle takes certain items and then changes the system. Incentives for people to recycle, open houses to educate people, classes in schools encouraging the kids to take it over and show parents; programs to pick up used mattresses, furniture, electronics or drop off centers, so people don't dump them in wilderness areas. Incentivize programs and companies who are using discarded items and inventing items with them. Programs for discarded household items in workable condition that might be used elsewhere for those who can't afford the newest. and best.

#004

Posted by **Roy** on **04/30/2021** at **2:35pm** [Comment ID: 99] - [Link](#)

Agree: 0, Disagree: 0

Reducing not just water use and food wastes but all our energy use in transportation and buildings is key to addressing climate change and improving our life in Lacey. How

can we encourage just using less of everything?

#005

Posted by **Marianne** on **04/24/2021** at **11:43am** [Comment ID: 76] - [Link](#)

Type: Question

Agree: 1, Disagree: 0

Water is a finite resource, so reducing our consumption of potable water is key. Paving, roofs and other impervious surfaces that prevent water from infiltrating into the soil and recharging groundwater supplies contribute to shortages.

Treating stormwater as waste and funneling it to storm sewers before it has an opportunity to benefit the landscape, instead of capturing and using stormwater in our gardens--we've created an entire infrastructure of gutters, downspouts, and sewers to rapidly transport it offsite. Landscapes play a major role, and residents can make a big difference. The question is how can we provide education so residents (and businesses) understand, and care enough to reduce their consumption?

Reply by **7509L** on **04/24/2021** at **2:23pm** [Comment ID: 81] - [Link](#)

Agree: 0, Disagree: 0

What if building standards could be such that they incorporate sprinkler systems in commercial and residential areas that pool the rainwater on site and hook to sprinkler systems to use it? Wouldn't that be great.

Reply by **Marianne** on **04/24/2021** at **3:05pm** [Comment ID: 87] - [Link](#)

Agree: 0, Disagree: 0

Also adding greywater systems when it is applicable is an excellent idea on new homes/ buildings.

#006

Posted by **Tish Levee** on **04/30/2021** at **4:06pm** [Comment ID: 110] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

I'm relatively new to Lacey, and I have been disappointed that more is not being done about Green Waste. I live at the Reserve (241 units) and there is NO composting, NONE. I would like to see us adopt a Zero Waste policy as an aspiration. We need some legislation that would mandate composting for anyone generating more than 4 cu yds of landfill a week. We need to incentivize composting, and do the education needed to get people on board. The hauler I worked with in California had Zero Waste Consultants who worked with big and small account. With their help, my synagogue was able to cut our landfill in half, saving over \$3,000 a year in costs, and taking the equivalent of over 3 cars a month off the road by lowering our emissions.

#007

Posted by **Carolyn** on **04/30/2021** at **2:45pm** [Comment ID: 102] - [Link](#)

Agree: 0, Disagree: 0

I'm not familiar with this program, but it sounds excellent. Decreasing food waste is essential.

#008

Posted by **Marianne** on **04/24/2021** at **11:44am** [Comment ID: 77] - [Link](#)

Agree: 0, Disagree: 0

Yes!

#009

Posted by **Randy** on **04/01/2021** at **6:04pm** [Comment ID: 8] - [Link](#)

Type: Suggestion

Agree: 0, Disagree: 0

Please let lawns on City property go dormant in the Summer and encourage/recognize HOAs and neighborhoods to do the same.

#010

Posted by **Marianne** on **04/24/2021** at **11:56am** [Comment ID: 79] - [Link](#)

Type: Question

Agree: 0, Disagree: 0

Can the city adapt ecology lawns in their parks, etc.? Eco-lawns are more drought-tolerant and disease-resistant than conventional, grass-only lawns. They do not require synthetic fertilizers, and people with children and pets will appreciate that. They stay green even during long, dry periods. Putting a "conserving water" sign on a lawn at a city facility or city park that is allowed to go dormant is also a perfect educational tool for the public. Can the city change their landscape maintenance

practices, and be the example for the community?

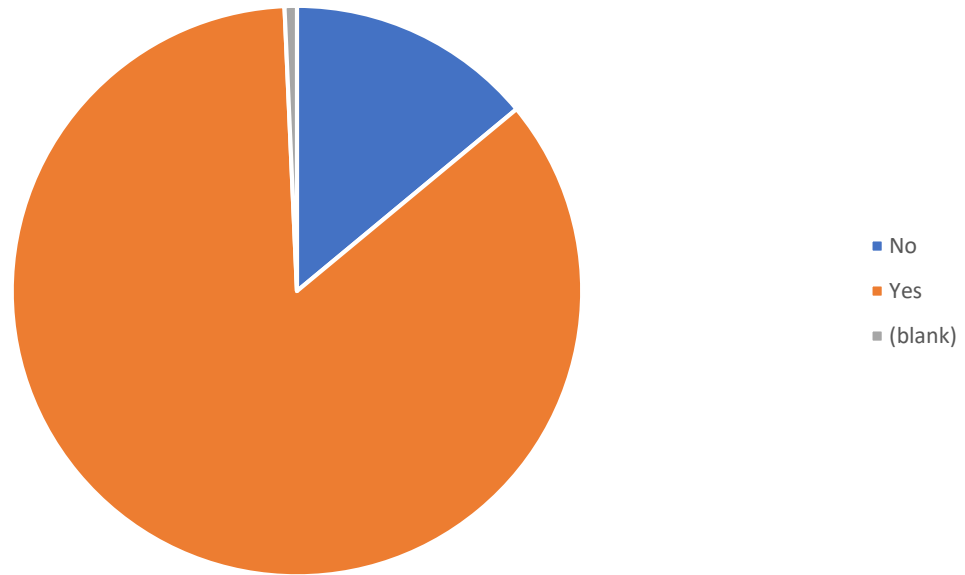
#011

Posted by **Marianne** on **04/24/2021** at **11:46am** [Comment ID: 78] - [Link](#)

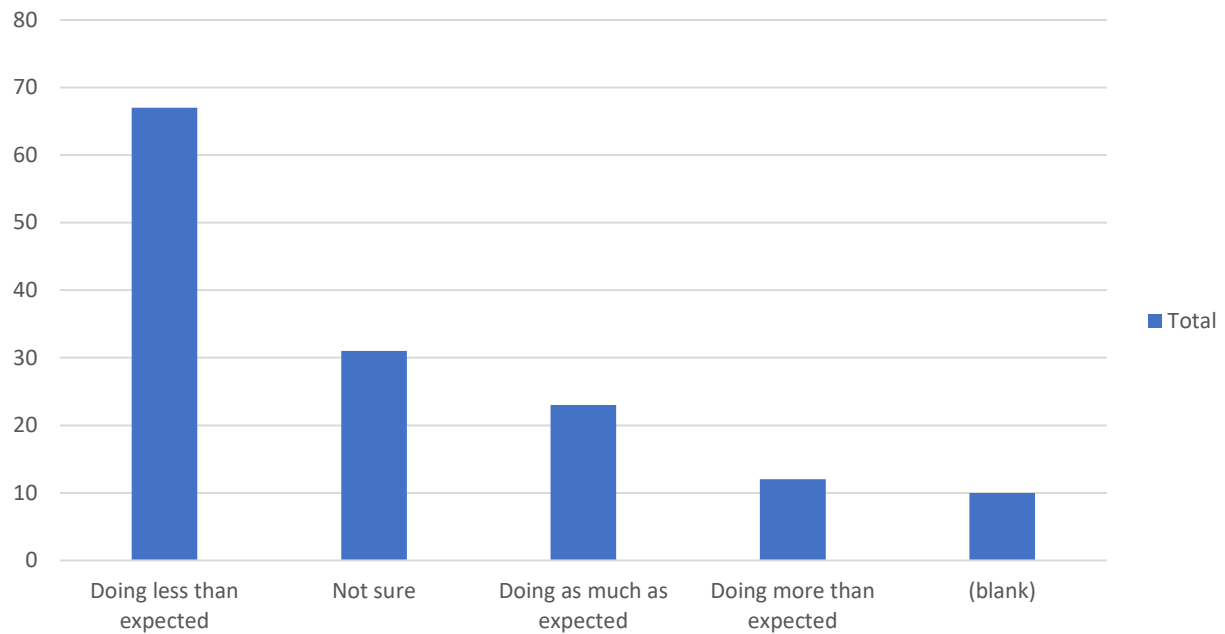
Agree: 0, Disagree: 0

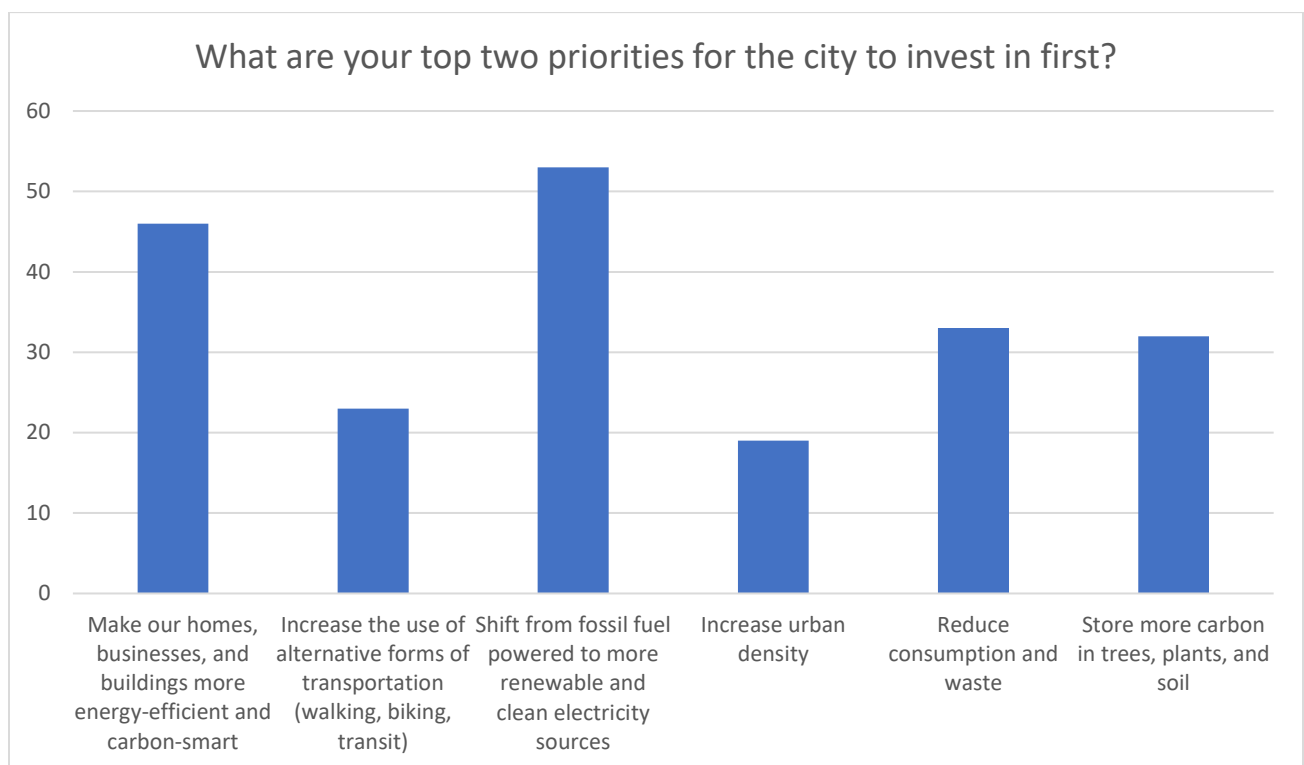
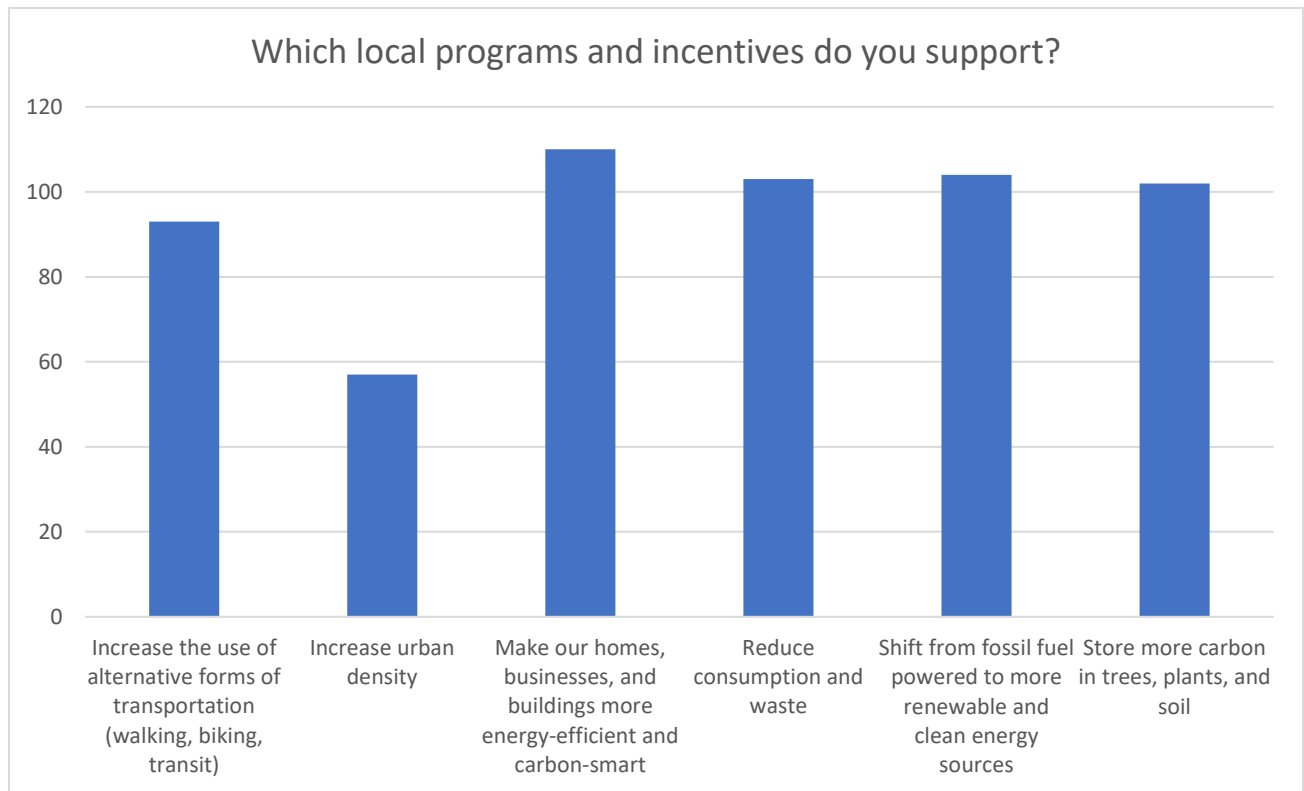
Yes!

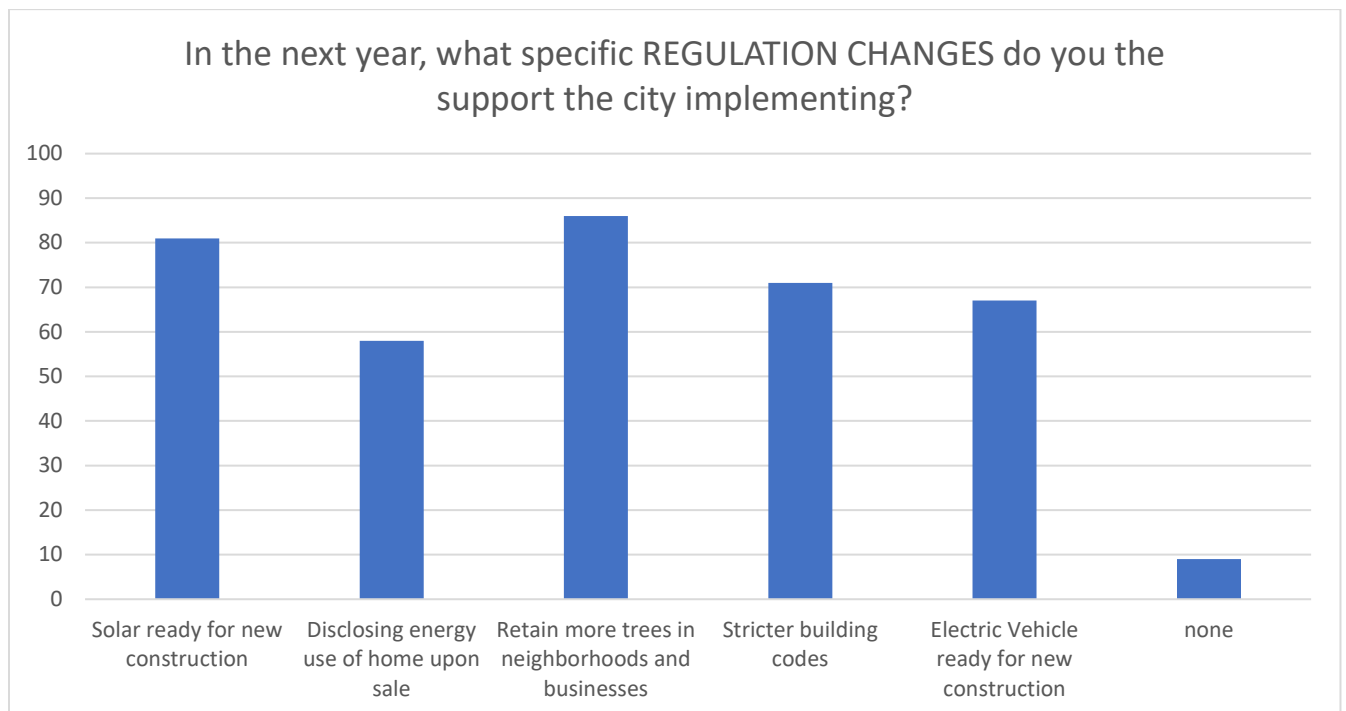
Do you expect City leaders to work on climate change?

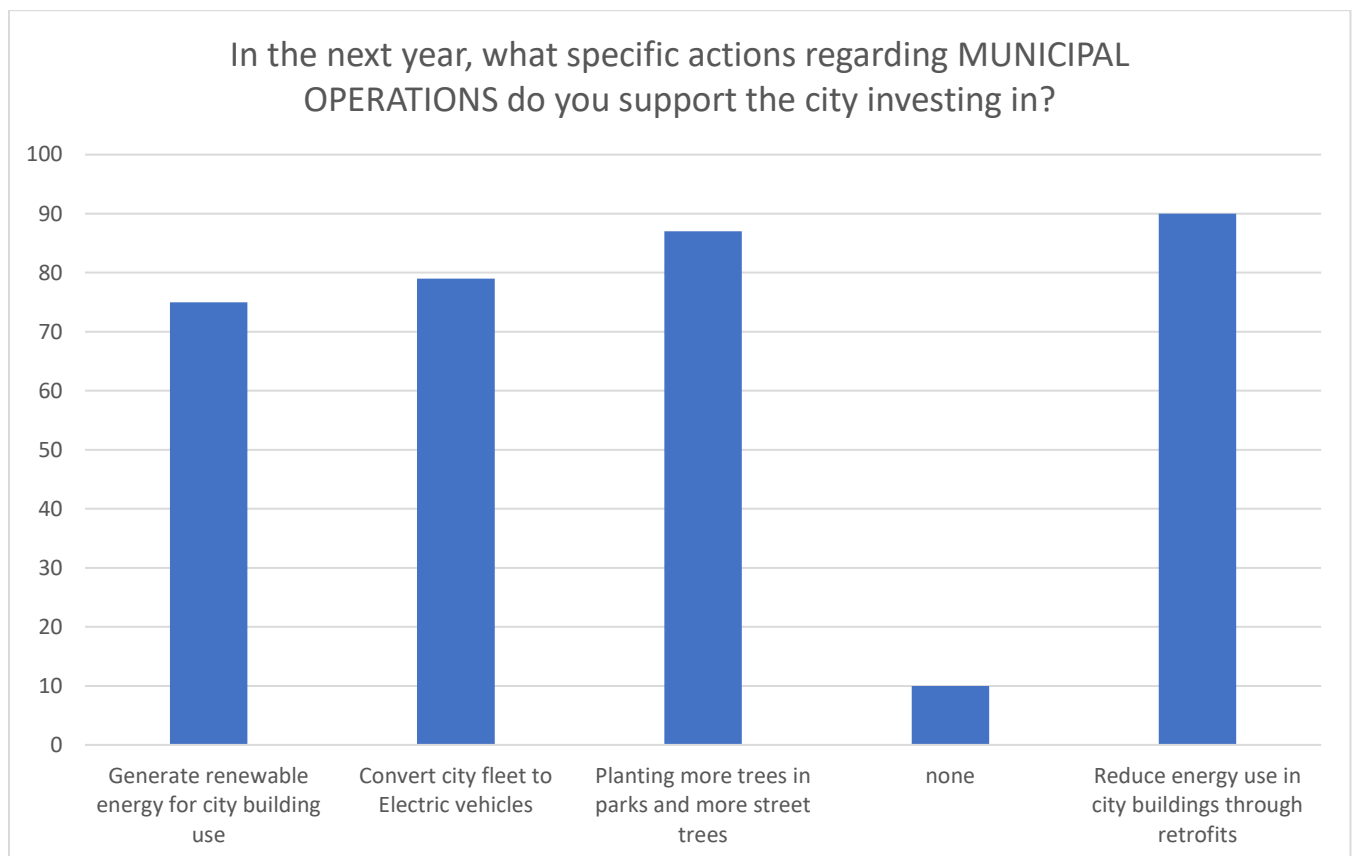
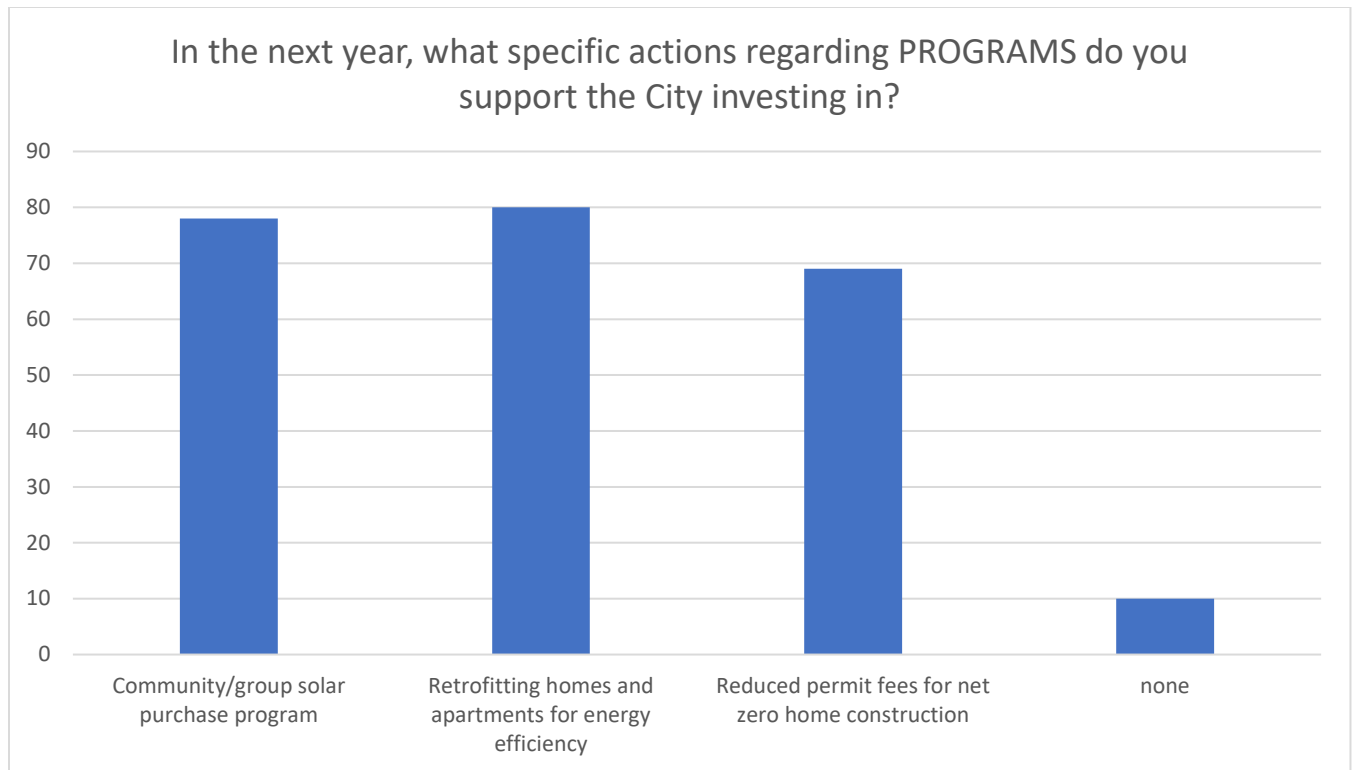


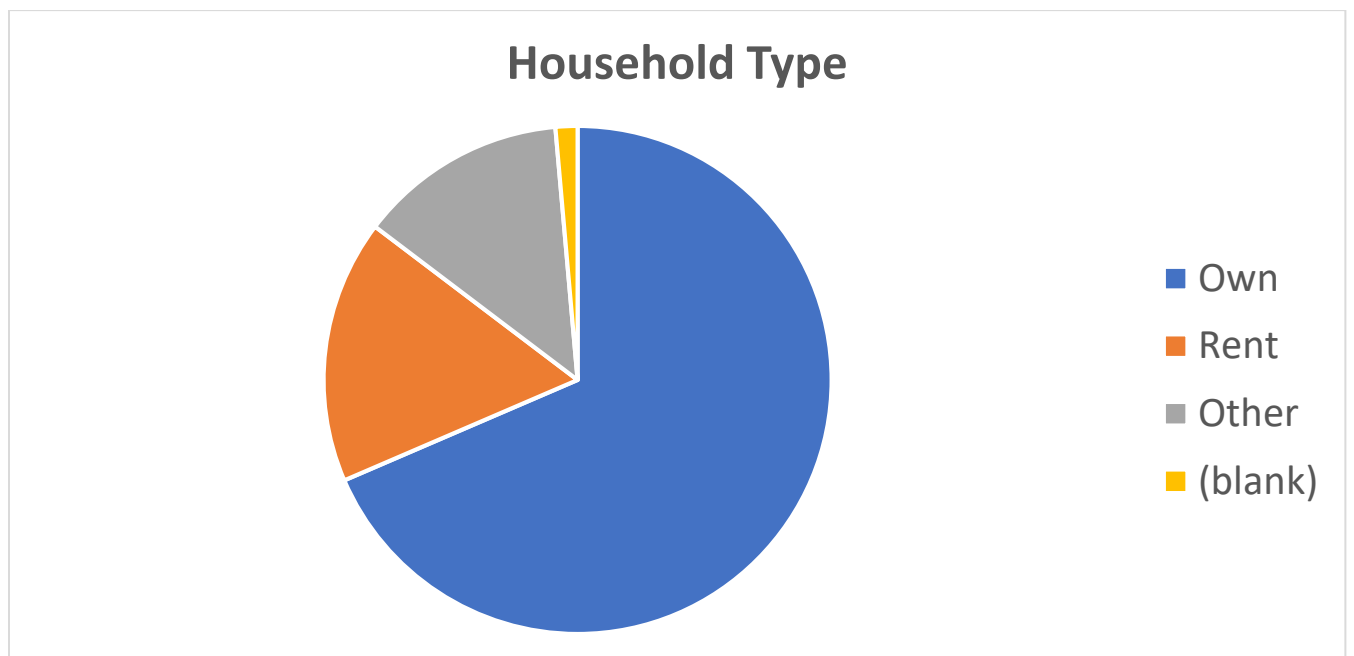
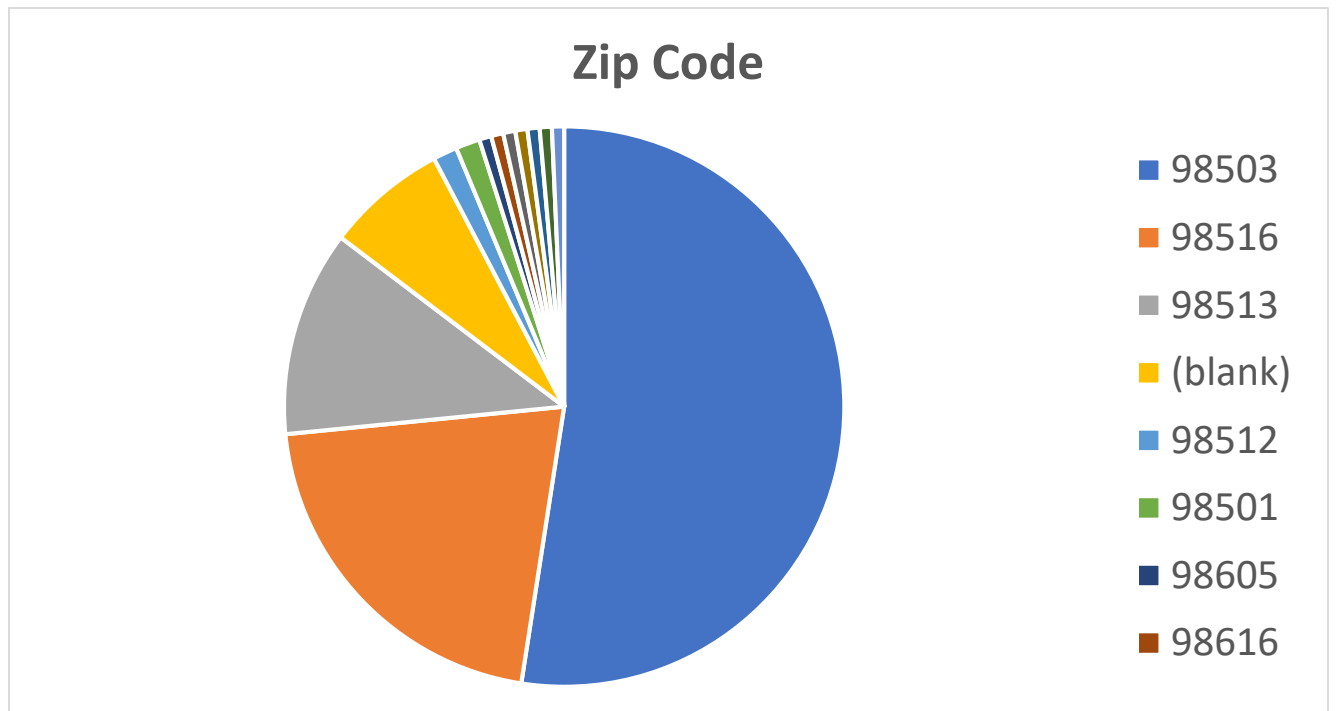
How much is the City doing to address climate change?





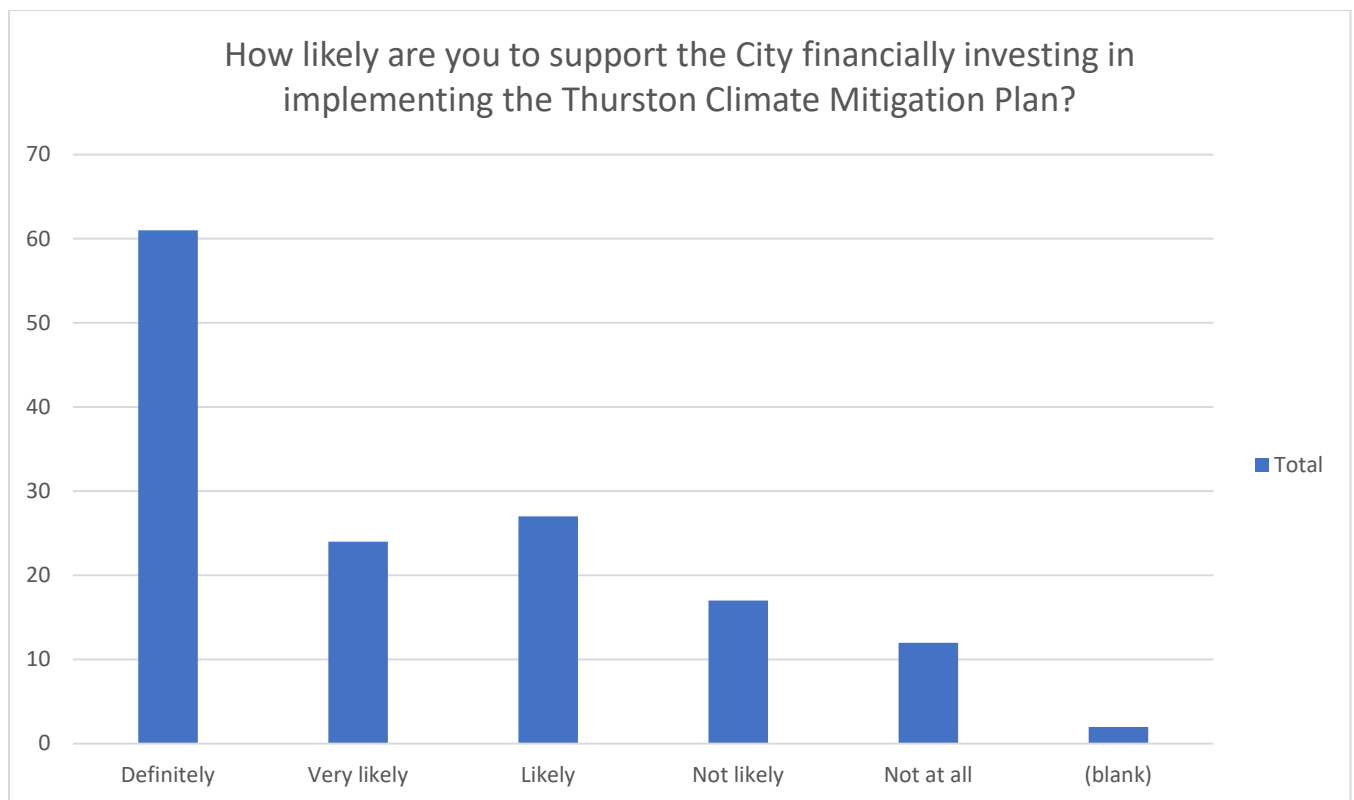
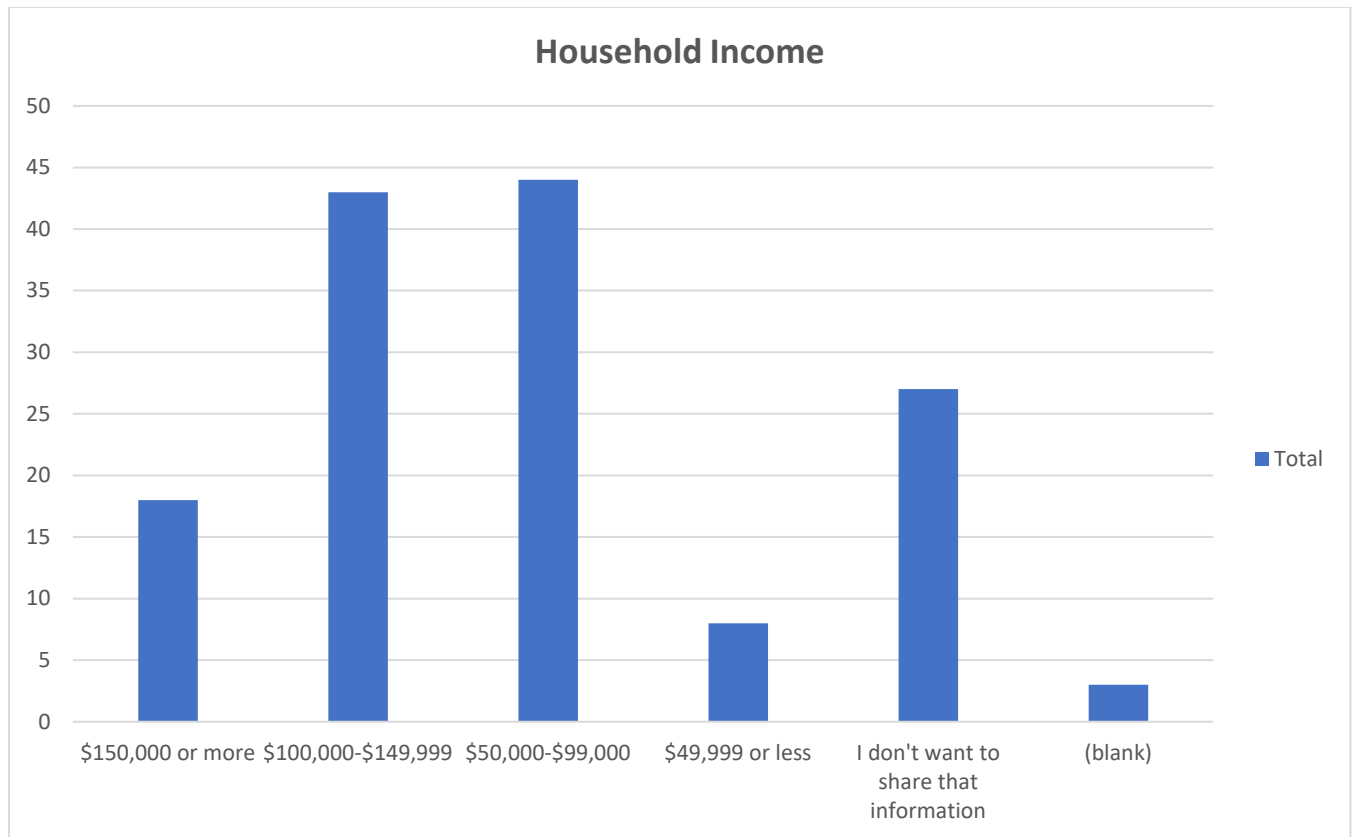






Climate Survey Summary as of 05/12/21

Total responses: 143



Leah Bender

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.

January 3, 2021

Panorama Residents' Petition to the Lacey City Council:

The cities of Lacey, Tumwater, and Olympia as well as the county have come together to create the Thurston Climate Mitigation Plan (TCMP). As the next step, we urge that you adopt and implement this plan to achieve the science-based targets that you have previously agreed to for reducing carbon pollution in our region, specifically, 45% reduction of greenhouse gas emissions from the 2015 baseline by 2030, and 85% reduction of carbon emissions by 2050.

The evidence is overwhelming that our planet is warming due to human-generated greenhouse gases. More heat waves, droughts, wildfires, flooding, heavier precipitation, stronger storms, crop failures, famine, infectious diseases, climate refugees, species extinctions, rising sea level, mounting economic losses, and higher human mortality rates, to name a few, are in our future until we solve this climate crisis. The scientists and the world's 197 nations have concluded that the solution is net zero carbon emissions.

As a global problem, global warming requires a global response. But the response ultimately is carried out at the individual level, with leadership from local governments. The Thurston Climate Mitigation Plan provides the blueprint for carbon emission reductions while promoting more livable neighborhoods, energy efficient buildings, a clean energy grid, transition to electric vehicles, and more jobs. Many of the 71 action items are easy; some are hard. We want you to do all of them, especially the hard ones, with our backing. Please adopt and implement this Plan. We are counting on you.

During this period of COVID-19, the following residents of Panorama agree with this petition and have authorized by phone call or email that their names be attached in lieu of signing a hard copy.

Wayne L. Olsen
Betsy Olsen
Paul Enns
Gail Madden

Roy Treadway
Carolyn Treadway
Mary Anne Enns
Don Melnick

Panorama Residents' Petition for TCMP, Page 2

Phyllis Sturges
Carolyn Odio
Susan Marke
Dale Thompson
Judith Anderegg
David Pelto
Georgina Armstrong
David Armstrong
George Houck
Rosa Barton
Burt Sarver
Ginger Sarver
Gary Proctor
Geri Proctor
Cleve Pinnix
Martha Pinnix
Mary Anne McClaire
Dick Murphy
Becky Murphy
Carol Thomas
Andrew Johnson
Rev Wendy J. Taylor
Martha S. Wohlken
Rich Kalman
David Plemons
Janet Dawes
Douglas Scrima
Karen Greenfield
Joan Martin
Charlotte Palmiter
Myrna Rosler
Phyllis Freitas
Lu Hamacek
Lee S. Thompson, MD
Carol Royer
Dennis Mullikin
Kathy Kidwell
Mary Douglass
Bob Jensen
Caroline Fenn

Rosalie Melnick
Carol Dolliver
Larry Pratt
Rosalie Romano
Robert D. Markey
BJ Matthews
Linda Clary
George Sharp
LouAnn Houck
Mary Boston
Steve Tilley
Edith Bryan
Sally Vogel
Judy Winsor
Mari Stuart
Tamra Alden
Tim Alden
Cindy Fairbrook
Dave Fairbrook
Evie Starr
Cilla Raughley
Ellen M. Sweetin
Brian Hovis
Ann Rockway
James Vaupel
Warren Dawes
Ingrid Scrima
James Greenfield
Nova Berkshires
Curtis Rosler
Robert D. Bowers
Elaine Ehrhardt
Margare A. Curl
James Toomey
David Milne
Mary Wales North
Judy Clinesmith
Diane Darling
Lynn Elliott
Carl Clinesmith

Panorama Residents' Petition for TCMP, Page 3

Suzanne Hansen
Paul Eldenburg
Barbara Silverstein
Susan Morris
Bruce Hanson
Patricia Huddy
Sandra Morasky
Cynthia Daniels
Joan Tenenbaum
Jo Ann McVeigh
Gary Reid
Jay Felzien
Pat Winsor
Carol Ballard
Michael Silverstein
Tim Burke
Mark Christophersen
Jeanne Christophersen
Will Randolph
Judy Smith
Steve Lundin

Peggy Jamerson
Mary Jo Eldenburg
Deborah Ross
Dave Morris
Nancy Hanson
Joseph Huddy
Phyllis Clausen
Bob Daniels
Bill Lange
Christina Clarke
Virginia Reid
Robert Morasky
Janet Sears
Marian Raitz
Joe Palmiter
Eva Fitz
Mike Reveal
Lynn Reveal
Gerda Randolph
Susan Ballard
Maria Jensen

Point of contact is Wayne L. Olsen, 2010 Cardinal LN SE, Lacey, WA 98503.

Leah Bender

From: Ryan Andrews
Sent: Thursday, April 8, 2021 8:13 AM
To: 'Carol Hayes'
Cc: Jessica Brandt
Subject: RE: Thurston Climate Mitigation Plan

Good morning Carol. Thank you for your comments and feedback. If you haven't yet, this would be a good opportunity for you to participate in the City's online open house related to local implementation of the Thurston Climate Mitigation Plan. The open house and an associated survey are available on our website which is linked here:
www.ci.lacey.wa.us/climatechange

Thanks again,
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: Carol Hayes
Sent: Wednesday, April 07, 2021 6:57 PM
To: Ryan Andrews
Subject: Thurston Climate Mitigation Plan

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City of Lacey Planning Committee,

I am writing to urge you to accept and adhere to all 72 items laid out in the Thurston Climate Mitigation Plan. It is of utmost importance for you to be on board with this effort, we must all do a significant part in helping to restore the health of planet earth. I moved to Lacey, the city of trees, two and a half years ago and have been astonished at the tremendous growth of the city, so much land has been clear-cut disrupting the ecosystem. The rate of building has been extensive and I feel more effort should be going into building with energy efficiency in mind. Please choose to act now, as later is not a viable option.

Thank you for making your decisions on science backed research.

Sincerely,
Carol Hayes

Sent from my iPad

Leah Bender

From: Rick Walk
Sent: Wednesday, March 31, 2021 7:19 AM
To: Jessica Brandt; Ryan Andrews
Subject: FW: PSE - Transportation Electrification
Attachments: PSE - Transportation Electrification Plan 3.25.2021.docx

FYI- information to include in the Climate Action discussion for Lacey and at the regional table.

From: Tousley, Amy
Sent: Tuesday, March 30, 2021 8:54 AM
To: lbauer@ci.olympia.wa.us; rhoey@ci.olympia.wa.us; Rick Walk ; Scott Egger ; Grant Beck ; Cody Colt ; Joshua Cummings (joshua.cummings@co.thurston.wa.us) ; 'Jennifer Walker' ; Mike Matlock (MMATLOCK@ci.tumwater.wa.us) ; Brandon Hicks (bhicks@ci.tumwater.wa.us) ; Thomas Knuckey ; 'andrea.spencer@ci.bremerton.wa.us' ; Diane K. Lenius (dlenius@cityofpoulsbo.com) ; Karla Boughton (kboughton@cityofpoulsbo.com) ; mdorsey@cityofportorchard.us; Nick Bond ; Jeff Rimack - Kitsap County (jrimack@co.kitsap.wa.us) ; 'anelson@co.kitsap.wa.us'
Cc: Mauer, Matthew ; OsterbergA@trpc.org; parkhuk@trpc.org
Subject: PSE - Transportation Electrification

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

Good morning,

Perhaps you saw this, but I wanted to share a notice about PSE's recent tariff filing with the Washington State Utilities & Transportation Commission regarding electrification of the transportation network. I find this to be an exciting time in the energy world, please let me know if you have any questions or would like additional information. PSE is desirous of working with cities and counties as they develop climate change/sustainability plans and regulations working towards carbon reduction.

Take care,
Amy

Amy L. Tousley

*Senior Municipal Liaison Manager for Puget Sound Energy
serving the cities and counties of Thurston, Lewis and Kitsap*

2711 Pacific Avenue S.E.
Olympia, WA 98501
360-786-5956 (desk)
206-604-3103 (cell)
amy.tousley@pse.com

Leah Bender

From: Tom Crawford <tom@thurstonclimateaction.org>
Sent: Friday, April 30, 2021 1:38 PM
To: Pamela Braff; Jessica Brandt; Jennica Machado; Brad Medrud
Subject: Clean Energy savings
Attachments: Savings on Clean Energy Solutions for Families.docx

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Here's some information I thought may be of interest to residents of your jurisdiction. It will also be in our upcoming newsletter.

Tom

Tom Crawford, President
Thurston Climate Action Team
PO Box 13324
Olympia, WA 98508
(360) 280-0242
tom@thurstonclimateaction.org
<https://thurstonclimateaction.org>

Leah Bender

From: Jason Gano <jason@omb.org>
Sent: Wednesday, April 7, 2021 11:40 AM
To: Ryan Andrews
Cc: Jessica Brandt
Subject: Questions for builders

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

Good Morning,

I wanted to start by Thanking Ryan for Presenting to OMB's Government Affairs Committee, my committee found the information very helpful and a great way to start our next conversation that you talked about towards the end of your presentation.

Ryan you talked about how you had some questions that you would love to have builders' input on. If you wanted to you could send me a list of questions and a paragraph or 2 (or more) about what problems (or issues) you want these questions to help answer. I can make sure that we have those sent out not only in our E newsletter but also in our magazine as well and I can compile all the answers and send them to you.

If this works, please let me know.

Our Comms Director would need it by next Friday.

Jason D. Gano
Director of Government Affairs
Olympia Master Builders
(253)682-8495

Leah Bender

From: Tousley, Amy <Amy.Tousley@pse.com>
Sent: Friday, April 30, 2021 3:41 PM
To: Rick Walk; Jessica Brandt; Scott Egger
Cc: Mauer, Matthew
Subject: Lacey - Climate Mitigation Plan (PSE Comments)
Attachments: PSE 2020 Community Profile - Thurston County - March 2021.pdf; Thurston Climate Mitigation Plan - PSE Comment 10.16.20.pdf; Lacey - Climate Plan Open House 4.30.21.docx

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Good afternoon,

Please find attached, a letter to be submitted as part of the City's Open House regarding the Thurston Climate Mitigation Plan (TCMP). While the letter doesn't outline comments about the City's proposal, I felt it was important to attach PSE's October 2020 letter on the TCMP. We are excited to discuss in greater detail how PSE can provide assistance to the City in its implementation of the proposed Local Actions. Please let Matthew and I know when we can meet, it will be important for us to make sure other PSE folks are in attendance.

As an aside, I also wanted to forward PSE's - 2020 Thurston County profile.

Take care,
Amy

Amy L. Tousley

*Senior Municipal Liaison Manager for Puget Sound Energy
serving the cities and counties of Thurston, Lewis and Kitsap*

2711 Pacific Avenue S.E.
Olympia, WA 98501
360-786-5956 (desk)
206-604-3103 (cell)
amy.tousley@pse.com

Leah Bender

From: Tousley, Amy <Amy.Tousley@pse.com>
Sent: Thursday, April 1, 2021 3:11 PM
To: Jessica Brandt
Cc: Rick Walk; Beckwith, Jeff; Scott Egger; Mauer, Matthew
Subject: Lacey - RE: Climate Mitigation Plan Open House - NOW OPEN!

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Good afternoon Jessica,

Hope you are well.

Thank you for sending PSE notice about the City's Open House. We look forward to working with the cities and county on their continued development of climate change plans at the jurisdictional level. Over the past ten years, PSE has been an active participant in regional planning efforts on sustainability and climate change. We would like to continue our participation during Lacey's respective implementation of local actions. In addition to ensuring that the City is aware of what PSE is doing to address the impacts of climate change, including complying with CETA; our efforts are also focused on how these amendments and/or adoption of climate plans, comprehensive plans and development regulations such as building and energy codes will affect PSE and its customers.

On behalf of PSE, I will help coordinate our initial input as part of the Open House process. Since we believe it is important for us to be an active part in developing solutions to address climate change, perhaps we could look at setting up a stakeholders meeting to include PSE staff who are responsible for implementing plans, programs and initiatives related to areas such as LED lighting, energy efficiency, electric vehicles, solar and any other areas identified in the City's Plan.

Take care,
Amy

Amy L. Tousley
*Senior Municipal Liaison Manager for Puget Sound Energy
serving the cities and counties of Thurston, Lewis and Kitsap*

2711 Pacific Avenue S.E.
Olympia, WA 98501
360-786-5956 (desk)
206-604-3103 (cell)
amy.tousley@pse.com

From: Jessica Brandt
Sent: Thursday, April 01, 2021 9:28 AM
Subject: Climate Mitigation Plan Open House - NOW OPEN!

CAUTION - EXTERNAL EMAIL

Phishing? Click the PhishAlarm **"Report Phish"** button.

For mobile - forward to abuse@pse.com



CITY OF **LACEY**

**Implementing the
Thurston Climate Mitigation Plan
In Lacey**

[Visit our Virtual Open House April 1-30](#)

The City of Lacey worked with Thurston Regional Planning Council, Thurston County, and the cities of Olympia, and Tumwater to prepare for and reduce the impacts of climate change by developing the Thurston Climate Mitigation Plan.

The Plan is a framework for how we can reduce emissions from transportation and buildings, water, waste, and land use, while maintaining—and even improving—our quality of life.

We need your help prioritizing local actions. Explore the virtual poster boards, leave comments, take the surveys, and sign up for the mailing list to stay in touch.

Spread the word to your Lacey neighbors and businesses!

Access the Open House by visiting our [website](#).



Jessica Brandt
Associate Planner
Community & Economic Development
360.438.2637 | jbrandt@ci.lacey.wa.us

City of Lacey Community Engagement Initiative www.laceycares.org

Leah Bender

From: Ryan Andrews
Sent: Thursday, May 13, 2021 8:45 AM
To: 'Roy Treadway'
Cc: Jessica Brandt
Subject: RE: Comments on the Lacey Planning Commissions Meeting on May 18

Roy: 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: Roy Treadway
Sent: Wednesday, May 12, 2021 10:42 PM
To: Ryan Andrews
Subject: Comments on the Lacey Planning Commissions Meeting on May 18

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

Dear Mr Andrews:

Please share these comments relevant to action on the Lacey Comprehensive Plan at the meeting of the Lacey Planning Commission on Tuesday, May 18, with all Lacey Planning Commissioners.

Thank you.

Roy C. Treadway

1951 Circle Lane SE
Lacey, WA 98503
2021 May 12

Dear Lacey Planning Commissioners:

As a resident of Lacey, I urge you to adopt the Thurston Climate Mitigation Plan (TCMP) into the proposed Comprehensive Plan in Lacey at your meeting on May 18.

We are all aware of the increasing impact of climate change on our lives. We experienced the effects of climate change last summer when our air was so polluted by smoke from wildfires that it was unhealthy to go outdoors. We are seeing increasing flooding in winter and longer periods of no rain in the summer due to climate change, with increasing costs to ameliorate the resulting devastating effects. Our coastal communities face the inevitability of property damage and human relocation due to rising sea levels. Now is the time – not later – to act to mitigate the short and long term effects of climate change.

The Thurston Climate Mitigation Plan has been developed with the collaboration of many local concerned citizens and dedicated staff of Lacey along with Olympia, Tumwater, and Thurston County for over three years to provide a blueprint for all of us in Thurston County to reduce our greenhouse gas emissions from 2015 by 85 percent by 2050. Not only does the plan provide comprehensive actions to meet these climate goals, but it also provides detailed ways in which Lacey can become a more livable, healthy, equitable, and economically viable place in which to live. It focuses our residential and commercial development as infill, where we already have urban services, supports public transit, and discourages more sprawl. It challenges us not only to use renewable energy sources, but also to use less energy in our transportation and buildings. It encourages us to preserve and increase the trees and prairies we have not only to capture carbon, but also help retain essential water and enrich our life-giving soil. It guides us to be a better and more resilient community in which to live.

That is type of community in which I would like to live and enjoy life. Yes, to accomplish the actions of the Thurston Climate Mitigate Plan will cost money, but so will **not** doing anything. The investment and commitment will be very worthwhile.

Please support implementing the Thurston Climate Mitigation Plan into the Lacey Comprehensive Plan.

Roy C. Treadway



LACEY PLANNING COMMISSION STAFF REPORT May 18, 2021

SUBJECT: Housing Action Plan

RECOMMENDATION: The Planning Commission will conduct a public hearing to take testimony on the draft Housing Action Plan that is proposed to be incorporated into the Housing Element of the Comprehensive Plan. After the conclusion of the hearing, the Planning Commission may make a recommendation on the Plan to the City Council.

TO: Lacey Planning Commission

STAFF CONTACTS: Rick Walk, Community and Economic Development Director
Ryan Andrews, Planning Manager *RA*

ATTACHMENT(S):

1. Housing Action Plan Public Hearing Draft
2. [Housing Needs Assessment](#)
3. [Landlord Survey Summary](#)

PRIOR REVIEW: May 11, 2021 Planning Commission Meeting
Jan. 5, 2021 Planning Commission Meeting (Housing Needs Assessment)

BACKGROUND:

The City of Lacey has developed a Housing Action Plan to encourage the 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.

To support the effort, the Cities of Lacey, Olympia, and Tumwater contracted with Thurston Regional Planning Council to develop:

- A Housing Needs Assessment, including a 25-year projection of housing affordable at different income levels;
- A Rental Survey to better understand what residents are paying for rent and how rents are changing; and
- A Draft Housing Action plan that can be tailored for use by each city that contains specific actions that can increase the stock of affordable housing.

The Housing Action Plan will be adopted into the Housing Element of the Comprehensive Plan as an appendix to support housing policies and actions and to compliment the Lacey's existing Affordable Housing Strategy.

The Housing Action Plan builds on the work done through the Housing Needs Assessment by addressing the seven housing gaps that were identified with an overall focus on how to create an equitable housing market. The housing gaps are addressed through the actions identified in the plan which were developed collaboratively with a stakeholder committee made up of for-profit and non-profit housing providers, real estate professionals, elected and appointed government officials and residents.

The Housing Action Plan identifies the primary actions Lacey can take and also identifies whether or not the City has previously considered implementing the action. The Housing Action Plan categorizes each action into the following:

1. Actions that increase the supply of permanently affordable housing for households that make 80 percent or less of the area median income.
2. Actions that make it easier for households to access housing and stay housed.
3. Actions that expand the overall housing supply by making it easier to build all types of housing projects.
4. Actions that increase the variety of housing choices.
5. Actions that improve implementation of housing strategies through collaboration, public understanding, and continually building on resources.
6. Actions that establish a permanent source of funding for low-income housing.

The Planning Commission has reviewed each action and identify those that are the highest priority. One significant action that is a priority of staff but has not yet been completed is the Low Density Residential Zone Consolidation. The zoning consolidation has received a recommendation from the Planning Commission but has not yet been adopted by the City Council. It is anticipated that one of the first actions to be implemented out of the Housing Action Plan will be the zoning consolidation.

The Housing Action Plan also identifies actions that require legislative support that would be best achieved if we worked cooperatively between jurisdictions to address. 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. The Planning Commission has identified supporting a regional approach to a permanent funding source to support low-income housing as another high priority action.

The final chapters of the Housing Action Plan include additional details and a description of each action and also includes a table of all actions that have been considered. A focus of the 2016 Comprehensive Plan was related to addressing housing variety and availability. Many of the actions that have been identified for Olympia and Tumwater have already been completed in Lacey.

As part of the Planning Commission review, staff will provide an evaluation of Lacey's adopted Housing Element and development codes, providing a summary of any consistencies, inconsistencies and recommended actions identified through the evaluation.

Public Outreach

The Housing Action Plan was developed by Thurston Regional Planning Council Staff with the assistance of a stakeholder committee. While the committee was a diverse representation of

the housing industry, additional stakeholder engagement has been necessary prior to Plan adoption. In addition to typical public engagement including putting a draft of the Housing Action Plan on the City's website and Facebook posts, outreach has also included review by the Government Affairs Committee of Olympia Master Builders and the Thurston Thrives Affordable Housing Team. The Plan has also been broadly distributed to affordable housing providers and stakeholders for their review.

RECOMMENDATION:

The Planning Commission will conduct a public hearing on the Housing Action Plan as an amendment to the Housing Element of the Comprehensive Plan. The Planning Commission has the responsibility and authority to recommend action to the Lacey City Council on the proposed amendment. Based upon public comments, staff analysis, review of the Comprehensive Plan, and other applicable information, the Commission requested to make a formal recommendation on the Plan to the City Council or schedule a follow-up work session for additional deliberation.

HOUSING ACTION PLAN

for the
City of Lacey

April 1, 2021 Draft



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.

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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 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

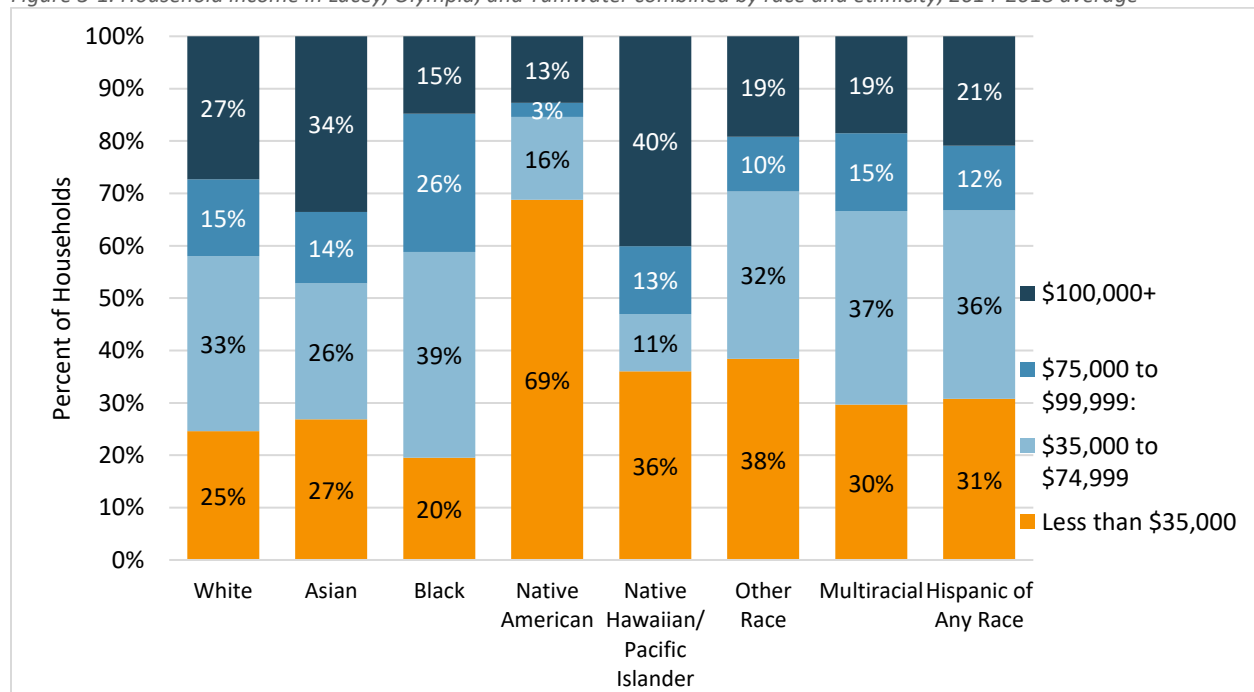
Reducing the cost of renting and owning a home are both part of the solution. For households looking toward homeownership, the up-front costs associated with purchasing a home can put this option out of reach. Low-income households, however, can benefit from the stabilization in housing costs owning 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.

Figure 3-1. Household income in Lacey, Olympia, and Tumwater combined by race and ethnicity, 2014-2018 average

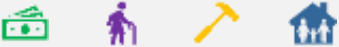
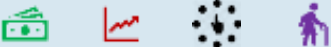


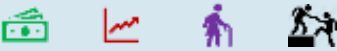
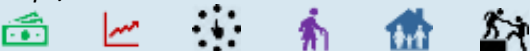
Note: In the figure above, householders who are Latino or Hispanic are only represented in “Hispanic of Any Race.”

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.

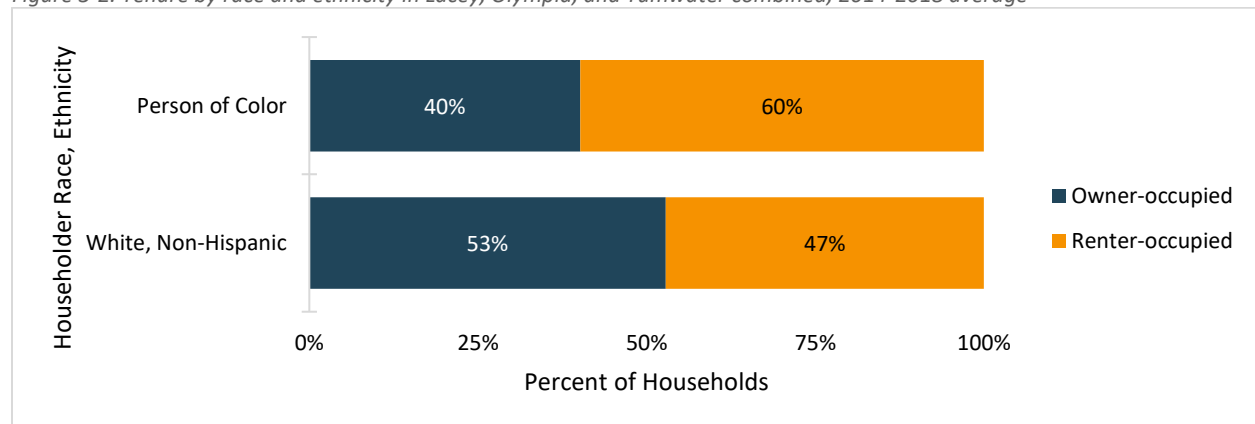
How do these actions reduce housing costs?

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.

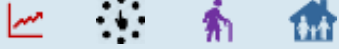
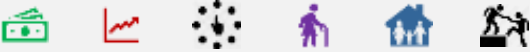
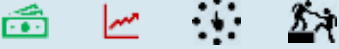
Market rate housing alone will not address the needs of the most disadvantaged populations, and pressure to develop market rate housing in communities of color can cause displacement. Strategy 1 includes actions to increase the supply of housing for the lowest-income households while Strategy 2 includes 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. Gaps/Needs Addressed: 	
3.b	Allow third-party review of building permits for development projects. Gaps/Needs Addressed: 	
3.c	Develop a plan for adapting vacant commercial space into housing. Gaps/Needs Addressed: 	
3.d	Expand allowance of residential tenant improvements without triggering land use requirements. Gaps/Needs Addressed: 	
3.e	Reduce parking requirements for residential uses, including for multifamily developments near frequent transit routes. Gaps/Needs Addressed: 	
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  = 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.l Simplify land use designation maps in the comprehensive plan to help streamline the permitting process. <i>Gaps/Needs Addressed:</i> 		
3.m Integrate or adjust floor area ratio standards. <i>Gaps/Needs Addressed:</i> 		
3.n Maximize use of SEPA threshold exemptions for residential and infill development. <i>Gaps/Needs Addressed:</i> 		
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. <i>Gaps/Needs Addressed:</i> 		
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?

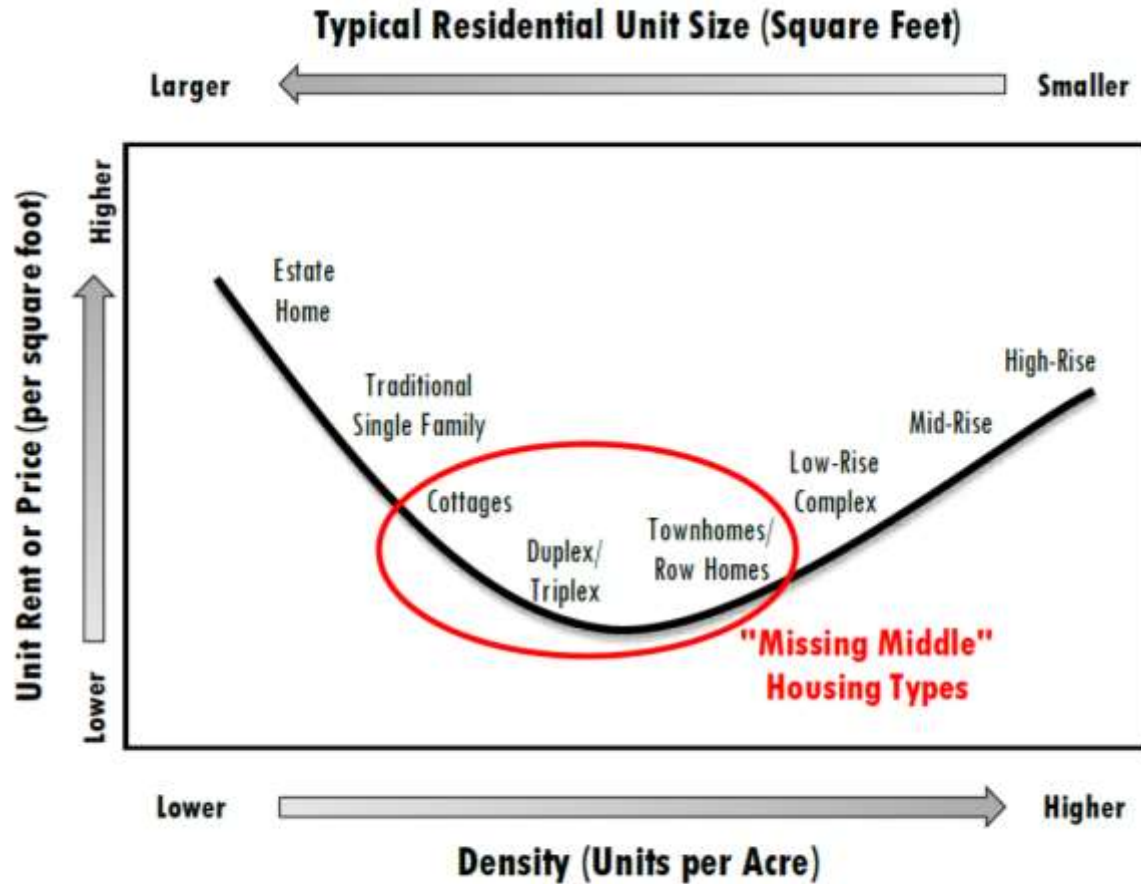
Household sizes in Thurston County have gotten smaller – reaching an average of 2.5 people per household today. There are more single-parent families and householders living alone. As household formation and composition have changed over time, so have housing needs. Increasing the variety of housing 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.). Gaps/Needs Addressed:      	
4.b.	Allow more housing types in commercial zones. Gaps/Needs Addressed:  	
4.c.	Adopt a form-based code for mixed-use zones to allow more housing types and protect the integrity of existing residential neighborhoods. Gaps/Needs Addressed:   	
4.d.	Allow single-room occupancy (SRO) housing in all multifamily zones. Gaps/Needs Addressed:  	
4.e.	Strategically allow live/work units in nonresidential zones. Gaps/Needs Addressed:   	
Key  = Affordability  = Supply  = Variety  = Seniors  = Improvements  = Stability  = Supportive Housing Implementation Status  Action Pending  Action Implemented		

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. Gaps/Needs Addressed: 	
6.b. Establish an affordable housing property tax levy to finance affordable housing for very low-income households. Gaps/Needs Addressed: 	
6.c. Establish an affordable housing sales tax. Gaps/Needs Addressed: 	
6.d. Establish a regional housing trust fund to provide dedicated funding for low-income housing. Gaps/Needs Addressed: 	
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.	



PLANNING COMMISSION STAFF REPORT

May 18, 2021

SUBJECT: 2020-2021 Urban Forest Management Plan Update

RECOMMENDATION: Conduct a public hearing and make a formal recommendation to the City Council on proposed updates to the Urban Forest Management Plan and revisions to the implementation regulations in LMC 14.32. Staff recommends approval of amendments.

TO: Lacey Planning Commission

STAFF CONTACTS: Rick Walk, Community and Economic Development Director
Ryan Andrews, Planning Manager *RA*
Jessica Brandt, Associate Planner *JB*

ATTACHMENT(S):

1. UFMP draft amendments
2. LMC 14.32 draft amendments
3. LMC 14T-66
4. Tree Survey Results as of 05/10/21
 - a. Selectable questions (graphs)
 - b. Open ended question responses - comments
5. Tree Comments from Climate Plan Open House as of 04/30/21

**PRIOR COUNCIL/
COMMISSION/**

COMMITTEE REVIEW: 05/04/21 Planning Commission
07/09/20 Planning Commission
06/23/20 Land Use Committee
02/14/20 Planning Commission
02/04/20 Planning Commission

BACKGROUND:

The Urban Forest Management Plan is the overarching policy document that guides the City's urban forestry vision and efforts. The City developed this Plan in 2006 and updated it in 2013 with the assistance of the City of Lacey's contract forester Galen Wright, who has decades of experience and perspective into Lacey's urban forestry efforts.

In keeping with the Plan's goal of updating the document every five years, it is now due again for review, along with the implementation regulations in LMC 14.32. In addition, homeowner associations and citizens have raised questions and concerns over tree removal and permitting process to the Council further supporting the need to conduct an assessment of forestry plan

and regulations. The review process examines challenges, issues, and experiences related to the implementation of the Plan since its last update.

To assist the Planning Commission in developing recommendations for changes to the Urban Forest Management Plan and tree regulations, a tree task force was established. The tree task force contained a broad representation of interests including homeowners associations, commercial property owners, residential development, environmental protection, residential property owners, and a representative from the Planning Commission. The task force is supported by a staff group representing Parks Facilities, Transportation Maintenance, Development Review, City Foresters and Community and Economic Development. The task force met five times in total and has provided staff and City foresters input on policy and regulation issues and challenges.

Early in the task force's discussions, these high-level issues were identified:

- Enforcement of Tree Regulations
- Street Tree Program
- Private Property Trees and Consistent Application of Regulations
- Retention of Existing Trees Through Development Process
- Tree Education and Outreach
- Potential Establishment of Tree Board

The task force also discussed options to address issues brought forth by homeowners associations and commercial property owners who wish to remove and replace existing trees but are constrained under current regulations.

Following a survey of the staff and task force about their recommended priorities of the above issues, the task force collectively recommended that the City focus on outreach and education first, then enforcement of tree regulations.

Public Outreach

During the month of April, staff engaged the community with educational information in Lacey Life, a tree survey and dedicated a section of the Climate Mitigation Plan Open House to trees. A State of the Trees Report is now available on the City's website and was distributed electronically through social media, a link in the Lacey Life newsletter, and emailed to HOAs and landscaping businesses in Lacey. Feedback has been similar to the issues identified by the Tree Task Force:

Total survey responses as of 05/10/21 – 173 responses (See attachment 4)
Open House comments as of 04/30/21 – 15 written comments (See attachment 5)

A key issue that has come out of the tree task force, community surveys, staff feedback, and tree protection specialist feedback is the need for a cohesive tree program at the city. A tree program would include more resources for education, outreach, and enforcement to maintain and enhance the city's tree canopy. Requests from the public regarding more tree protection and increased tree planting also emerged through a parallel planning process, the Thurston Climate Mitigation Plan. Planting trees and retaining large trees provides carbon sequestration, a key action to meet climate targets in 2030 and 2050.

Draft Amendments

Highlights of the proposed amendments include:

Urban Forest Management Plan

- Introductory information about this update.
- Goals and Policies – added language about the importance of enforcement
- Appendix 4 – planting details to match Development Guidelines and Public Works Standards.
- Tree protection specialists reviewing and updating where needed, recommended tree lists for street trees, parks, and residential uses.

LMC 14.32

- Housekeeping items in definitions .
- Exemptions
 - o Individual lot exemption – maintain tree density and require tree protection specialist review if removing more than 5 trees. Remove language for “5 trees every 36 months” allowance.
 - o HOA open spaces with forester review and replanting. (Discussion item)
 - o City owned property
- Remove a substantial portion of “Revegetation Options” section 14.32.069. City tree protection professionals determined it is no longer necessary to include the entirety of this language in the regulations.

The tree task force reviewed proposed amendments on April 22, 2021 and were in general agreement about most of the proposed amendments. The Planning Commission reviewed the proposed amendments May 4, 2021. Both the task force and Planning Commission did not have full consensus the issue of healthy tree removals in HOA open spaces. Additional technical amendments, such as recommended tree lists, will likely be made after further review by our tree protection specialists before consideration for formal adoption.

RECOMMENDATION

The Planning Commission will conduct a public hearing on amendments to the Urban Forest Management Plan and associated regulations contained in Lacey Municipal Code 14.32. The Planning Commission has the responsibility and authority to recommend action to the Lacey City Council on the proposed amendments. Based upon public comments, staff analysis, review of the Comprehensive Plan, and other applicable information, the Commission requested to make a formal recommendation on the amendments to the City Council or schedule a follow-up work session for additional deliberation.

CITY OF LACEY

URBAN FOREST MANAGEMENT PLAN



URBAN FOREST MANAGEMENT PLAN

CITY OF LACEY

~~JULY 25, 2013~~ July 2021



LACEY CITY COUNCIL

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~~Jason Hearn~~ Cynthia Pratt, -Deputy -Mayor
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Lacey Urban Forest Management Plan

Principal technical assistance:

Commented [JB1]: Update when ready for adoption

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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
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 - 9. Curb Lawn Zone Widths
 - 10. Maintaining the Safety of the Urban Forest
 - 11. Removals
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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
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- 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 the City of Milwaukee, WI

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

Lacey Urban Forest Management Plan

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 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 locations

Lacey Urban Forest Management Plan

- Clarification of regulations contained in LMC 14.32 pertaining to tree replacement on individual lots
- Clarification of definitions contained in LMC 14.32
- Improve inspection procedures for trees in the 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 ~~has~~was ~~also been~~ 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 we reduce emissions we also will need to

Lacey Urban Forest Management Plan

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.

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.

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 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:

Lacey Urban Forest Management Plan

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.

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:

Lacey Urban Forest Management Plan

- 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 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:

Lacey Urban Forest Management Plan

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.



Streetscape in 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 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).

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 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.

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:

Lacey Urban Forest Management Plan

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.

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 ~~currently lacks an ordinance adopted an ordinance in 2015~~ related to street tree maintenance ~~and may benefit from developing one in the future. Such an~~The ordinance ~~would provides~~ additional clarity and consistency when it comes to maintenance responsibilities.

Another benefit of ~~having the~~a street tree ordinance ~~would be to~~s that it clarifies notice and abatement procedures for trees on private property that may impact city right-of-way. This ordinance ~~would~~ 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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Creative use of trees – Lacey, WA



Development pressure on the forest – Lacey, WA

Goals and Policies Of the Urban Forest Management Plan

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.

~~D.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.

the urban use is expected to be institutional.

F.D. 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.

G.E. 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.
- 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

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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. Develop a no net loss standard for maintenance of Lacey's tree canopy. 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 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.

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 ~~Woodland District~~ 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 requirements for trees.

~~C.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.

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- 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.
- 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:

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- 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 – 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 Oregongrape 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, Oregongrape, 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

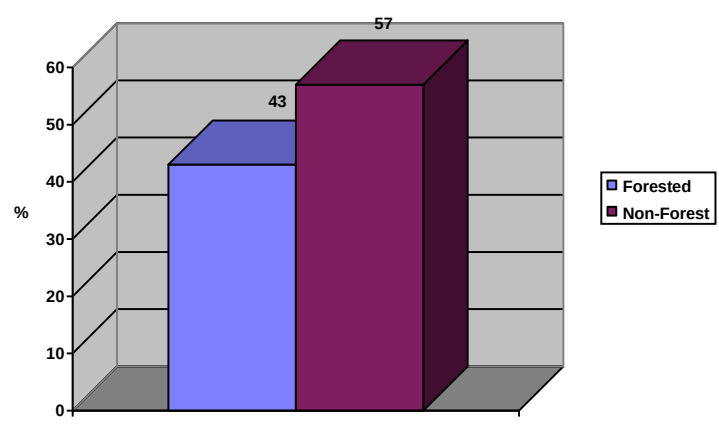
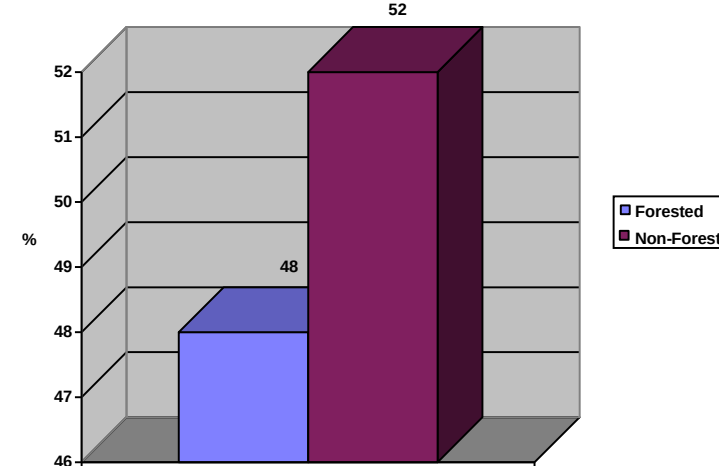


Figure 2. % Forest Cover in Lacey - 1966



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.

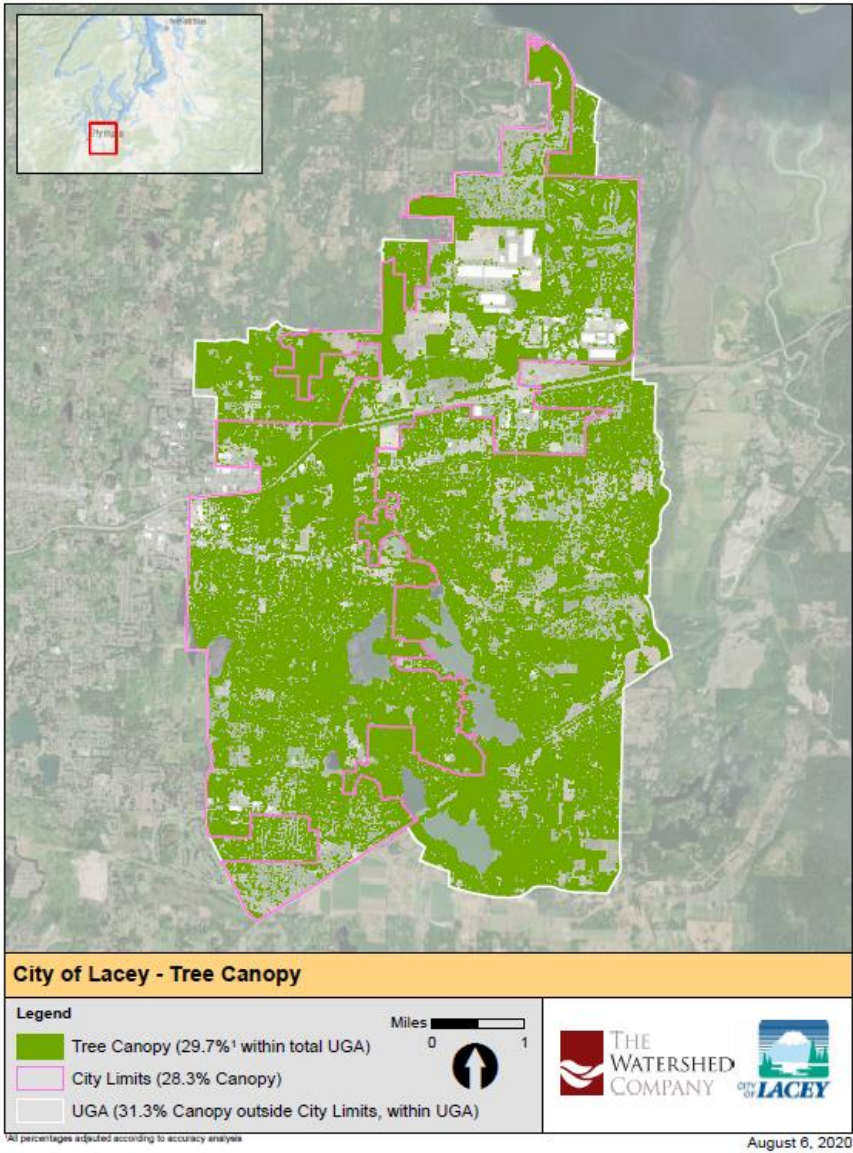


Figure 3 illustrates tree canopy in the City and UGA as of August 2020.

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.

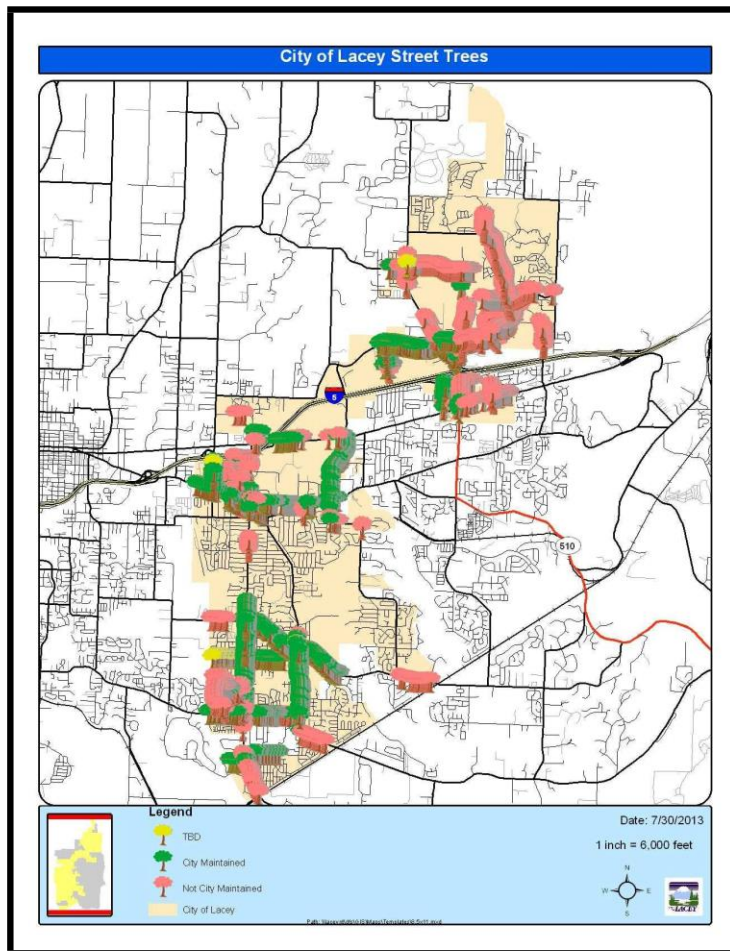


Figure 34. 2012 Street Tree Inventory

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

Species	Diameter Range (inches)	# 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 Sunset	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.



Photo D. View of privately maintained street trees in SE Lacey. A case where trees are well-maintained.

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 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

Lacey Urban Forest Management Plan

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 2,9734,554 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.

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 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.

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 needs.

Removals

The hazard tree evaluation program in parks has already identified a number of removals that are necessary. These trees should be removed or pruned as recommended immediately to protect public safety. Staff has done a good job in the past of completing hazard tree mitigation in a timely fashion.

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

~~The majority of the street trees in Lacey are smaller trees, so~~ Street trees in Lacey are causing sidewalk heaving ~~is not a major problem and. However,~~ there will need to be ~~some~~ 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 case by case basis. Trees in poor condition, or that would be made hazardous by the activity should be considered for removal.

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. Stumps do need to be cut low to avoid safety problems with pedestrians and cars. In many cases grinding to a level 6 inches below the surface is recommended since safety concerns are eliminated and lawn can be established. Small stumps may be cut at the groundline and left in many cases. 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).

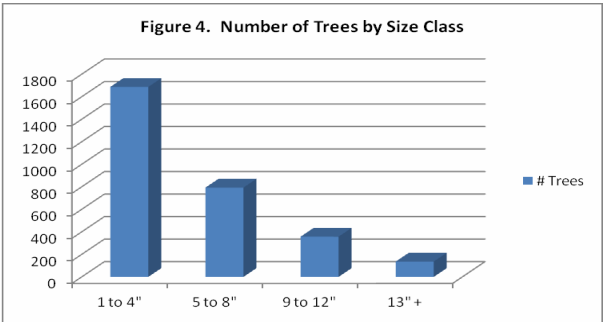


Figure 4 illustrates the young age of the Lacey city maintained street tree population. The urban forest should have a diversity of size classes as well as species. This helps assure that the entire urban forest does not mature at the same time causing excessive maintenance costs, replanting costs, and 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.

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 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 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 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 at 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 changes 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 ~~top half of~~ the root ball are to be removed after the plant has been set. All waterproof or water repellant wrappings shall be removed from the ball. Remove at least the top half of the wire basket before backfilling.

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 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 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.

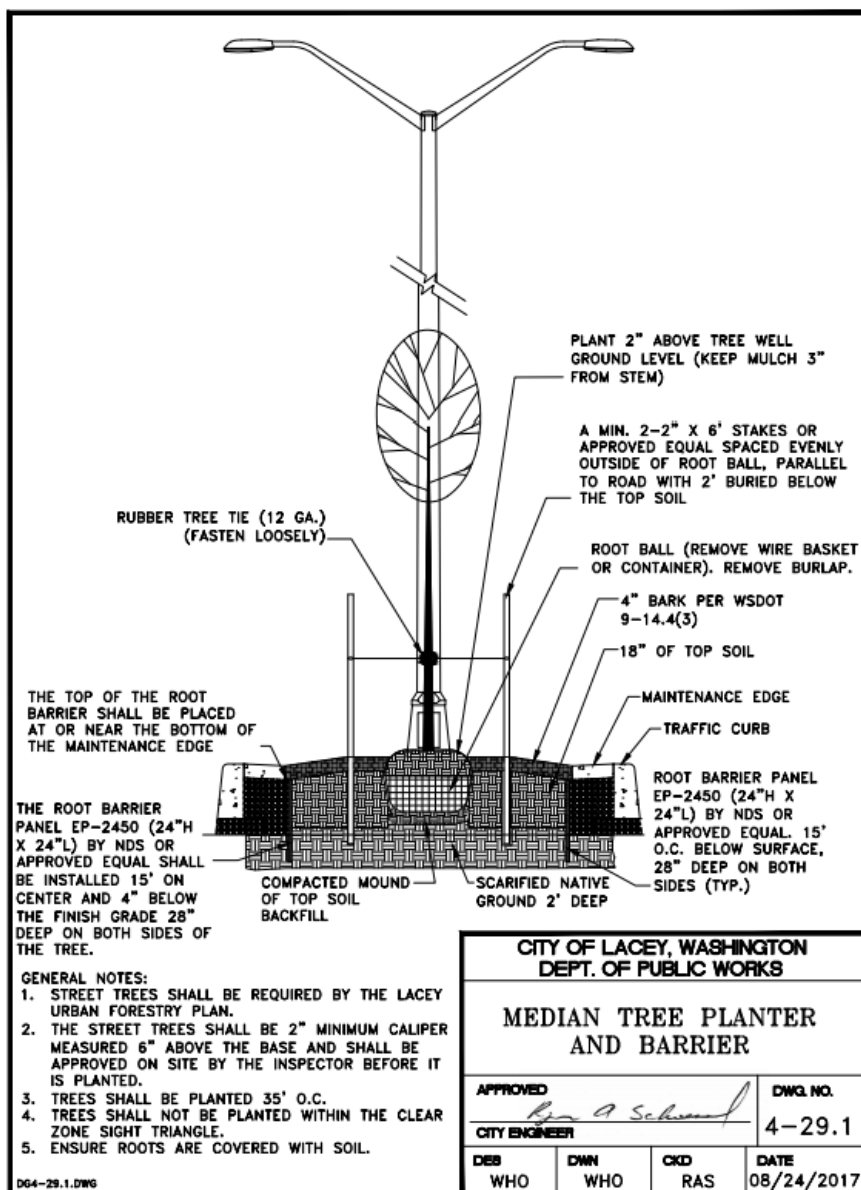
XVIII. Final Inspection and Final Acceptance

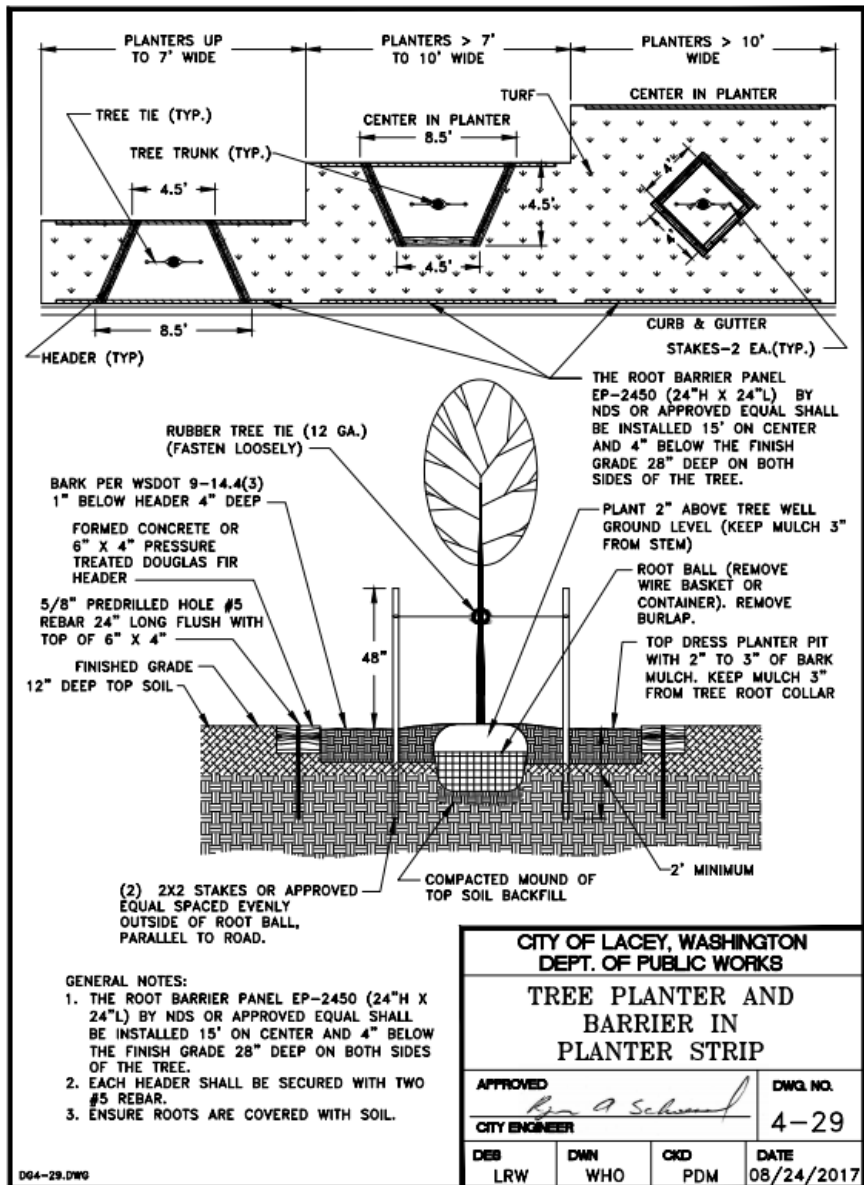
A. At the end of the guarantee period and upon written request of the Contractor, the Owner's Representative will inspect all guaranteed work for final acceptance. The request shall be received at least 10 calendar days before the anticipated date for final inspection. Upon completion and reinspection 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.

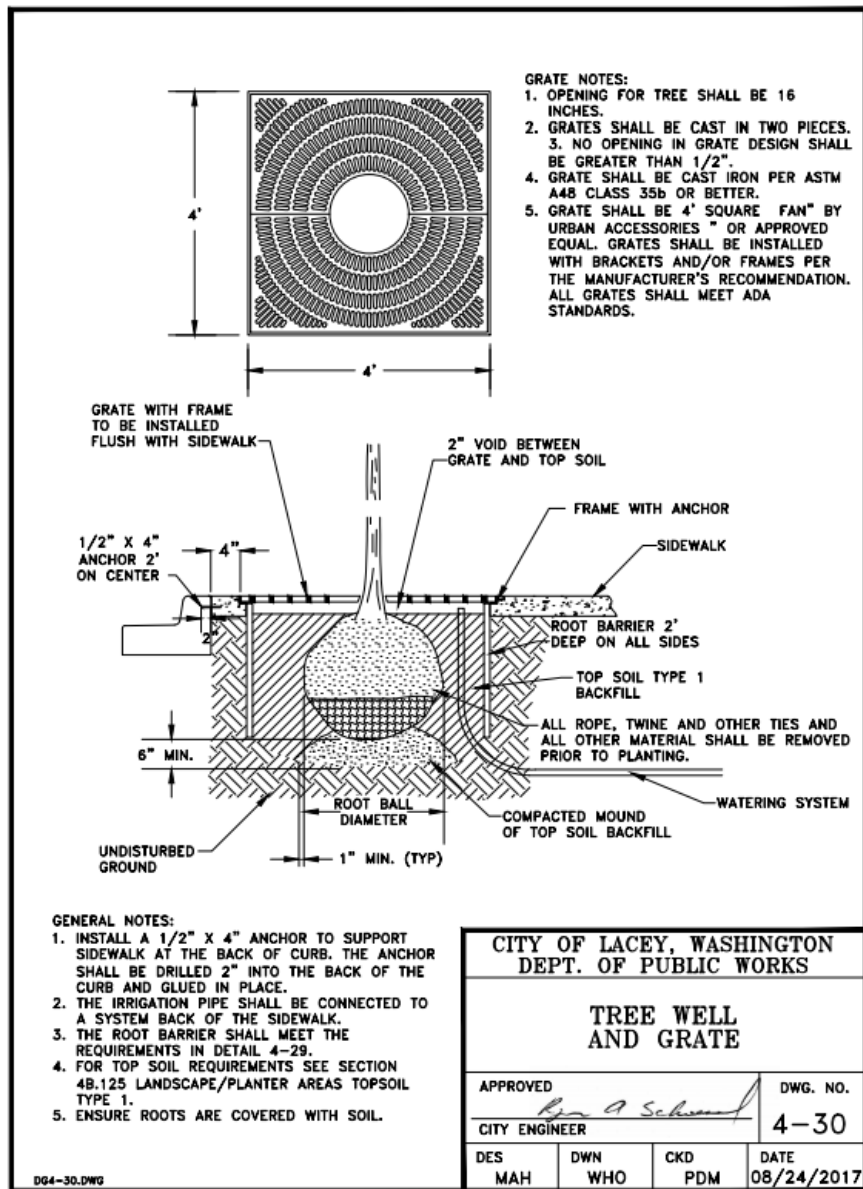
The City of Lacey Development Guidelines and Public Works Standards dictate street tree planting requirements. Drawing Numbers 4-29 and 4-30 in Chapter 4 Transportation are referenced below.

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APPENDIX 4

Tree Protection Guidelines

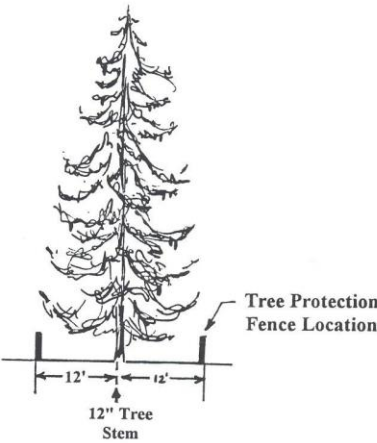
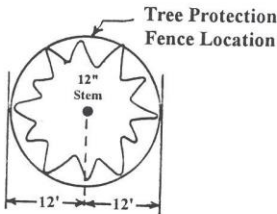
Pacific Northwest Native Trees

TREE ROOT PROTECTION ZONES

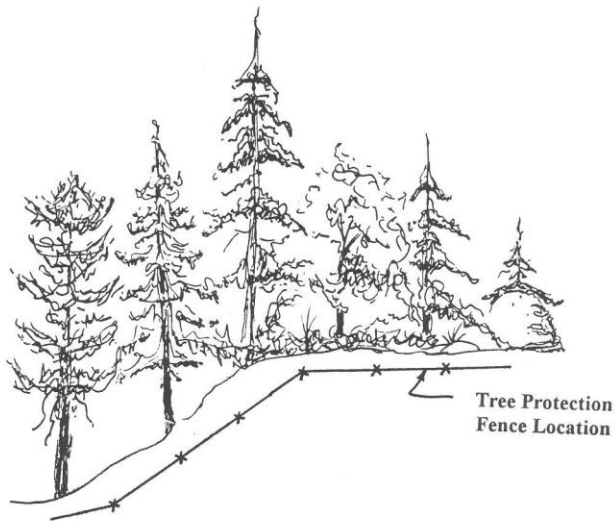
The root protection zone (RPZ) for Pacific Northwest native trees extends a distance of one (1) foot for every inch of tree diameter, measured 4.5' above the ground line. For example, the RPZ for a 12" diameter tree has a radius of 12' measured from the center of the tree stem. Ornamental or other high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

TOP VIEW

SIDE VIEW



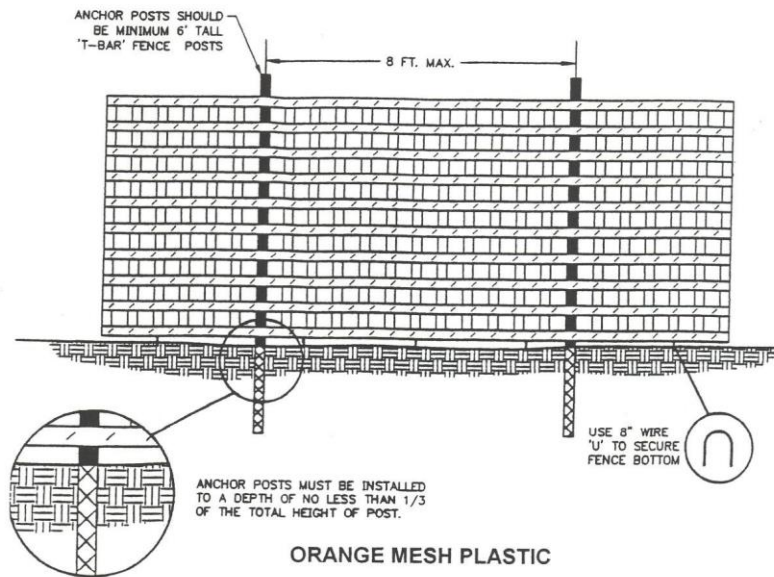
The RPZ for the edge of a forested area is determined using the diameters of the dominant edge trees, meandering the tree protection fence to correspond with the required RPZ distances.



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.

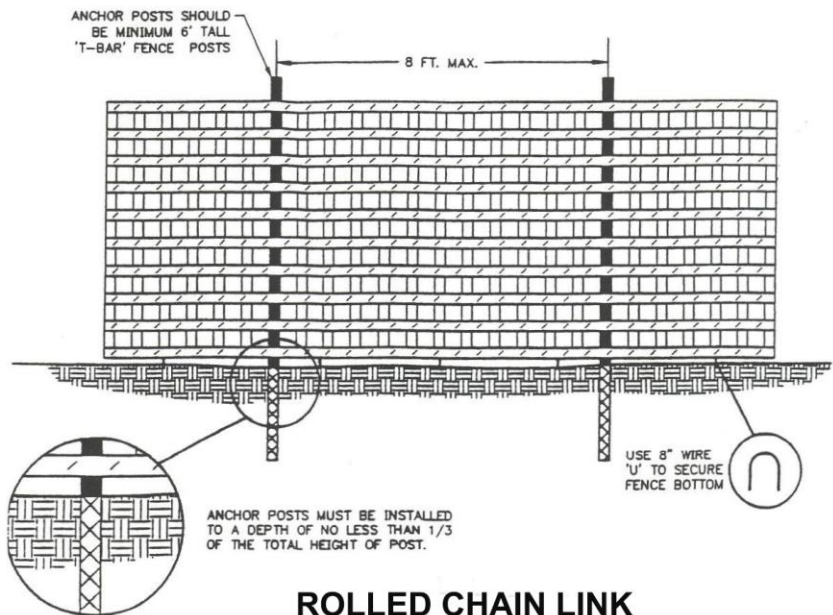
If impacts must occur within the RPZ, contact Washington Forestry Consultants prior to the operations to determine the proper procedure to protect the tree's health.



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



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 Goal: Streets lined with canopy forming trees (City of Milwaukee, WI).

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.

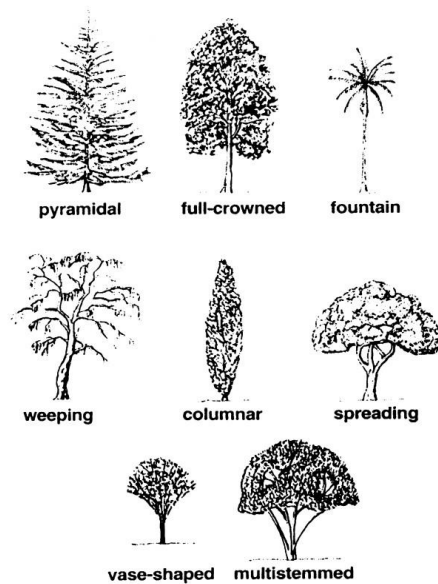


Figure 10. Illustration of Tree Shapes.

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 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 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 dominant 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.

Trees species planted into tree grates in the sidewalk will need to be more tolerant of elevated soil and ambient temperatures due to reflected and absorbed heat. Trees tolerant of drought tend to be more resistant to the harsh conditions when planted into a sidewalk or parking lot. Special consideration will need to be given for tree species selection for trees planted in grates.

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 as street and landscape trees within the city of Lacey. 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-treing 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.

Table 2. General list of trees for Lacey.

Commented [JB3]: Kevin or Galen to update

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Large >50' Tall					40-50'
Northern Red Oak	<i>Quercus rubra</i>		70'	45'	
Tuliptree	<i>Liriodendron tulipifera</i>		70'	35'	
Autumn Purple Ash	<i>Fraxinus americana</i>	Autumn Purple	50'	35'	
Sugar Maple	<i>Acer saccharum</i>	Commemoration/Bonfire	60'	35'	
European Beech	<i>Fagus sylvatica</i>		50'	35'	
Scarlet Oak	<i>Quercus coccinea</i>		60'	40'	
Medium-Narrow-Crowns 40-50' Tall					25-35'
Columnar Tuliptree	<i>Liriodendron tulipifera</i>	Fastigiatum	50'	15'	
Armstrong Red Maple	<i>Acer rubrum</i>	Armstrong	45'	15'	
Bowhall Red Maple	<i>Acer rubrum</i>	Bowhall	40'	15'	
Parkway Maple	<i>Acer platanoides</i>	Columnar-broad	40'	25'	
Skyrocket Oak	<i>Quercus robur</i>	Fastigiata	45'	15'	
Medium-Wider-Crowns 40-50' Tall					35-40'
Littleleaf Linden	<i>Tilia cordata</i>	Greenspire	40'	30'	
Summit Ash	<i>Fraxinus pennsylvanica</i>	Summit	45'	25'	
Patmore Ash	<i>Fraxinus pennsylvanica</i>	Patmore	45'	35'	
Norway Maple	<i>Acer platanoides</i>	Emerald Queen	45'	40'	
Red Sunset Maple	<i>Acer rubrum</i>	Red Sunset	45'	35'	
October Glory Red Maple	<i>Acer rubrum</i>	October Glory	45'	35'	
Honeylocust	<i>Gleditsia triacanthos</i>	Shademaster	45'	35'	
Katsura Tree	<i>Cercidiphyllum japonicum</i>		40'	40'	
Red Horsechestnut	<i>Aesculus x carnea</i>	Briotti	30'	35'	
Autumn Gold Ginkgo	<i>Ginkgo biloba</i>	Autumn Gold	35'	30'	
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	-				25-35'

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<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>	<u>CULTIVAR</u>	<u>MATURE HEIGHT</u>	<u>CROWN SPREAD</u>	<u>SPACING</u>
<u>Crowns 40-50' Tall</u>					
Parkway Maple	<u>Acer platanoides</u>	<u>Columnar-broad</u>	<u>40'</u>	<u>25'</u>	
Armstrong Red Maple	<u>Acer rubrum</u>	<u>Armstrong</u>	<u>45'</u>	<u>15'</u>	
Bowhall Red Maple	<u>Acer rubrum</u>	<u>Bowhall</u>	<u>40'</u>	<u>15'</u>	
Columnar Tuliptree	<u>Liriodendron tulipifera</u>	<u>Fastigiatum</u>	<u>50'</u>	<u>15'</u>	
Fastigate Beech	<u>Fagus sylvatica</u>	<u>Fastigiata</u>	<u>45'</u>	<u>15'</u>	
Skyrocket Oak	<u>Quercus robur</u>	<u>Fastigiata</u>	<u>45'</u>	<u>15'</u>	
<u>Medium – Wider Crowns 40-50' Tall</u>					<u>35-40'</u>
Norway Maple	<u>Acer platanoides</u>	<u>Emerald Queen</u>	<u>45'</u>	<u>40'</u>	
Red Maple	<u>Acer rubrum</u>	<u>October Glory</u>	<u>45'</u>	<u>35'</u>	
Red Horsechestnut	<u>Aesculus x carnea</u>	<u>Briotti</u>	<u>40'</u>	<u>35'</u>	
Katsura Tree	<u>Cercidiphyllum japonicum</u>		<u>40'</u>	<u>40'</u>	
Summit Ash	<u>Fraxinus pennsylvanica</u>	<u>Summit</u>	<u>45'</u>	<u>25'</u>	
Patmore Ash	<u>Fraxinus pennsylvanica</u>	<u>Patmore</u>	<u>45'</u>	<u>35'</u>	
Autumn Gold Ginkgo	<u>Ginkgo biloba</u>	<u>Autumn Gold</u>	<u>40'</u>	<u>30'</u>	
Honeylocust	<u>Gleditsia triacanthos</u>	<u>Shademaster</u>	<u>45'</u>	<u>35'</u>	
Littleleaf Linden	<u>Tilia cordata</u>	<u>Greenspire</u>	<u>40'</u>	<u>30'</u>	
<u>Small Trees <35' Tall</u>					<u>30-40'</u>
Trident Maple	<u>Acer buergeranum</u>		<u>20'</u>	<u>20'</u>	
David's maple	<u>Acer davidii</u>		<u>30'</u>	<u>25'</u>	
Flame Maple	<u>Acer ginnala</u>	<u>Flame</u>	<u>20'</u>	<u>20'</u>	
Paperbark Maple	<u>Acer griseum</u>		<u>25'</u>	<u>20'</u>	
Tatarian Maple	<u>Acer tatarian</u>		<u>25'</u>	<u>20'</u>	
Norwegian Sunset Maple	<u>Acer truncatum x A. platanoides</u>	<u>Keithsform</u>	<u>35'</u>	<u>25'</u>	
Pacific Sunset Maple	<u>Acer truncatum x A. platanoides</u>	<u>Warrenred</u>	<u>30'</u>	<u>25'</u>	
Pyramidal European Hornbeam	<u>Carpinus betulus</u>	<u>Fastigiata</u>	<u>35'</u>	<u>25'</u>	
American Hornbeam	<u>Carpinus caroliniana</u>		<u>25'</u>	<u>20'</u>	
Eastern Redbud	<u>Cercis Canadensis</u>	<u>Forest Pansy</u>	<u>20'</u>	<u>25'</u>	
Pink Flowering Dogwood	<u>Cornus florida</u>	<u>Rubra</u>	<u>20'</u>	<u>20'</u>	
Chinese Kousa Dogwood	<u>Cornus kousa</u>	<u>Chinensis</u>	<u>20'</u>	<u>20'</u>	
Tricolor Beech	<u>Fagus sylvatica</u>	<u>Roseomarginata</u>	<u>30'</u>	<u>20'</u>	
Goldenrain Tree	<u>Koelreuteria paniculata</u>		<u>30'</u>	<u>30'</u>	
Rustica Rubra Saucer Magnolia	<u>Magnolia soulangiana</u>	<u>Rustica Rubra</u>	<u>20'</u>	<u>20'</u>	
Flowering Crabapple	<u>Malus spp.</u>	<u>Snowdrift, Red Baron, Prairiefire</u>	<u>20'</u>	<u>20'</u>	
Black Tupelo	<u>Nyssa sylvatica</u>		<u>30'</u>	<u>20'</u>	

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<u>COMMON NAME</u>	<u>BOTANICAL NAME</u>	<u>CULTIVAR</u>	<u>MATURE HEIGHT</u>	<u>CROWN SPREAD</u>	<u>SPACING</u>
<u>Flowering Plum</u>	<u>Prunus cerasifera</u>	<u>Thunder-cloud</u>	<u>20'</u>	<u>20'</u>	
<u>Sargent Cherry</u>	<u>Prunus sargentii</u>		<u>30'</u>	<u>30'</u>	
<u>Snowgoose Cherry</u>	<u>Prunus spp.</u>	<u>Snowgoose</u>	<u>20'</u>	<u>20'</u>	
<u>Callery Pear (not for street tree use)</u>	<u>Pyrus calleryana</u>	<u>Redspire or Cleveland Select</u>	<u>35'</u>	<u>25'</u>	
<u>Japanese Stewartia</u>	<u>Stewartia pseudocamellia</u>		<u>30'</u>	<u>20'</u>	
<u>Japanese Snowbell</u>	<u>Styrax japonicus</u>		<u>25'</u>	<u>25'</u>	
<u>Redmond Linden</u>	<u>Tilia americana</u>	<u>Redmond</u>	<u>35'</u>	<u>25'</u>	
<u>Small Trees – Narrow <35' Tall</u>					<u>25-30'</u>
<u>Rocky Mt. Maple</u>	<u>Acer grandidentatum</u>	<u>Schmidt</u>	<u>25'</u>	<u>15'</u>	
<u>Crimson Sentry Maple</u>	<u>Acer platanoides</u>	<u>Crimson Sentry</u>	<u>25'</u>	<u>15'</u>	
<u>Golden Desert Ash</u>	<u>Fraxinus oxycarpa</u>	<u>Aureaefolia</u>	<u>20'</u>	<u>18'</u>	
<u>Galaxy Magnolia</u>	<u>Magnolia 'Galaxy'</u>	<u>Galaxy</u>	<u>30'</u>	<u>15'</u>	
<u>Spire Cherry</u>	<u>Prunus x hillieri</u>	<u>Spire</u>	<u>30'</u>	<u>10'</u>	
<u>Red Cascade Mt. Ash</u>	<u>Sorbus americana</u>	<u>Dwarfscrown</u>	<u>18'</u>	<u>8'</u>	
<u>Tree Lilac</u>	<u>Syringa meyeri</u>	<u>Palibin</u>	<u>7'</u>	<u>5'</u>	

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COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Small Trees <35' Tall					25-40'
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'	
Crimson Sentry Maple	<i>Acer platanoides</i>	Crimson Sentry	25'	15'	30-40'
Japanese Stewartia	<i>Stewartia pseudocamellia</i>		30'	20'	
Snowgoose Cherry	<i>Prunus</i> spp.	Snowgoose	20'	20'	
Spire Cherry	<i>Prunus x hillieri</i>	Spire	30'	10'	
Flowering Crabapple	<i>Malus</i> spp.	Snowdrift, Red Baron, Prairiefire	20'	20'	
Japanese Snowbell	<i>Styrax japonicus</i>		25'	25'	
Black Tupelo	<i>Nyssa sylvatica</i>		35'	20'	
Goldenrain Tree	<i>Koelreuteria paniculata</i>		30'	30'	
Rocky Mt. Maple	<i>Acer grandidentatum</i>	Schmidt	25'	15'	
Galaxy Magnolia	<i>Magnolia</i> spp.	Galaxy	30'	15'	
Rustica Rubra Saucer Magnolia	<i>Magnolia soulangiana</i>	Rustica Rubra	20'	20'	
Golden Desert Ash	<i>Fraxinus oxycarpa</i>	Aureafolia	20'	18'	
Chinese Kousa Dogwood	<i>Cornus kousa</i>	Chinensis	20'	20'	
Pink Flowering Dogwood	<i>Cornus florida</i>	Rubra	20'	20'	
Flowering Plum	<i>Prunus cerasifera</i>	Thunder-cloud	20'	20'	
Paperbark Maple	<i>Acer griseum</i>		25'	20'	
Tatarian Maple	<i>Acer tatarian</i>		25'	20'	
Trident Maple	<i>Acer buergeranum</i>		20'	20'	
David's maple	<i>Acer davidii</i>		30'	25'	
Flame Maple	<i>Acer ginnala</i>	Flame	20'	20'	
Sargent Cherry	<i>Prunus sargentii</i>		30'	30'	
Amur Maple	<i>Acer ginnala</i>	Flame	20'	20'	
Black Tupelo	<i>Nyssa sylvatica</i>		30'	20'	
Small Trees – Narrow <35' Tall					25-30'
Redmond Linden	<i>Tilia americana</i>	Redmond	35'	25'	
Pyramidal European Hornbeam	<i>Carpinus betulus</i>	Fastigate	35'	25'	
Hedge Maple	<i>Acer campestre</i>	Evelyn	35'	30'	
Callery Pear	<i>Pyrus calleryana</i>	Redspire or Cleveland Select	35'	25'	
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.

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

Commented [JB4]: Parks?

~~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*)~~
~~Incense Cedar (*Calocedrus decurrens*)~~
~~Serbian Spruce (*Picea omorika*)~~
~~Noble Fir (*Abies procera*)~~
~~Shore Pine (*Pinus contorta* var. *contorta*)~~
~~Western white pine (*Pinus monticola*-blister rust resistant cultivars)~~

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*)

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Tree species specifically **prohibited** 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*)
Lombardy Poplar (*Populus nigra* 'Italica')
Silver Poplar (*Populus alba*)
Black Locust (*Robinia pseudoacacia*)
Tree of Heaven (*Ailanthus altissima*)
Scotch pine (*Pinus sylvestris*)

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Tree species discouraged:

Elms (*Ulmus* spp.)

European White Birch (*Betula pendula*)

Willows (*Salix* spp.)

Sweetgum (*Liquidambar styraciflua*)

Leyland Cypress (*Cupressus x leylandii*)

Colorado Blue Spruce (*Picea pungens*)

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

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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 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.

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 Norway Maple	Parkway Maple Redmond Linden	Prairiefire crabapple	Prairiefire crabapple
Golf Club Road	I-5	Chambers Lk. Rd.	Patmore Ash	Rustica Rubra Saucer Magnolia	Japanese Snowbell	Prairiefire crabapple
Judd St.	Ruddell Road	28 th Ave.	Japanese Stewartia	Rustica Rubra Saucer Magnolia	Kousa Dogwood	Trident Maple
Clearbrook Dr.	Lacey Blvd.	To End	London Plane	Emerald Queen Norway Maple	Rustica Rubra Saucer Magnolia	Galaxy Magnolia
College St.	15 th Ave.	Pacific Ave.	Northern Red Oak	Shademaster Honeylocust	Galaxy Magnolia	Trident Maple
College St.	Pacific Ave.	32 nd Lane	Norwegian Sunset Maple	Shademaster Honeylocust	Prairiefire crabapple	Desert Ash
College St.	32 nd Lane	Yelm Hwy.	Patmore Ash	Norwegian Sunset Maple	Snowdrift Fl. Crab	Pacific Sunset Maple
Rainier Road	Yelm Hwy.	City Limits	Greenspire Linden	Emerald Queen Norway Maple	Rustica Rubra Saucer Magnolia	Trident Maple
Ruddell Road	Martin Way	Yelm Hwy.	Summit Ash	Tuliptree	Japanese Snowbell	Pacific Sunset Maple
Ruddell Rd. Extension	Israel Road	Dennis St.	Summit Ash	Tuliptree	Flowering Cherry	--
Carpenter Road	Hawks Pr. Road	Pacific Ave.	Tuliptree	Rustica Rubra Saucer Magnolia-	Japanese Snowbell	Pacific Sunset Maple
Carpenter Road	Pacific Ave.	Mullen Road	Sugar Maple	Emerald Queen Norway Maple	Kousa Dogwood	Hedge Maple
Kinwood St.	Capitol Blvd.	City Limits	Shademaster Honeylocust	Patmore Ash	Flowering Plum	Pacific Sunset Maple
Hensley, Ranger, School St.	14 th Ave. NE	Pacific Ave.	Red Horsechestnut	Redmond Linden	Rustica Rubra Saucer Magnolia	Amur Maple
Union Mills Rd.	Pacific Ave.	Marvin Rd.	Scarlet Oak	Shademaster Honeylocust	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 Norway Maple	Flowering Plum	Galaxy Magnolia
Marvin Road	Martin Way	Pacific Ave.	Scarlet Oak	Shademaster Honeylocust	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 Honeylocust	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 Maple	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 Norway Maple	Red Sunset Maple	Flowering Plum	Golden Desert Ash
Britton Parkway	Carpenter Rd.	Hogum Bay Rd.	Sugar Maple	Autumn Purple Ash	Sargent Cherry	Japanese Snowbell
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 Magnolia	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 Honeylocust	Scarlet Oak	Snowgoose Cherry	Flowering Plum
Steilacoom Road	Pacific Ave.	City Limits	Katsura Tree	Pacific Sunset Maple	Snowgoose Cherry	Flowering Dogwood
Pacific Ave.	West City Limits	Carpenter Road	Patmore Ash	Autumn Purple Ash	Kousa Dogwood	Amur Maple
Pacific Ave.	Carpenter Road	Marvin Road	Tuliptree	Greenspire Linden	Black Tupelo	Japanese Snowbell

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.	Sleater-Kinney Rd.	Pacific Ave.	Patmore Ash	Autumn Purple Ash	Paperbark Maple	Golden Desert Ash
21 st Ave.	Chambers Lk. Dr.	Golf Club Rd.	Red Maple	Pacific Sunset Maple	Photinia Tree	Galaxy Magnolia
22 nd Ave.	Golf Club Rd.	Shady Lane	Redmond Linden	Scarlet Oak	Galaxy Magnolia	Japanese Snowbell
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.	Carpenter Road East of Ruddell Rd.	Meridian Road To End	Sugar Maple Redspire Callery Pear	Northern Red Oak Scarlet Oak	Sargent Cherry Flowering Plum	Japanese Snowbell Galaxy Magnolia
58 th Ave.	Kagy Road	Meridian Road	Greenspire Linden	Black Tupelo	Rocky Mt. Maple	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 Maple	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

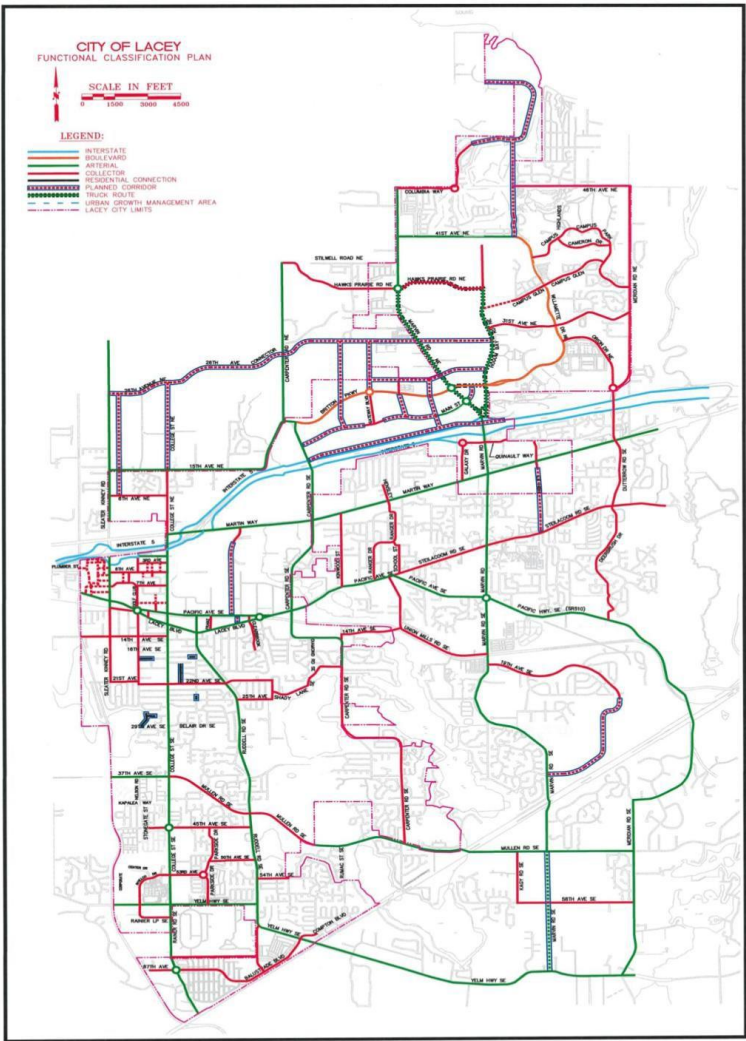


Figure 4
Functional Classification
of Roadways
Page 38

2030 Lacey Transportation Plan

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.

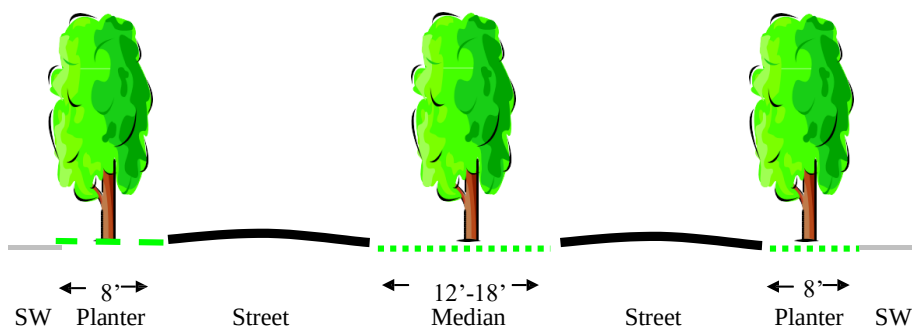


Figure 12. Ideal street design for development of maximum canopy, while providing separation between streets and sidewalks.

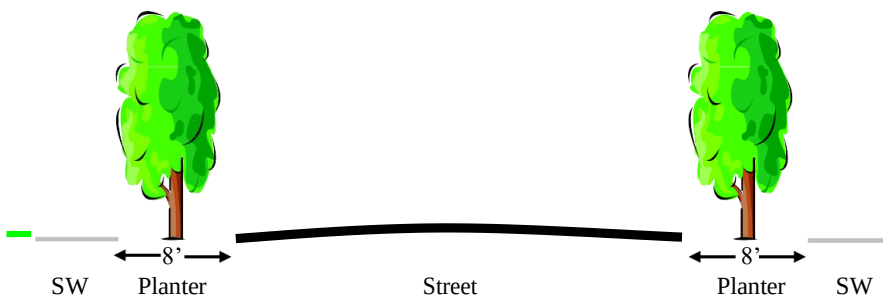


Figure 13. When space does not allow development of a full median, providing 8' planter strips will allow development of large, canopy forming trees. Planter strips should not be less than 6' wide. These narrow widths will only allow planting of small to medium sized trees that will not produce the canopy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

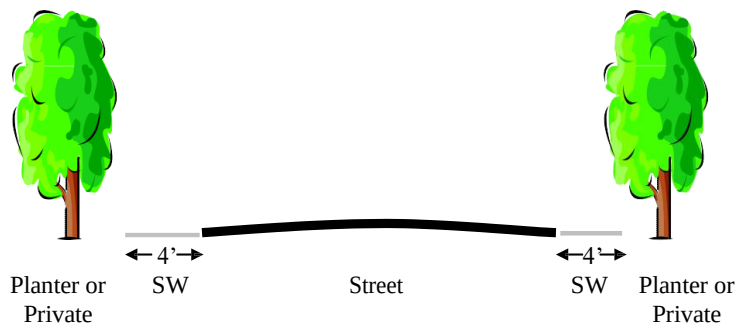


Figure 14. This is a commonly occurring street design in Lacey. Street trees, when they occur, are located on private property, or occasionally in planter strips.

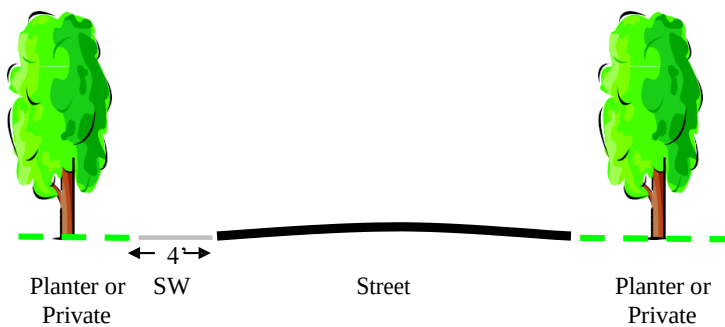


Figure 15. This is a commonly occurring street design in older neighborhoods in Lacey. In some cases no sidewalks occur. Most street trees are privately planted, without uniformity of design or occurrence.

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 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.

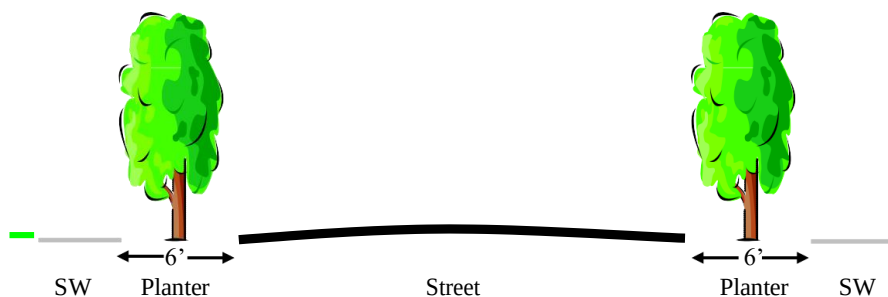


Figure 16. If space does not allow for 8' wide planter strips, then 6' can still be planted with medium to large street trees, however potential for root damage is higher.

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 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

Every effort should be made to avoid planting trees in tree grates within a sidewalk. Planting behind the sidewalk and within planter strips will provide a microclimate much more conducive to tree growth and survival. Planting trees at the back of a sidewalk edge with half-grates is a better alternative than full grates within a sidewalk.

If the only planting location is within the sidewalk and tree grates must be used, then the minimum size grate should be 5 ft. x 5 ft. If smaller grates must be used, then small street tree cultivars must be selected for these limited spaces. Preparation of the planting soils and space is similar to planting in planter strips.

Commented [JB5]: Match with development guidelines pw standards

Commented [JB6R5]: DGPWS Ch 4B.125, Drawings 4-17, 4-29, 4-30

Burlap and Wire Basket

Remove all twine ties from the root collar of the tree and ~~fold-remove~~ the burlap. ~~down into the hole exposing at least 2/3's of the root ball. If desired, cut out the extra 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 Week</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 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

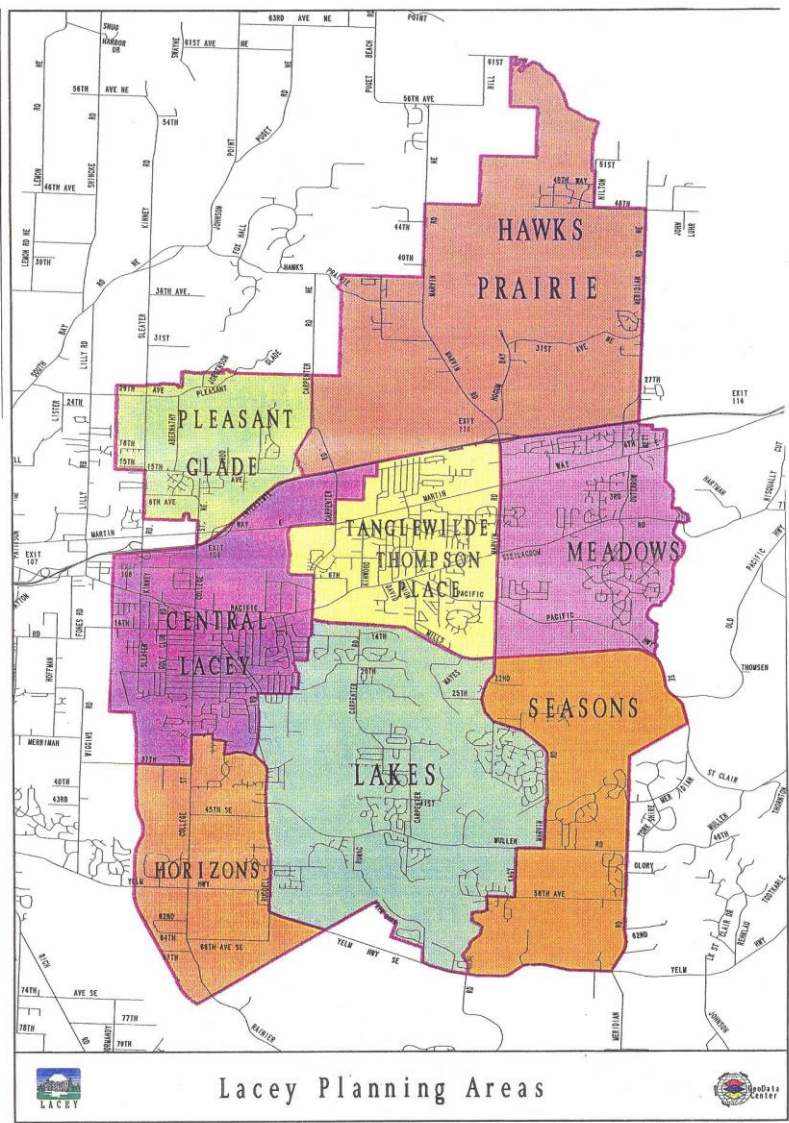
As trees are planted in the city of Lacey, maintenance records need to be updated on the street tree inventory system. This will help with tracking of stake removal, weed control, pruning needs, and hazard assessment. This system is up and running, and simply needs to be maintained and refined as needed.

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 1817. Proposed street tree management units. [Lacey Planning Areas](#)



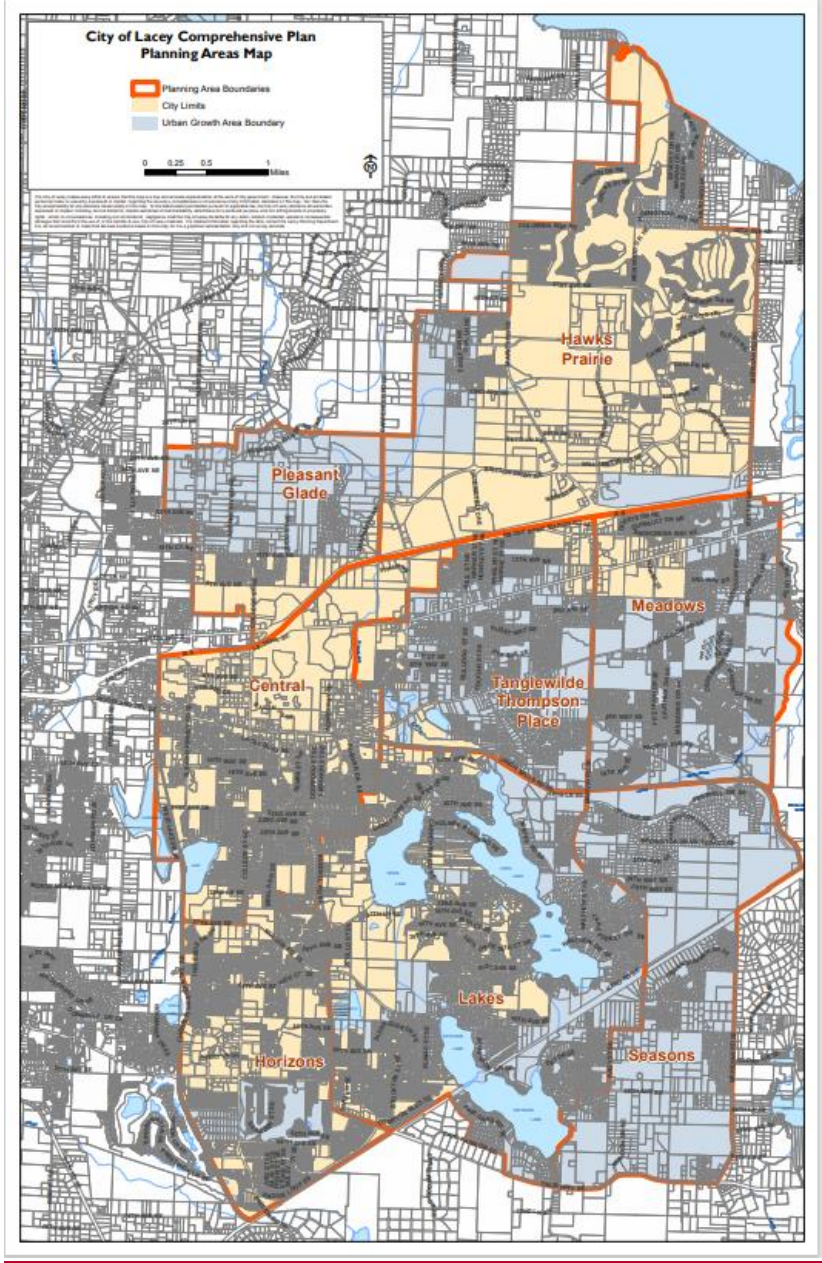


Figure 18e-19. Calendar for tree planting and maintenance activity.

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 360/943-4128

1919 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 (inches)	# 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%
Hemlock - all	1-4	25	0.43%

City of Lacey –Street Tree Inventory - Summary

Species	Diameter Range (inches)	# 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 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, adjusting tree grates 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.

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 (in.)	# 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 Trees	%
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 Trees	%
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 Trees	%
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

Chapter 14.32

TREE AND VEGETATION PROTECTION AND PRESERVATION

Sections:

14.32.010	Short title
14.32.020	Purposes and permit criteria
14.32.030	Definitions
14.32.035	The city's tree protection professional
14.32.040	Permits
14.32.045	Class IV forest practice applications
14.32.050	Exemptions
14.32.060	Application for permits
14.32.062	<i>Repealed</i>
14.32.063	Conformance to standards
14.32.064	Tree tract requirements
14.32.065	Tree replacement in tree tracts
14.32.066	Tree replacement and establishment of new trees on lots
14.32.067	Street tree requirements
14.32.068	Solar access considerations
14.32.069	Revegetation option
14.32.070	Additional considerations for commercial developments
14.32.072	Historical tree(s)
14.32.073	Financial security
14.32.080	Appeals
14.32.090	Violations
14.32.095	Requirements for foresters and contractors doing land clearing work in Lacey
14.32.100	Severability

14.32.010 Short title.

This chapter shall be known and may be cited as the Tree and Vegetation Protection /Urban Forest Management regulations of the city of Lacey. (Ord. 1269 §3, 2006; Ord. 904, 1991; Ord. 399 §1 (part), 1975).

14.32.020 Purposes and permit criteria.

These regulations are adopted for the following purposes and these purposes are to be used as criteria for the issuance of land clearing permits under LMC [14.32.040](#):

- A. To implement strategies for the management and protection of Lacey's urban forest resources pursuant to the goals and policies of the Lacey Urban Forest Management Plan;
- B. To implement the purposes of the State Growth Management Act relating to conservation of natural resources, including Lacey's urban forest resources, pursuant to RCW [36.70A.050](#), [36.70A.060](#) and [36.70A.080](#);
- C. To implement the purposes of the State Growth Management Act pursuant to RCW [36.70A.172](#), considering the many environmental benefits of the urban forest as described in Lacey's Urban Forest Management Plan;
- D. To promote the public health, safety, and general welfare of the citizens of Lacey without preventing the reasonable development of land;
- E. To preserve and enhance the city's physical and aesthetic character by preventing indiscriminate removal or destruction of trees and ground cover and to insure the protection of trees chosen to remain during construction;
- F. To minimize surface water and ground water runoff and diversion and to prevent erosion and reduce the risk of slides;
- G. To retain and utilize trees to assist in site planning, considering the abatement of noise, visual screening, protection from wind, and other site design issues;
- H. To acknowledge that trees and ground cover have significant environmental and quality of life benefits as identified in Lacey's Urban Forest Management Plan, such as the production of pure oxygen from carbon dioxide, the reduction of air pollution, help in providing clean water, control of soil erosion, use in design for energy efficiency and temperature control, noise attenuation, and wildlife habitat;
- I. To promote building and site planning practices that are consistent with the city's natural topography, soils, and vegetation features. At the same time certain factors may require the removal of certain trees and ground cover for things such as, but not limited to disease, danger of falling, proximity to existing and proposed structures and improvements, interference with utility services, protection of scenic views, protection of solar access and the realization of a reasonable enjoyment of property;
- J. To insure prompt development, restoration, replanting, and effective erosion control of property after land clearing;
- K. To reduce water pollution from siltation in the city's streams and lakes;

- L. To implement the goals and objectives of the Washington State Environmental Policy Act;
- M. To implement and further the City's Comprehensive Land Use Plan and its Environmental Protection and Resource Conservation Element;
- N. To encourage protection of wildlife and/or wildlife habitat whenever possible. (Ord. 1269 §4, 2006; Ord. 904, 1991; Ord. 650 §1, 1982; Ord. 399 §1 (part), 1975).

14.32.030 Definitions.

- A. "Brushing" means the practice of removing ground cover to create better visibility on a property for purposes such as marketing or surveying of said property.
- B. "Caliper" is the standard for trunk measurement of nursery stock. Caliper of the trunk shall be the trunk diameter measured six inches above the ground for up to, and including, four-inch caliper size and twelve inches above the ground for larger sizes.
- C. "City" means the city of Lacey, Washington.
- D. "Class IV forest practice activity" is a timber harvest, thinning or other activity as established in the Washington State Department of Natural Resources Forest Practices Regulations, whereby a property owner is allowed to harvest a limited amount of timber from their property within the city of Lacey, while still maintaining their rights to convert their property to a use inconsistent with growing timber.
- E. "DBH" is the diameter at breast height, measured four and one-half feet above the groundline on the high side of the tree.
- F. "Director" means director of community and economic development or his/her designee.
- G. "Drip line" of a tree is located by the vertical projection of a line at the tips of the outermost branches.
- H. "Ground cover" means grass, forbs, shrubs, and trees less than four inches in diameter measured four and one-half feet above the ground level (DBH).
- I. "Hazard tree" means any tree that is dead, dying, damaged, diseased, or structurally defective, recently exposed by adjacent clearing, or some other factor that will subject the tree to failure, and the tree could reasonably reach a target, as determined by the tree protection professional.
- J. "Historical tree" is a tree or group of trees designated as such by the city because of its historical value to the residents of the city.
- ~~JK.~~ "Land clearing" means the direct and indirect removal of trees and/or ground cover from any public or private undeveloped, partially developed, or developed lot, public lands or public right-of-way. This shall also

include any destructive or inappropriate activity applied to a tree that will result in its death or effectively destroy the tree's appearance and/or functionality, such as topping.

~~K. "Historical tree" is a tree or group of trees designated as such by the city because of its historical value to the residents of the city.~~

L. "Root protection zone" is an area around the tree to be saved equal to one foot of radius for each one inch of tree diameter measured four and one-half feet above the ground line (DBH), unless otherwise designated by the city's tree protection professional.

M. "Site disturbance" is any action that requires a city of Lacey building permit.

N. "Specimen tree" is a tree that is unique or rare because of its exceptional size or quality, species, or value in a particular location.

O. "Topping" is the indiscriminate placement of cuts to reduce a tree's size. Topping is not an acceptable pruning practice in the city of Lacey.

P. "Tree" means any living woody plant characterized by one main stem or trunk and many branches, and having a diameter of four inches or more measured at four and one-half feet above the ground level (DBH).

Q. "Tree protection professional" is a certified professional with academic and/or field experience that makes him or her a recognized expert in urban forestry and tree protection during development. A tree protection professional shall be a member of the Society of American Foresters (SAF), the Association of Consulting Foresters of America (ACF), the American Society of Consulting Arborists (ASCA), or the International Society of Arboriculture (ISA), and shall have specific experience with urban tree management in the state of Washington. Additionally the tree protection professional shall be an ISA Certified Arborist or an ASCA Registered Consulting Arborist with the necessary training and experience to use and apply the International Society of Arboriculture's Guide for Plant Appraisal and to professionally provide the necessary expertise relating to management of urban trees specified in this chapter.

R. "Tree tract" is a portion of land designated for the preservation and protection of existing trees or the planting of new trees to maintain tree canopy at a development site. The tree tract shall be a separate designated lot(s) shown on the plat map, binding site plan, or site plan review map, and shall be recorded with appropriate description of purposes and restrictions. Restrictions applied to the tree tract will not allow any use other than the growing of trees in the tract, and will reserve the tract for the protection and preservation of trees in perpetuity. Tree tracts can be used for other open space uses when the uses are compatible with trees and will not impact tree health. The tract will be dedicated to, and owned and maintained by, the homeowners' or lot owners' association, or comparable entity. The tract may be dedicated to the city of Lacey for maintenance if approved by the city. Creation of tree tracts to save the best trees on a site may require modifications to the street locations, lot designs and/or other features of the site plan. (Ord. 1539 §19, 2019; Ord. 1417 §7, 2013; Ord. 1269 §5, 2006).

14.32.035 The city's tree protection professional.

The city shall contract with one or more professionals that qualify as a tree protection professional under the definition of this chapter. Said professional or professionals shall be responsible for providing the information and services required of a tree protection professional described herein.

Individual applicants will be responsible for payment of the costs and fees of the designated tree protection professional for projects necessitating work to be performed by the tree protection professional in accordance with Table [14T-66](#). The city shall be responsible for billing and collecting costs and fees charged to the applicant and transferring said payment to the tree protection professional unless the city has opted for some other mechanism of providing for the costs and fees, such as inclusion of such costs and fees in the schedule of application fees. (Ord. 1417 §8, 2013; Ord. 1269 §6, 2006; Ord. 1219 §2, 2004; Ord. 904, 1991; Ord. 650 §2, 1982; Ord. 399 §1 (part), 1975).

14.32.040 Permits.

No person, corporation, or other legal entity shall engage in timber harvesting or cause land clearing in the city without having complied with one of the following:

- A. Received a land clearing permit from the director;
- B. Having obtained approval of the proposed work under the processes described in LMC [14.32.050\(A\)](#);
- C. Having received an exemption from the director under the provisions of LMC [14.32.050](#). In such cases an exemption notice shall be required for posting at the site. (Ord. 1269 §7, 2006; Ord. 904, 1991; Ord. 545 §1, 1979; Ord. 517 §1, 1979; Ord. 399 §1 (part), 1975).

14.32.045 Class IV forest practice applications.

A. **Urban growth area.** Properties within the urban growth area are anticipated to be available for development with urban uses within the next twenty-year period. Pursuant to RCW [76.09.070](#) lands within the urban growth area are not considered appropriate for long-term timber production and harvesting which takes a full forty-year cycle. Forest management activities shall be consistent with the city's Comprehensive Land Use Plan and implementing regulations for the urban growth area. Forest management activities shall promote the goals and policies of the Lacey Urban Forest Management Plan. Forest practice applications shall meet the requirements specified in subsections [B](#), [C](#), [D](#) and [E](#) of this section.

B. **Conversions and timing.** Because conversion of properties within the urban growth area can reasonably be expected, significant land clearing of such properties shall only take place at the time of a valid land use

application. Tree tracts, open spaces and buffers can then be properly coordinated with the actual development plans.

To further the purposes, goals, and policies of the Urban Forest Management Plan, timber harvesting and conversion of forested lands within the urban growth area shall not be permitted until such time as a valid land use application for development is made; provided, however, requests may be made for maintenance and thinning of existing timber stands to promote the overall health and growth of the stand until said stand is converted and harvested pursuant to plans provided within a valid land use permit.

C. **Maintenance and thinning.** Class IV forest practice applications and applications for maintenance and thinning shall be reviewed by the city's tree protection professional who shall make recommendations on the request to the ~~land clearing~~[Site Plan Review](#) committee. Recommendations shall ensure that action shall improve the health and growth of the stand and preserve long-term tree protection alternatives to meet the goals of this chapter.

D. **Selective thinning limited.** Thinning activities shall be strictly limited to less than thirty-five percent of the volume every ten years. High grading or top-down thinning shall not be permitted. The remaining stand of trees should be healthy, long-term trees from the dominant and co-dominant crown classes. The stand shall be marked prior to the selective thinning operation, indicating which trees will be removed and saved.

E. **Processing of applications.** Class IV forest practice applications shall be processed concurrently with, and using the same process as, the underlying land use application. Should there be no underlying land use application, the Class IV forest practice application shall be processed in accordance with the full administrative review procedures in Chapter 1 of the City of Lacey Development Guidelines and Public Works Standards. (Ord. 1417 §9, 2013; Ord. 1269 §8, 2006; Ord. 904, 1991).

14.32.050 Exemptions.

The following shall be exempt from land clearing permit requirements of this chapter but shall satisfy all standards and requirements of LMC [14.32.065](#) and other sections as noted below:

A. **Coordination with land use applications.** Projects requiring approval of the city of Lacey site plan review committee under Chapter [16.84](#) LMC, or projects requiring review by the hearings examiner or city council; provided, that land clearing on such projects shall take place only after approval and shall be in accordance with such approval and the standards of this chapter including the information requirements and standards of LMC [14.32.060](#).

B. **Hazard trees.** Removal of hazard trees in emergency situations involving immediate danger to life or property as determined by the city's tree protection professional.

C. **Unhealthy trees and groundcovers.** Removal of obviously dead or diseased trees or ground cover which may be a fire hazard as determined by the city's tree protection professional.

D. **Individual lot exemption.** Removal of trees on individual lots where tree density minimums are maintained per Table 14T-18. ~~of no more than five trees in any thirty-six consecutive months or ground cover for the purposes of solar access, general property and utility maintenance, landscaping or gardening, provided a minimum tree threshold is maintained pursuant to LMC 14.32.066, and provided further this exemption does not apply to historical trees or trees and ground cover in an area designated as environmentally sensitive.~~ For removal requests for more than five trees, review must be completed prior to permit issuance by the City's tree protection professional. An exemption must be issued by the city of Lacey prior to the removal of trees under this exemption provision.

E. **Building footprint.** Removal of trees and ground cover within a maximum of ten feet (when required for construction) of the perimeter of the building line and any area proposed to be cleared for driveway, septic, sewer and water purposes, of a single-family or duplex dwelling to be constructed as indicated on the plot plan submitted to the building official with an application for a building permit; provided, however, the director may require minor modifications in siting and placement of driveways, utilities and septic tank drain field systems and sewer and water lines where such modifications will promote the goals of the chapter and still satisfy the need and function of improvements.

F. **Clear vision.** Removal of obstructions required by the vision clearance at intersections regulations of Chapter Four of the Development Guidelines and Public Works Standards. (Ord. 1417 §10, 2013; Ord. 1269 §9, 2006; Ord. 904, 1991; Ord. 650 §4, 1982; Ord. 399 §1 (part), 1975).

G. **Homeowners Association (HOA) open space and tree tracts.** Removal of trees in open space, if reviewed by the City's tree protection professional and tree replacement plan is approved.

H. **City owned property.** Tree assessment, removal and replacement of trees on city owned property.

14.32.060 Application for permits.

A. **Pre-Submission Conference.** Prior to application for land use permits and actions such as a land division, commercial site plan review (SPR), or a conditional use permit (CUP), a pre-submission conference shall be required consistent with the requirements of chapter one of the Development Guidelines and Public Works Standards. The pre-submission conference is designed to review the proposed action and identify permit requirements and issues an applicant may incur if the project is implemented. As part of this review it should be made clear that the city of Lacey has an Urban Forest Management Plan and tree protection regulations that require early consideration of tree protection options, and that urban forest concepts and strategies shall be part of the early design considerations for new projects. Location and design of major infrastructure, buildings, and planned uses must consider the tree protection opportunities to further the purposes of the Urban Forest Management Plan.

B. *Applicable Requirements.* An application for a land clearing permit or information required by this chapter shall be submitted at the same time as a valid land use application or building permit on a form provided by the city and shall be accompanied by such of the following documents and information as are determined to be necessary by the director:

1. *Site Plan.* Copies of the site plan, pursuant to requirements of chapter one of the Development Guidelines and Public Works Standards, which shall include the following information:

- a. Name, address, and telephone number of the applicant and owner of property;
- b. Legal description of property;
- c. Date, north arrow, and adequate scale, as determined by the director, on the map or plot plan;
- d. Topography map showing contours at not greater than ten-foot intervals of proposed clearing projects within areas of steep slopes, creeks and shorelines;
- e. Location of proposed improvements, including, but not limited to, structures, roads, driveways, utilities, and storm drainage facilities. Said improvement locations shall also be staked on site to enable the city's tree protection professional and other city staff to review improvement locations and their relationship to the site and existing vegetation;
- f. Approximate and general location, type, size and condition of trees and ground cover and a general identification of trees and ground cover which are to be removed.

2. *Tree Protection Professional Report.* On forested property greater in size than one acre or commercial property with one or more trees, or other sites the city deems it necessary because of special circumstances or complexity, the city's tree protection professional shall review the site and provide a report analyzing the site for tree protection consistent with the requirements of this chapter. The report should provide information important to urban forest management and options for consideration when developing preliminary designs. The report should suggest options for design to best achieve the purposes of the Urban Forest Management Plan and this chapter. The report shall include but shall not be limited to:

- a. Information required under subsections (B)(1) through (7) of this section;
- b. An analysis of technical information requested by the review body related to trees and forest practices;
- c. Analysis of what portion of the site is best for designation of the tree tract if required, considering the intent of this chapter, soil type, topography, tree species, health of trees and reasonable project design limitations;
- d. Recommendations for saving of individual tree specimens based upon the intent of this chapter, soil type, topography, tree species, health of trees, and reasonable project design limitations;

e. A plan for protection of trees to be saved during construction including placement of construction fences, monitoring of construction activity and other measures necessary to ensure adequate tree protection;

f. Consideration of the location of roads, other infrastructure, and buildings and potential options for alternative locations, if applicable, to best satisfy the purposes of the Urban Forest Management Plan;

g. A timeline for tree protection activity;

h. The final tree protection plan should be prepared on the site grading plan. All tree protection fences, trees to be saved, and trees to be removed should also be shown on the site demolition plan. Necessary save-tree pruning and selective thinning within tree tracts shall be detailed and trees marked as such. The tree protection plan and demolition plan should be part of the submittal to the city of Lacey and shall be approved by the tree protection professional. The tree protection plan shall be part of the contractor bid package and a copy of the tree protection plan shall be available to the contractors on site at all times during logging, clearing, and construction.

3. *Schedule.* A proposed time schedule for land clearing, land restoration, implementation of erosion control and any excavation or construction of improvements.

4. *Strategy for control.* A statement indicating the method to be followed in erosion control and restoration of land during and immediately following land clearing.

5. *Landscape plan.* Proposed landscape plan or written or graphic description of proposed action.

6. *Areas of saved trees.* Location of tree tracts, proposed buffers, open space, and other areas of the site where stands of trees are to be saved.

7. *Revegetation.* If the option for revegetation of the site or a portion of the site is proposed under LMC [14.32.069](#), information requirements described under LMC [14.32.069](#) shall be required at the time of application.

C. *Review Body.* Review shall take place as part of the underlying permit review process. The review body (site plan review committee, hearing examiner, or city council) shall review the application and make a decision in accordance with review requirements of the underlying permit.

D. *Expiration.* Any permit granted hereunder shall run with the underlying permit or shall expire eighteen months from the date of issuance. Upon a showing of good cause, a permit may be extended by the director for one six-month period. The permit may be suspended or revoked by the director because of incorrect information supplied or any violation of the provisions of this chapter. Minor amendments of a permit may be granted by the director. Major amendments may be accomplished only by making a new application and proceeding through the requirements of this chapter and chapter one of the City of Lacey Development Guidelines and Public Works Standards. Major alterations are changes that alter the intent of the original

decision. What constitutes a minor or major amendment shall be left up to the discretion of the director who may consult the review body for guidance.

E. *Permit Notice Posted.* No work shall commence until a permit notice has been posted on the subject site in a conspicuous location. The notice shall remain posted until the project has been completed.

F. *Preconstruction Conference.* Prior to the start of logging and land clearing activity, a preconstruction conference shall be held with the city tree protection professional to insure the contractors understand the necessary tree protection measures prescribed in the tree protection plan and that all required tree protection fences and other required tree protection activity is completed prior to the start of site work. (Ord. 1539 §20, 2019; Ord. 1269 §10, 2006).

14.32.062 Repealed.

Repealed by [Ord. 1192](#). 14.32.063 Conformance to standards.

All land clearing shall conform to the following standards and provisions unless otherwise recommended in a forest management plan, prepared by the city's tree protection professional and approved by the city, where the alternate procedures will be equal or superior in achieving the policies of this code. In addition, the following minimum standards and provisions shall be the governing criteria for the issuance or denial of land clearing permits under this chapter:

A. **Tree tract.** Land clearing shall meet requirements for tree tracts as specified in LMC [14.32.064](#).

B. **Soil stability.** The clearing will not create or contribute to landslides, accelerated soil creep, settlement and subsidence or hazards associated with strong ground motion and soil liquefaction.

C. **Preservation.** The proposal shall contain reasonable provisions for the preservation of natural topography, water features, vegetation, drainage and other existing natural features on the site.

D. **Runoff.** The clearing will not create or contribute to flooding, erosion or increased turbidity, siltation or other forms of pollution in a watercourse.

E. **Sensitive areas.** No ground cover or trees which are within the designated buffer area of creeks, streams, lakes and other shoreline or wetland areas shall be removed, nor shall any mechanical equipment operate in such areas; provided, that conditions deemed by the director to constitute a hazard may be removed; and provided, that a property owner shall not be prohibited from making landscaping improvements where such improvements are consistent with the aims of this chapter. The designated buffer area shall be in accordance with the city's wetland protection ordinance as hereafter amended. Buffer areas shall be consistent with best available science guidelines and recommendations from the Washington State Department of Ecology for classification, protection and designation of wetlands and wetland buffer areas.

F. **Aesthetic character.** The clearing will be undertaken in such a manner as to preserve and enhance the city's aesthetic character. Vegetative screens or buffer strips shall be maintained or be reestablished in a timely manner with approved plantings along public rights-of-way and adjoining property boundaries.

G. **Erosion control.** Clearing operations shall be conducted so as to expose the smallest practical area of soil to erosion for the least possible time, consistent with an anticipated build-out schedule.

H. **Conformance with laws.** Land clearing activities shall be performed in accordance with all applicable laws, rules and regulations pertaining to air and water pollution, the Washington Forest Practices Act, and the Shoreline Master Program.

I. **Protection of roots.** Except for the use of existing roads and constructed pathways, land clearing machinery shall be kept outside of the root protection zone of any trees designated for retention. Damaging of trees designated for retention by making cuts or fills, trenching, compacting of the soil, draining concrete rinsate, attaching wires or other devices to the trees, piling of materials, modification of drainage within the root protection zone, breaking of tree stems or branches, removal of desirable groundcovers from under tree, or otherwise damaging the roots or root zone of the tree shall be considered a violation of this chapter and shall require mitigation pursuant to the requirements of LMC [14.32.090\(C\)](#). All requirements for protection of trees and vegetation detailed in plans prepared by the city's tree protection professional or in land clearing conditions required by staff such as fencing and other protection measures shall be satisfied.

J. **Clearing of individual lots with land division approvals prohibited.** Where a land division of property is concerned, only areas where streets and utilities are to be constructed can be cleared of trees and ground cover. No such rights-of-way clearing of trees or ground cover shall take place until preliminary short plat, preliminary plat or preliminary binding site plan approval has been granted and engineered plans for road construction have been approved by the city and said road areas have been surveyed and staked to enable city staff to confirm road locations. No tree removal or brushing shall take place on lots or in open space areas of a preliminary short plat or preliminary plat except through the provisions of LMC [14.32.069](#). Additionally, no tree removal or brushing shall take place on lots or in open space areas of a final land division except through the provisions of LMC [14.32.069](#), or on a lot by lot basis after individual building permit applications have been made and land clearing activities have been approved for said individual lots pursuant to the requirements of LMC [14.32.050](#) or [14.32.060](#).

K. **Intent.** Land clearing shall meet the intent and requirements of Lacey's Urban Forest Management Plan. (Ord. 1496 §22, 2016; Ord. 1269 §11, 2006).

14.32.064 Tree tract requirements.

Every commercial project over one acre in size, and every land division over two acres in size shall be required to designate a tree tract(s) to further the goals of the Urban Forest Management Plan for maintenance and no net loss of tree canopy in the city of Lacey.

A. **Tree tract basic standard.** The tree tract or tracts shall generally cover five percent or more of the site and shall represent the primary strategy for maintaining the tree canopy. All developing properties shall create a tree tract equal to five percent of the gross site area.

B. **Tree tract credit for required open space area.** Land divisions and most binding site plans require provision of open space as a requirement of the approval process. Up to one hundred percent of the requirement for a tree tract(s) may be satisfied in combination with the open space requirement provided the following conditions apply:

1. The open space area can function for necessary recreation activities, is located in the most strategic location of the site to provide centralized recreation functions or combined with adjacent open space identified for a public park;
2. The open space satisfies open space needs as identified in the City Comprehensive Plan for outdoor recreation;
3. The location is the best site for the tree tract(s) based upon urban forestry principles and intent of the Urban Forest Management Plan.
4. If the open space and tree tract location requirements are not compatible, the requirement for open space may be reduced to provide for the full tree tract requirement provided the following conditions apply:
 - a. There shall be adequate area set aside for tot lot and subdivision park activities to satisfy the expected needs of the subdivision residents, as determined by the city parks and recreation department director;
 - b. In no case shall the combined amount of land in the open space and tree tract(s) be less than the original open space requirement for the development.
5. Cash or like value of land area and improvements may be donated to the city in lieu of a tree tract. Any cash donated to the city shall be deposited in the city tree account. The city shall then utilize those funds for planting trees in other areas of the city. Acceptance of such a donation will be at the discretion of the site plan review committee and consistent with city policies for the provisions of establishing tree tracts.

C. **Ownership.** Tree tracts shall be held in common ownership by the homeowner's or lot owner's association or a comparable entity. Tree tracts may be deeded to the city of Lacey if approved by the city.

D. **Priority of tree types.** Trees to be protected must be healthy, windfirm, and appropriate to the site at their mature size, as identified by a qualified professional forester. In designing a development project's tree tract, the applicant shall protect the following types of trees in designated tract(s) in the following order of priority, unless Endangered Species Act-listed species in accordance with LMC [14.33.117](#) are present:

1. **Historical trees.** Trees designated as historical trees under LMC [14.32.072](#).
2. **Specimen trees.** Unusual, rare, or high quality trees.
3. **Critical area buffer.** Trees located adjacent to critical area buffers.
4. **Significant wildlife habitat.** Trees located within or buffering significant wildlife habitat.
5. **Other high quality.** Individual trees or groves of trees. (Ord. 1496 §23, 2016; Ord. 1417 §11, 2013; Ord. 1269 §12, 2006).

14.32.065 Tree replacement in tree tracts.

Tree replacement is required where no trees exist in the tree tract, where tree canopy coverage in the tree tract is less than one hundred percent, where unhealthy, unsuitable, or hazardous trees occur within the tree tract, where gaps in the stand require replanting, or where underplanting is necessary for future stand replacement. The tree tract shall be replanted to achieve ninety percent canopy coverage within fifteen years.

Trees removed in homeowners association open spaces and tree tracts must be replaced per Table 14T-18.

Replacement trees will be a minimum of 1.5 inch caliper for deciduous species and 6-7 foot tall for conifers unless otherwise recommended by the city tree protection professional. Conifers will be native to the Pacific Northwest. Deciduous tree species will be compatible with the other trees in the tract, and will provide wildlife, aesthetic, and other amenities to the tract. (Ord. 1269 §13, 2006).

14.32.066 Tree replacement and establishment of new trees on lots.

Tree planting is required on all newly developed single and multi-family residential, commercial, and industrial lots, established open space and tree tracts, and all properties on which a class IV forest practice occurs. A minimum tree threshold, according to the provisions of this section, is required on all developed lots where tree removal or other site disturbance is proposed.

When trees are planted on individual lots the species shall be appropriate for the size of the lot and the space planted pursuant to guidance provided in the Urban Forest Management Plan and, if applicable, as provided on approved revegetation or landscaping plans developed for the land division.

The following table provides a summary of the required minimum tree requirements and replacement for developed and developing properties. (See [Table 14T-18](#)).

TABLE 14T-18

Type of Development	Lot Size	Required New or Saved Trees	Tree Size **
Developing Single- and Multifamily Lots	Less than 3,500 ft ²	2	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
	3,500 ft ² to 4,999 ft ²	3	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
	5,000 ft ² to 6,499 ft ²	4	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
	6,500 ft ² to 7,499 ft ²	5	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
	7, 500 ft ² or over	4 trees per 5,000 ft ²	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
Developed Single-Family and Multifamily Lots	All***	4 trees per 5,000 ft ² *	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
Developing Commercial or Industrial	All	2 Trees per 10,000 ft ² *	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
Developed Commercial/Industrial/Multifamily Proposing an Addition, Tree Removal, or Other Site Disturbance	All	2 Trees per 10,000 ft ²	2.0" Caliper measured 6" above the base Deciduous 7' Tall Conifers
<u>Developed tree tracts as required by a binding site plan/HOA open space requirements</u>	<u>All</u>	<u>1 Tree per 1 Removal</u>	<u>1.5" Caliper measured 6" above the base Deciduous 7' Tall Conifers</u>
Class IV Forest Practice Activity	All	Replanting required when average stocking (basal area) falls below 80 ft ²	Seedlings or transplants 1+1, 2-0, 2-1, P+1, or 1-2

Type of Development	Lot Size	Required New or Saved Trees	Tree Size **
		per acre – Tree spacing required is 10 ft on center	

* In addition to all tree tract requirements and landscape ordinance requirements.

** Tree species will be selected from the general tree list in the Lacey Urban Forest Management Plan.

*** Developed single-family lots seven thousand five hundred square feet or larger proposing tree removal in accordance with LMC [14.32.050\(D\)](#), that do not currently meet the required tree density of four trees per five thousand square feet, shall be required to replant the number of trees equal to the number removed.

A. **Replacement tree location.** The applicant's proposed location of transplanted or replacement trees shall be subject to city approval as part of the tree plan. Replacement trees should be planted according to the following priority:

1. **On-Site.**
2. **Off-site.** When space is unavailable for planting the required trees on-site, then they may be planted at another approved location within the city of Lacey or Lacey's growth area.

B. **City tree account.** When on-site and off-site locations are unavailable, the applicant shall pay an amount of money equal to the replacement cost of the replacement trees into the city's tree account. The replacement cost is the retail cost of the tree plus all cost of planting and maintenance for three years.

C. **Tree replacement.** Replacement trees shall meet the required quality and priority. On sites where there are currently inadequate numbers of existing trees, or where the trees are inappropriate for protection as determined by the tree protection professional, then replacement tree planting shall be required. In designing a development project and in meeting the required tree stocking the following trees shall be planted in the following order of priority:

1. **Buffers.** Trees in or adjacent to critical area and/or significant wildlife habitat.
2. **Tree tracts.** Trees to replace unhealthy or unsuitable trees for tree tracts with no trees or inadequate numbers of trees.
3. **Landscaping.** Trees required to be protected or planted as a requirement of this chapter are in addition to any required to be planted by the Landscaping Ordinance Chapter [16.80](#) LMC. Protected trees within any required landscaping area can be used to satisfy the required spacing in the landscaping requirements. For residential subdivisions this may include entrance landscaping, traffic islands, separate deeded tree tracts, and other common areas.

D. **Replacement tree quality.** Replacement trees shall meet the quality, caliper, and root-ball size standards delineated in the Urban Forestry Management Plan and the current edition of the American Standard for

Nursery Stock (ANSI Z60.1). Trees shall be healthy and free of damage, insects, and disease, be well-branched and show evidence of cultural care in the nursery to create quality trees.

E. **Replacement tree planting standards.** Trees shall be planted pursuant to the industry planting standards delineated in the Urban Forestry Management Plan. (Ord. 1496 §111 (part), 2016; Ord. 1417 §13 (part), 2013; Ord. 1269 §14, 2006).

14.32.067 Street tree requirements.

Street trees are required on all public streets within all new developments. The species of tree shall be selected from the street tree list or the general tree list in the Lacey Urban Forest Management Plan. The required tree spacing depends on the expected tree size at age thirty. Landscape trees are required in all alleys. Street trees can be counted towards tree replacement requirements for individual lots. (Ord. 1269 §15, 2006).

14.32.068 Solar access considerations.

While trees have long been used to complement solar planning and site design such as providing deciduous trees in strategic locations to cool areas in summer and providing solar access in winter, providing of adequate solar access may sometimes conflict with protection of existing trees, particularly conifers. When established city goals designed for different purposes conflict, balancing of different community and individual needs must be accomplished. In implementing the goals of this chapter, the review body shall give due consideration to valid solar access needs together with any specific solar access policies that may hereafter be adopted. (Ord. 1496 §24, 2016; Ord. 1269 §16, 2006).

14.32.069 Revegetation option.

Based upon recommendations in a report by the city's tree protection professional, removal of areas of vegetation that might normally be saved may be permitted if extensive revegetation is accomplished and standards for tree tract(s) are satisfied pursuant to the requirements of LMC 14.32.064 and 14.32.065. Such alternatives may be desirable for sites with significant physical limitations such as topography, soil type or proposed small lot sizes (less than sixty-five hundred square feet). Additionally, limitations of existing trees such as unsuitable species or poor health of a particular tree stand may make such options desirable.

On a site with documented special circumstances, an alternative allowing removal of vegetation normally saved may be approved with a comprehensive revegetation plan developed by the city's tree protection professional. At a minimum, the plan shall include:

~~A. **General information.** Information required under LMC 14.32.060.~~

~~B. **General standards.** Consideration of the standards provided in LMC 14.32.063.~~

~~C. **Justification.** An evaluation of what circumstances are present in specific areas of the site to make incorporation of topography and existing vegetation undesirable and recommendations on what areas if any can be designed to accommodate existing vegetation.~~

~~D. **Consideration of functions and values.** Consideration of overstory and understory vegetative species to provide wildlife habitat and meet specific purposes important to the neighborhood environment and project design such as buffers, green belts, open spaces, street trees, urban beautification, solar access, and other functions and purposes deemed desirable and appropriate to the anticipated use.~~

~~E. **Landscape plan map.** A comprehensive map showing location, number, species and size of planned vegetative improvements. The plan shall also consider the particular circumstances of the site and proposed project, and detail species selected based upon the anticipated use of the property consistent with the site's zoning designation, permitted uses, and lot size.~~

~~F. **Timing.** A time line for completion of improvements.~~

~~G. **Value of vegetation.** An appraisal of the value of vegetation being removed under this option. Said appraisal must be accomplished pursuant to the most recent guidelines established by the International Society of Arboriculture in its "Guide for Plant Appraisal" and be completed by the city tree protection professional.~~

~~H. **Commensurate value replaced.** Said plan shall provide for a commensurate value of vegetation to be installed as is to be taken out under this option. Said amount shall be above and beyond what is normally required for landscaping in the projects not utilizing this option. The calculated value of the revegetation shall include only appraised value of the trees and vegetation and shall not include the applicant's administrative or labor costs, or the costs of the city's tree protection professional.~~

~~I. **Maintenance.** A three year maintenance plan including provision for an irrigation system, weed control and a shrub and tree maintenance program.~~

~~J. **Protection strategy for vegetation to be saved.** If any existing vegetation is to be saved, a plan shall be provided for the protection of said vegetation during construction activity, including fencing and other protective measures deemed necessary by the city's tree protection professional.~~

~~K. **Land division elements considered.** If the project involves a land division, the landscaping plan should include a comprehensive treatment of tree tracts, open space areas, green belt areas, buffers, common areas, and street frontages (street trees and parkways). All common improvements shall be completed prior to the final land division, approval or financial security provided to the city in a form acceptable to the city in the amount of one hundred fifty percent of the estimated costs including two years maintenance and twenty percent replacement.~~

~~L. **Required consideration for clearing individual lots with land division approval.** If a developer desires to clear individual lots within the land division at the same time as road areas, this may be done if it is consistent with the approved plans and the following conditions are satisfied:~~

~~1. **Valuation of vegetation.** An average valuation of vegetation on individual lots shall be provided with a conceptual plan of typical yard landscaping of equal value. Such conceptual plan shall contain specific guidelines for revegetation of individual lots and said guidelines shall be incorporated into protective covenants and lot owner's association articles of incorporation;~~

~~2. **Financial security.** Financial security is provided to the city in a form acceptable to the city at one hundred fifty percent of the estimated costs of improvements of individual lots based upon the conceptual typical yard landscaping plan.~~

~~3. **Meets requirements.** A detail of how the revegetation plan satisfies the requirements for tree tract(s) pursuant to this chapter. (Ord. 1269 §17, 2006; Ord. 1208 §56, 2003; Ord. 904, 1991).~~

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14.32.070 Additional considerations for commercial developments.

Commercial projects generally have different demands than residential areas. Commercial sites have parking lots to serve the traveling public, they have larger buildings, and they may have need of significant utility infrastructure to service commercial uses. While Lacey has the same goals to maintain our tree canopy and to save significant stands of trees, urban forestry requirements for commercial areas need to be crafted to acknowledge and plan for differences in site design and construction requirements. In addition to other requirements of this ordinance, commercial sites shall have emphasis on the following considerations and requirements:

A. Early planning prior to project design shall consider the stands of trees on the site. For a land use application to be considered complete a tree inventory with consideration of urban forestry issues shall be required to be submitted with the land use application. The tree inventory and evaluation shall be utilized in the design layout of the site. Existing trees and protection opportunities shall play an important role in site design;

B. The major strategy for tree protection on commercial sites will be designation of a tree tract(s) pursuant to the requirements of LMC [14.32.068](#). Analysis and recommendations of the tree protection professional will determine if certain individual trees should have special emphasis based upon their health and significance, individual site conditions, and retention opportunities. A review of these recommendations shall be provided in the tree protection professional's report;

C. The selection of the location of the tree tract(s) and individual trees shall be chosen early on at the pre-submission stage, before design of the site, and it shall consider the best location of the site to address urban forestry issues. The design of the commercial site layout shall work within the framework of tree protection opportunities for designation of the tree tract and individual trees;

D. Deciduous trees are generally encouraged for parking areas because of advantages for solar access considerations (shading in summer and solar access in winter), temperature and climate control factors (reducing temperature in parking lots in summer), pollution control advantages (broad leaves absorption of gases and removal filtering of particulate matter), and options for providing tree canopy coverage over parking sites and drive lanes. Select deciduous trees can also be chosen for root character that will not damage asphalt and parking lot overlays. For these advantages, planting of select deciduous trees will generally be a good choice to provide canopy coverage in parking lots for commercial sites over the long term. It is also important to restore some native conifers to the project site. This can occur in larger planter islands or as a backdrop to buildings or as foundation plantings to breakup concrete facades. The tree protection professional's report shall reflect these considerations, shall indicate the best areas for removal of trees to accommodate parking needs (based upon indigenous tree areas with the least protection value) and shall recommend replacement of trees;

E. In some cases commercial sites may require extensive grading because of the nature of the topography and other development requirements. For this reason, and the emphasis on provision of a designated tree tract to achieve canopy goals, some flexibility may be permitted for grading to provide for intensive infrastructure needs of the project design. Provided, the design takes advantage of tree protection opportunities to provide an attractive, functional and unique shopping experience. This flexibility is not intended to limit creative development with the site. Where possible, commercial developments should seek to use variations in terrain to create an interesting development scheme. (Ord. 1269 §18, 2006).

F. Trees planted in planter strips, medians, and tree wells with grates shall follow City of Lacey Development Guidelines and Public Works Standards in Chapter 4B.125, Landscape/Planter Areas for specific site preparation requirements and Drawings 4-17, 4-29, and 4-30.

14.32.072 Historical tree(s).

A. **Purpose.** The purpose of the historical tree designation is to protect trees with a historical significance and to establish a register of these trees. Historical trees require protection due to their special value in that they are irreplaceable. They may be associated with historic figures, events, or properties; or be rare or unusual species; or they may have aesthetic value worthy of protection for the health and general welfare of the residents of this city.

Therefore, the purpose of this section is:

1. **Protection and maintenance.** To provide for the protection and proper maintenance of historical trees, to minimize disturbance to the trees, and to prevent other environmental damage from erosion or destruction of wildlife habitat;
2. **Health, safety, welfare.** To protect the health, safety and general welfare of the public;

3. **Goals and objectives.** To implement the goals and objectives of the city's Urban Forest Management Plan.

B. **Historical Tree Registration.** The city shall prepare and thereafter maintain a list of historical trees within the city limits. The inventory may include a map identifying the location of the trees and a brief narrative description of each historical tree. The historical tree inventory shall be prepared and amended at any time following the procedures established below.

1. **Nomination.** A tree may be nominated for historical tree status by the property owner, a neighborhood organization, or any person by submitting a map, a photograph, and a narrative description including the location, species, approximate age, and the characteristics on which the nomination is based;

2. **Review.** The director, upon receipt of a nomination, shall review the nomination and confer with the city tree protection professional and other city staff as may be appropriate. Notice of the nomination shall be mailed to the property owner and shall be posted by the city on the subject site for a period of ten days. The director shall inspect the tree, consider public comments, and decide in each case whether or not the tree is to be designated a historical tree. The city shall place each designated historical tree on the historical tree register. In the event the owner of the tree does not approve of its designation as a historical tree, the nomination will be disapproved;

3. **Notification of the director's decision.** Notice of the director's decision shall be mailed to the property owner and shall be posted by the city on the subject site for a period of ten days;

4. **Appeal.** Any person may appeal the director's decision to the hearing examiner;

5. **Hearing examiner.** The hearing examiner shall hold a public meeting on the appeal pursuant to the procedures specified in section 1.C.050 (Quasi-Judicial Review of Applications) of the City of Lacey Development Guidelines and Public Works Standards. The hearing examiner will make a decision which will constitute a recommendation to the city council. All recommendations of the hearing examiner will be considered by the city council at the next available council meeting;

6. **Notification of registration.** Each property owner who has one or more registered historical trees shall be notified by first class mail of the designation within thirty days of designation;

7. **Recording of historical tree covenant.** Each property owner who has one or more registered historical trees shall execute a historical tree covenant in a form agreeable to the city. The historical tree covenant shall require that the tree be maintained in a manner which is consistent with the provisions of this chapter. The historical tree covenant shall be recorded by the county auditor. Recording fees shall be paid by the applicant;

8. **Duration of covenant.** The historical tree covenant shall be effective from the date of recording until such a time that a tree removal permit has been issued by the director pursuant to this section;

9. **Education benefits.** From time to time the city may prepare public information programs on historical trees and provide qualified professional tree care advice to owners of the historical trees;

C. **Limitation on removal.** Subject to the exceptions enumerated in subsection D of this section, no person shall remove, or cause to be removed, any historical tree.

D. **Removal Procedures.** Historical trees shall not be removed except through the procedures established in this section.

1. **Permit Required.** No Historical tree shall be removed without first applying for and receiving a land clearing permit. The applicant for the permit shall be the property owner or the city. An application for a tree removal permit shall be submitted on a form provided by the city. The applicant must state the justification for removal on the tree removal application;

2. **Review.** If justification for removal is based upon health of the tree, and a visual inspection by the director cannot establish that the tree is dead, diseased, or hazardous, the applicant shall pay for the city tree protection professional to make a determination. If it is determined by the tree protection professional that the tree is dead, diseased, or otherwise hazardous and cannot be saved, the director may approve the removal. If the tree is determined to be healthy, or with treatable infestation or infection, the director may deny the permit.

If justification is due to reasons other than health of the tree, the director shall confer with other city personnel as may be appropriate in evaluating the justification and make a decision pursuant to the procedures and requirements of section 1E.030 (Limited Administrative Review of Applications) of the Development Guidelines and Public Works Standards;

3. **Notification.** If the director decides that a permit is justified, notice of the director's decision shall be mailed to the applicant, all parties of record, and posted by the city on the subject site for a period of ten days, during which no work shall commence. No work shall commence during the notice periods or when appeals are pending disposition;

4. **Appeal.** The property owner or any person residing or owning property within three hundred feet of the tree may appeal the director's decision to the hearing examiner, whether that decision is positive or negative. Appeals must be submitted in writing within ten days of the posting of the director's decision;

5. **Hearing examiner.** The hearing examiner shall hold a public meeting on the appeal pursuant to the procedures specified in section 1K.050 (Quasi-Judicial Review of Applications) of the Development Guidelines and Public Works Standards. The hearing examiner will make a decision which will constitute a recommendation to the city council. All recommendations of the hearing examiner will be considered by the city council at the next available council meeting. The city council decision shall be final. No work shall commence during the notice periods or when appeals are pending disposition;

6. **Permit for tree removal timing.** Any tree removal permit granted under this chapter shall be valid for one year. In addition to the permit, the property owner will execute a revocation of covenant in a form

agreeable to the city. The revocation of covenant shall be recorded by the county auditor. Recording fees shall be paid by the property owner. (Ord. 1269 §19, 2006).

14.32.073 Financial security.

The review body may require financial security in such form and amounts as may be deemed necessary to assure that the work shall be completed in accordance with the permit. Financial security, if required, shall be furnished by the property owner, or other person or agent in control of the property at one hundred fifty percent of the estimated tree and vegetation replacement costs or appraised value. (Ord. 1269 §20, 2006).

14.32.080 Appeals.

Any decision of the city of Lacey in the administration of this chapter may be appealed in accordance with Chapter 1D of the City of Lacey Development Guidelines and Public Works Standards. (Ord. 1192 §55, 2002; Ord. 904, 1991; Ord. 399 §1 (part), 1975).

14.32.090 Violations.

A. **Violation general.** Violation of the provisions of this chapter or failure to comply with any of the requirements shall constitute a misdemeanor and such violation shall be punished as provided by LMC Title 9 for the commission of a misdemeanor. Each day such violation continues shall be considered a separate, distinct offense. The city's code enforcement officer shall promptly investigate all complaints of illegal tree removals.

B. **Penalties.** Any person who commits, participates in, assists or maintains such violation may be found guilty of a separate offense and suffer the penalties as set forth in subsection A of this section.

C. **Mitigation required.** In addition to the penalties set forth in subsections [A](#) and [B](#) of this section, any violation of the provisions of this chapter shall be mitigated by comprehensive treatment of environmental impacts through revegetation of the affected site. In assessing environmental damage, the city's tree protection professional shall determine the extent and value of vegetation removed or damaged and other environmental damage inconsistent with the intent and requirements of this chapter. In assessing environmental damage, the tree protection professional shall consider what the outcome of the site should have been had the proposed project been designed around existing topography and vegetation and all appropriate vegetation saved. The tree protection professional shall use the methodology in the current edition of the International Society of Arboriculture's "Guide for Plant Appraisal" in determining the value of removed and damaged vegetation.

D. **Environmental damage reviewed.** If the violation is discovered after evidence has been removed, the city tree protection professional shall use whatever resources are immediately available to determine environmental damage which may include aerial photographs, other photographs, interviews with adjacent property owners, receipts of timber sales off the site, and any other records available that have a bearing on the quantity and quality of vegetation removed or environmental damage sustained. The tree protection professional also may estimate the appraised value of removed vegetation at the site by analyzing the best case growing capability of the site given soil conditions, health of surrounding tree stands and type of species suspected of being removed. The determination of environmental damage made by the tree protection professional shall be given substantial weight in a court of law.

E. **Revegetation.** Once the value of the environmental damage is determined, a comprehensive plan for revegetation of the site shall be prepared by the tree protection professional considering the purposes of this chapter and the specific elements provided in LMC [14.32.069](#). The plan shall provide for a value of new vegetation commensurate with the determined value of environmental damage at the site. The violator shall be fully responsible for implementation of the plan, accomplishment of all improvements and maintenance of said improvements.

F. **City tree account.** If the cost of restoration of the site is less than the true value of environmental damage at the site, the balance shall be paid to the city tree account. The city shall then utilize those funds for planting trees in other areas of the city.

G. **Appeal.** The determination of the city tree protection professional regarding the environmental damage at the site may be appealed to the city hearings examiner pursuant to the requirements of LMC [14.32.080](#).

H. **Hearing examiner review.** In review of the tree protection professional's decision, the hearing examiner shall determine if the tree protection professional's decision accurately reflects the criteria set forth in LMC [14.32.020](#).

I. **Relevant facts.** Additionally, the city hearings examiner may consider any other facts the examiner determines are relevant to the specific situation.

J. **Reduction of monetary value.** In cases where the determined value of environmental damage far exceeds the site restoration requirements, and extenuating circumstances the examiner determines are relevant to the case are present, the hearing examiner may reduce the monetary value assigned to the environmental damage, provided the hearing examiner shall reduce the determined compensation only when all of the following criteria are demonstrated by the applicant:

1. **Professional forester or certified arborist.** A professional forester, certified arborist, or other professional who could have alerted the applicant of tree protection requirements was not involved in the action leading to the violation;
2. **Monetary gain.** The violation action was not associated with a tree harvesting operation for monetary gain;

3. **Previous record.** The applicant has no previous record of tree and vegetation protection and preservation ordinance violations.

K. **Monetary compensation.** If all of the above criteria are demonstrated, the hearing examiner may reduce the monetary compensation required. In determining the monetary compensation reduction, the hearing examiner shall consider the following factors:

1. **Person responded.** Whether the person responded to staff attempts to contact the person and cooperated with efforts to review the site and arrive at an agreement on site restoration;
2. **Due diligence.** Whether the person showed due diligence and/or substantial progress in site restoration;
3. **Code interpretation.** Whether a genuine code interpretation issue exists;
4. **Other factors.** Any other factors considered relevant to the situation by the hearings examiner.

L. **Limitation on reduction.** In fixing the amount of compensation, the hearings examiner shall not reduce the determined compensation by more than thirty percent of the true value of the environmental damage as determined by the tree protection professional; provided further, that no reduction shall be given in cases where the true value of environmental damage does not exceed the cost of restoration determined necessary by the city's tree protection professional; provided further the hearing examiner may double the monetary compensation if the violation is a repeat violation. In determining the amount of increased compensation, the examiner shall also consider the criteria of this section.

M. **Appeal of hearing examiner determination.** Appeals of violation determinations by the city hearing examiner shall be appealed to Superior Court. An appeal of the hearing examiner decision must be filed with Thurston County Superior Court within twenty calendar days from the date the hearing examiner decision was mailed to the person to whom the decision on monetary compensation was made. (Ord. 1269 §21, 2006; Ord. 935 §2 (part), 1992).

14.32.095 Requirements for foresters and contractors doing land clearing work in Lacey.

In order to assure compliance with the standards and requirements of this chapter, "Tree and Vegetation Protection/Urban Forest Management," foresters, arborists, and logging and land clearing contractors or others involved in land clearing operations in the city of Lacey shall be required to sign and submit a "Statement of Tree and Vegetation Protection Acknowledgment" to the city of Lacey. This statement shall attest such forester's or contractor's knowledge of the city of Lacey's tree and vegetation protection requirements. This statement shall be required in conjunction with normal city licensing requirements for persons performing work in the city of Lacey. The required statement shall be in substantially the following form:

"I, _____, a duly licensed professional contractor in the State of Washington, or professional forester, hereby attest that I have read and am knowledgeable of Chapter [14.32](#), "Tree and Vegetation Protection/Urban Forest Management", of the city of Lacey.

"I further attest that, as a professional doing land clearing work in the city of Lacey, I am accountable for following the city's tree and vegetation protection and conservation requirements, including obtaining a land clearing permit or exemption prior to performing land clearing work, as defined by Chapter 14.32.030(C) of the Lacey Municipal Code, as well as following all conditions and requirements of said permit or exemption.

"I attest that if I fail to follow tree protection requirements I will be held jointly responsible with the landowner for any restitution required as a result of environmental damage determined by the city tree protection professional to be the result of improper land clearing activities at the site. This may result in claims against my bond pursuant to Section [18.27.040](#) of the Revised Code of Washington and other monetary penalties as allowed by this chapter or State law."

Private professionals involved in land clearing operations who do not provide the above statement shall be prohibited from performing land clearing services in the city of Lacey. Said professionals who do not provide this statement and perform land clearing services in the city of Lacey shall be considered in violation of this chapter and may be prosecuted under this chapter, the city's civil penalties ordinance, or as otherwise provided by law. All foresters, arborists, loggers, or other land clearing contractors involved in land clearing operations shall be jointly responsible with the landowner for any land clearing violation and restitution required at a site as a result of improper land clearing activity. (Ord. 1269 §22, 2006; Ord. 935 §2 (part), 1992).

14.32.100 Severability.

If any section, paragraph, subsection, clause or phrase of this chapter is for any reason held to be unconstitutional or invalid such decision shall not affect the validity of the remaining portions of this chapter. (Ord. 904, 1991; Ord. 399 §1 (part), 1975).

The Lacey Municipal Code is current through Ordinance 1568, passed July 9, 2020.

Disclaimer: The city clerk's office has the official version of the Lacey Municipal Code. Users should contact the city clerk's office for ordinances passed subsequent to the ordinance cited above.

Note: This site does not support Internet Explorer. To view this site, Code Publishing Company recommends using one of the following browsers: Google Chrome, Firefox, or Safari.

[City Website: www.ci.lacey.wa.us](http://www.ci.lacey.wa.us)
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Table 14T-66

(Referred from LMC 14.32.035)

Applicant (Person or Group Requesting Services of Forester)	Forester's Recommendation	Party Responsible for Payment
Homeowner	Minimum of one tree defined as hazard tree (LMC 14.32.030(I)) <u>or if requesting exemption for 5 or less trees under 14.32.050 (D)</u>	City
Homeowner	No trees analyzed that would meet the definition of hazard tree <u>or if requesting exemption for 6 or more trees under 14.32.050 (D)</u>	Homeowner
Homeowner's/Condo Owner's Association	Minimum of one tree defined as hazard tree	City
Homeowner's/Condo Owner's Association	No trees analyzed that would meet the definition of hazard tree	Homeowner's Association
Commercial (Incl. Multifamily)	Any	Commercial

(Ord. 1417 §14, 2013).

The Lacey Municipal Code is current through Ordinance 1587, passed March 18, 2021.

Disclaimer: The city clerk's office has the official version of the Lacey Municipal Code. Users should contact the city clerk's office for ordinances passed subsequent to the ordinance cited above.

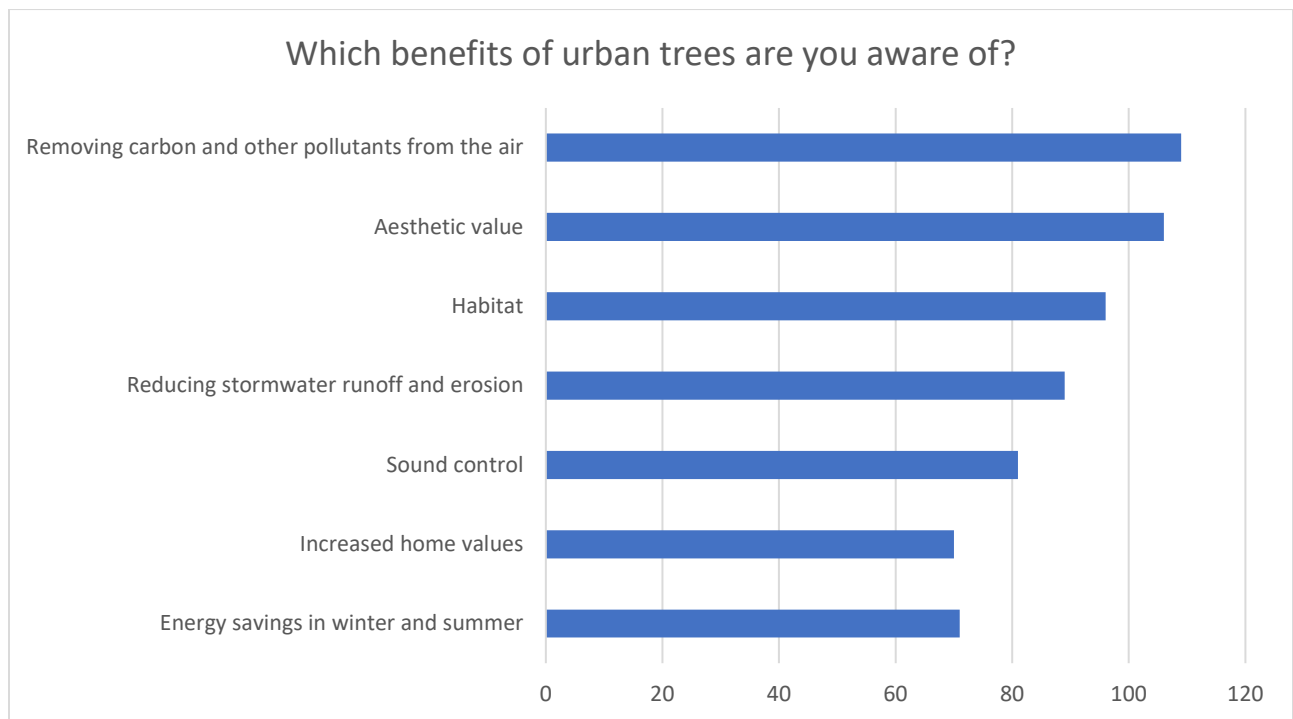
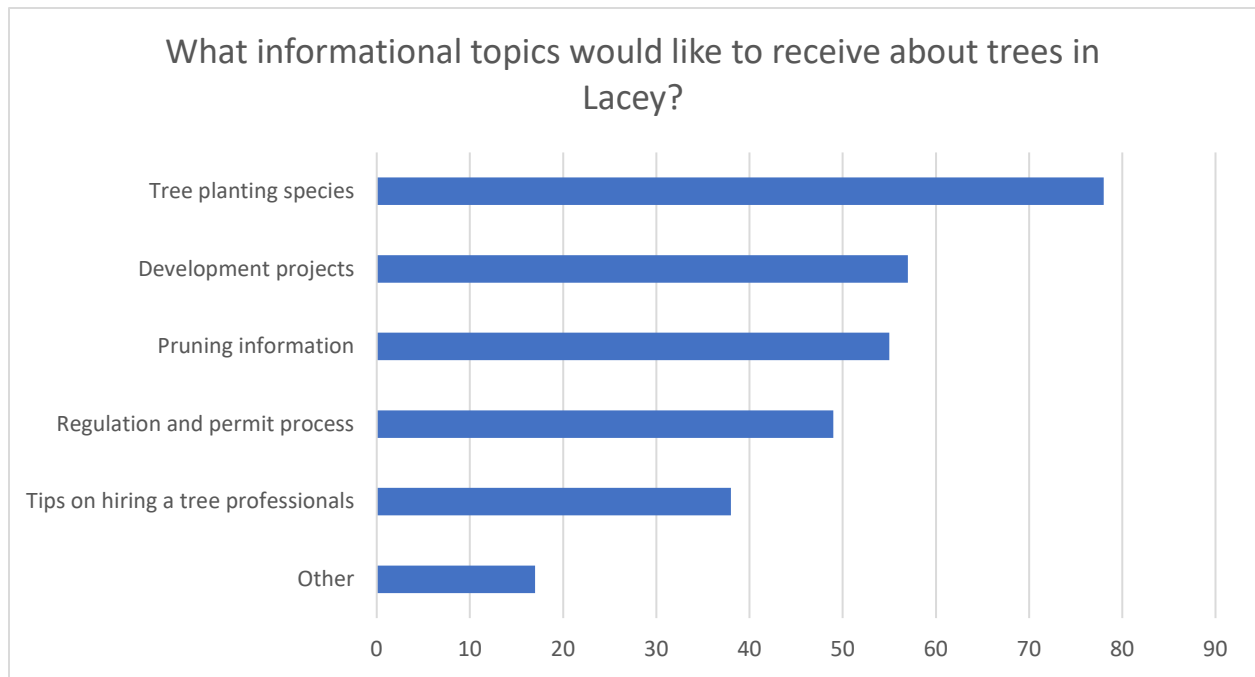
Note: This site does not support Internet Explorer. To view this site, Code Publishing Company recommends using one of the following browsers: Google Chrome, Firefox, or Safari.

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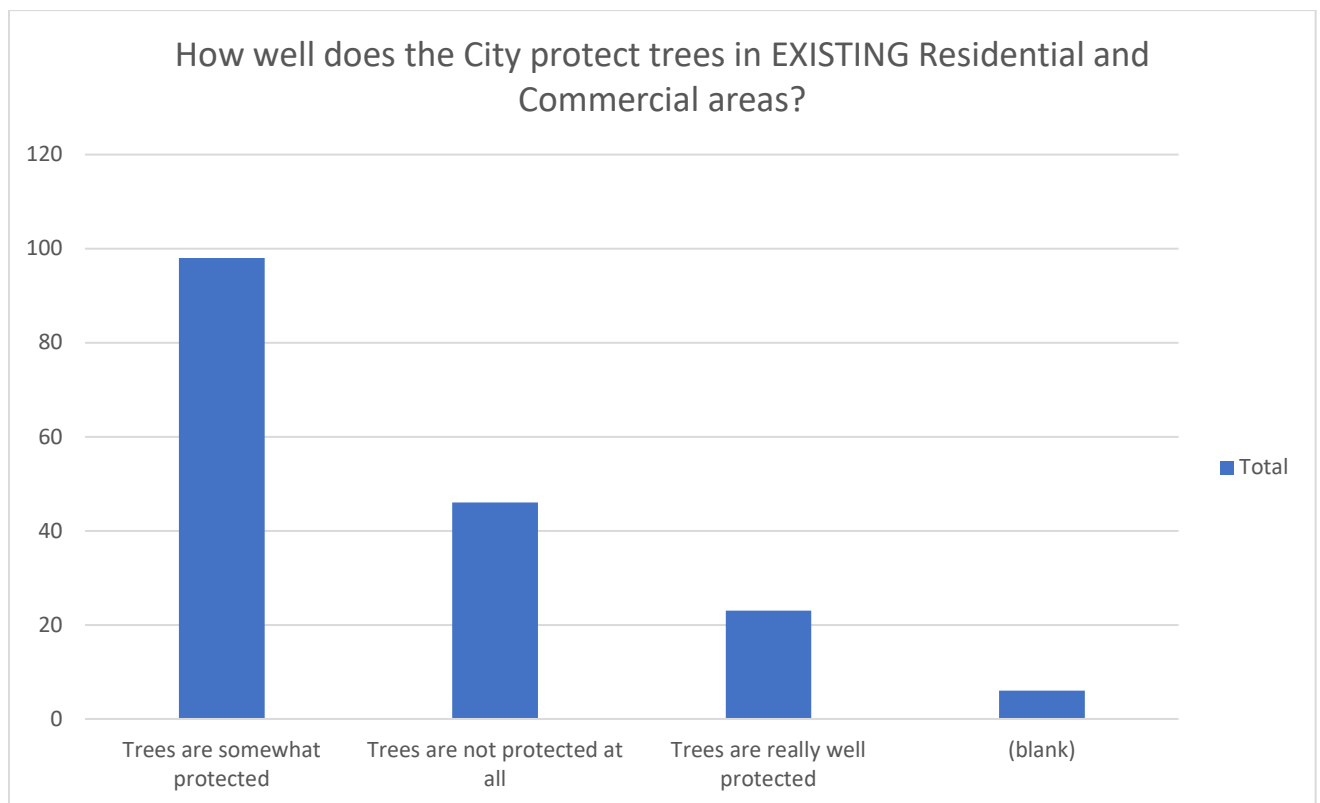
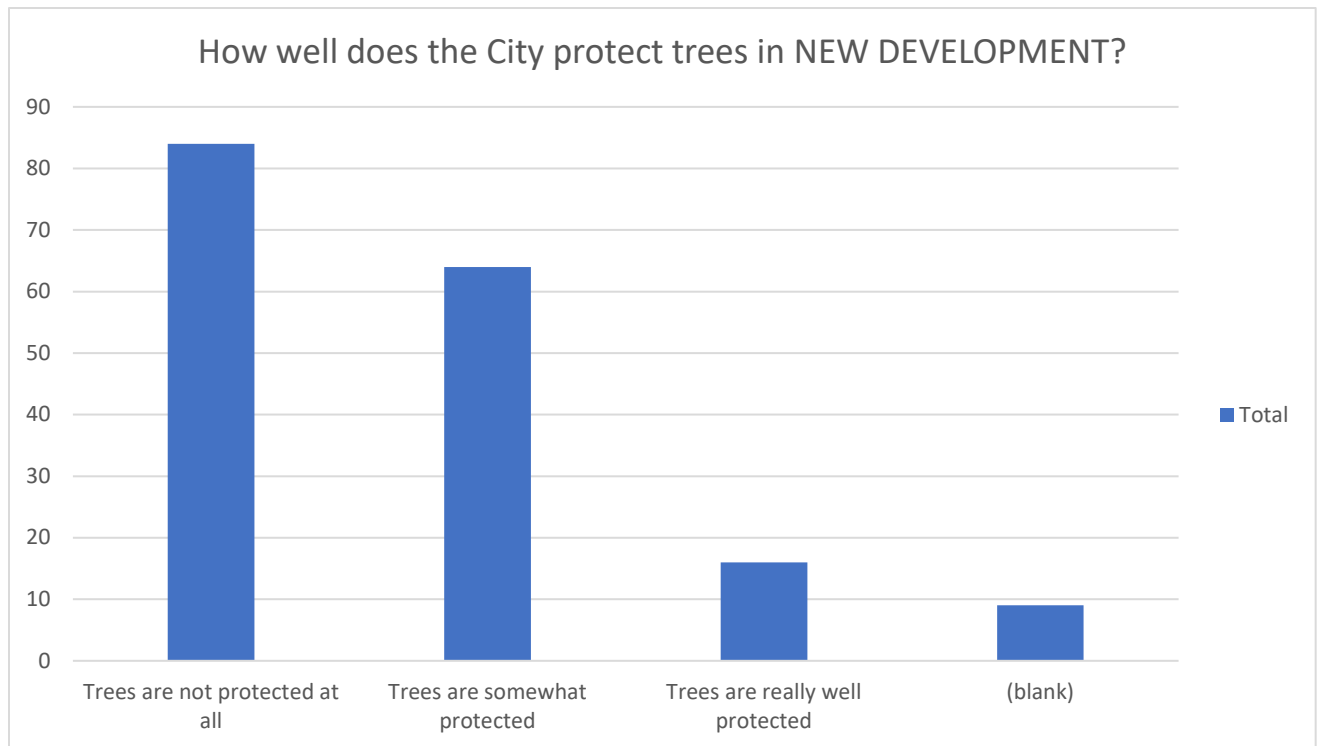
Tree Survey results as of 5/12/21

Total Responses: 173



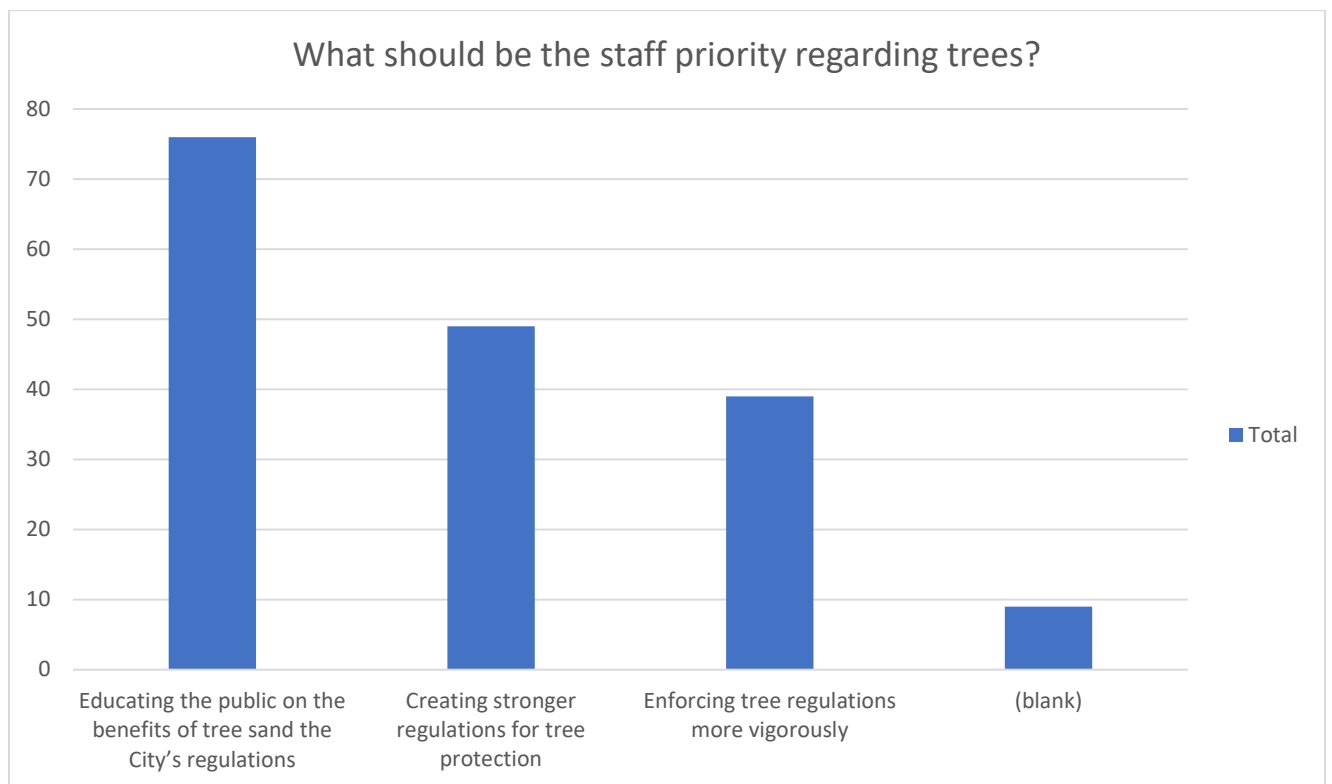
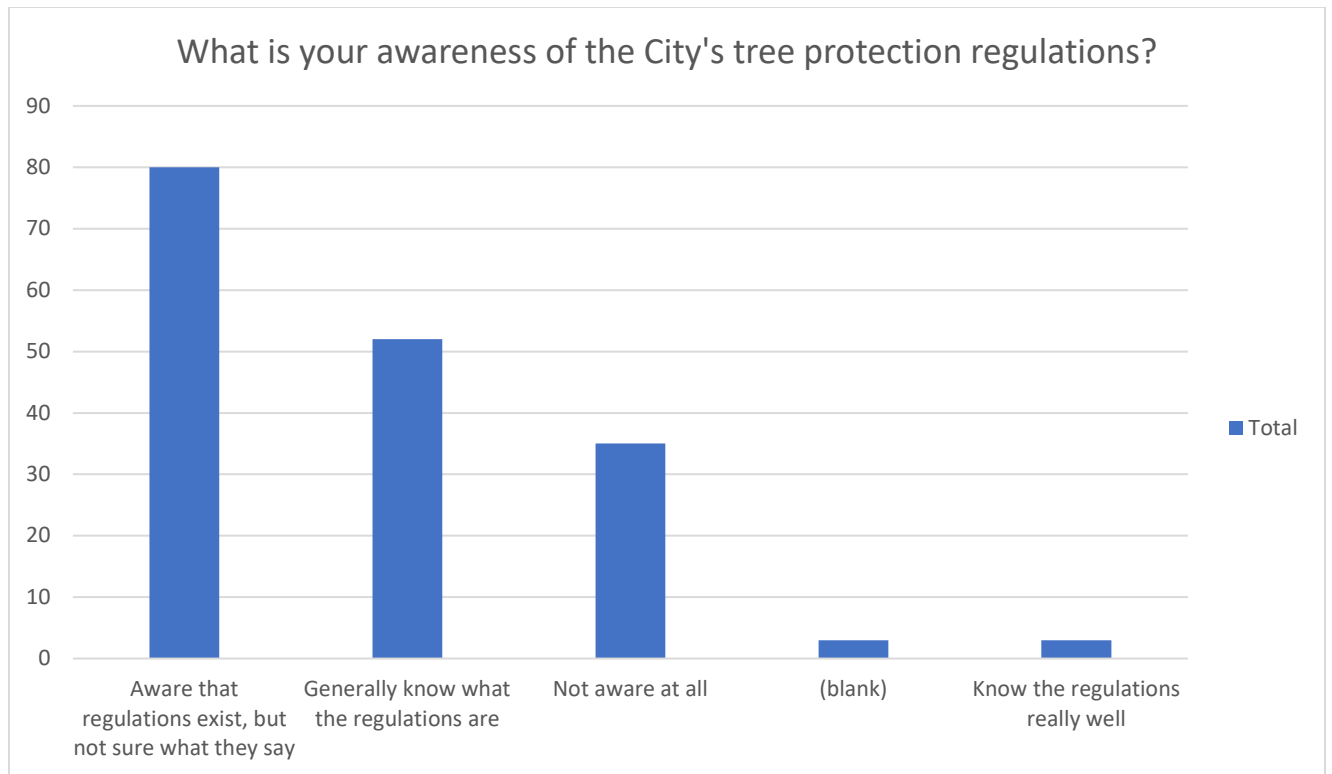
Tree Survey results as of 5/12/21

Total Responses: 173



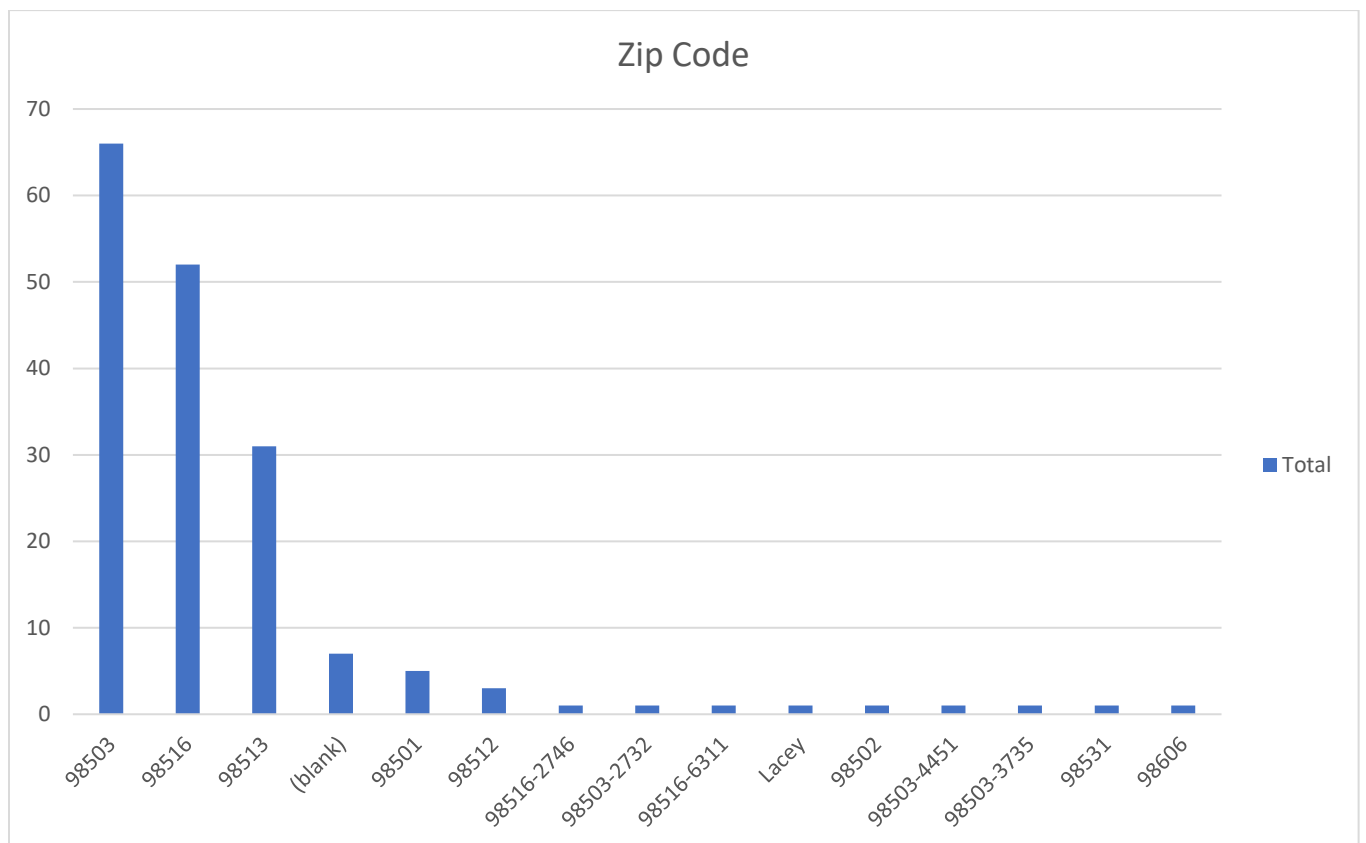
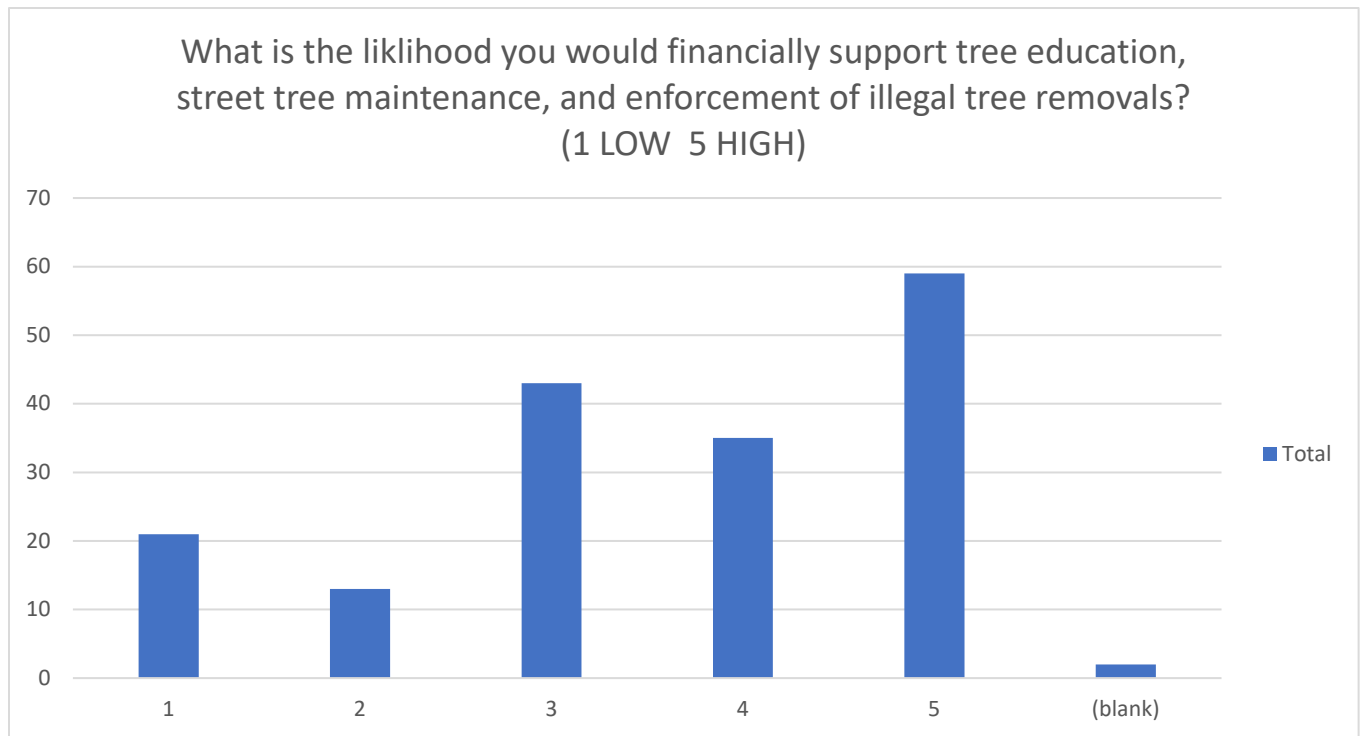
Tree Survey results as of 5/12/21

Total Responses: 173



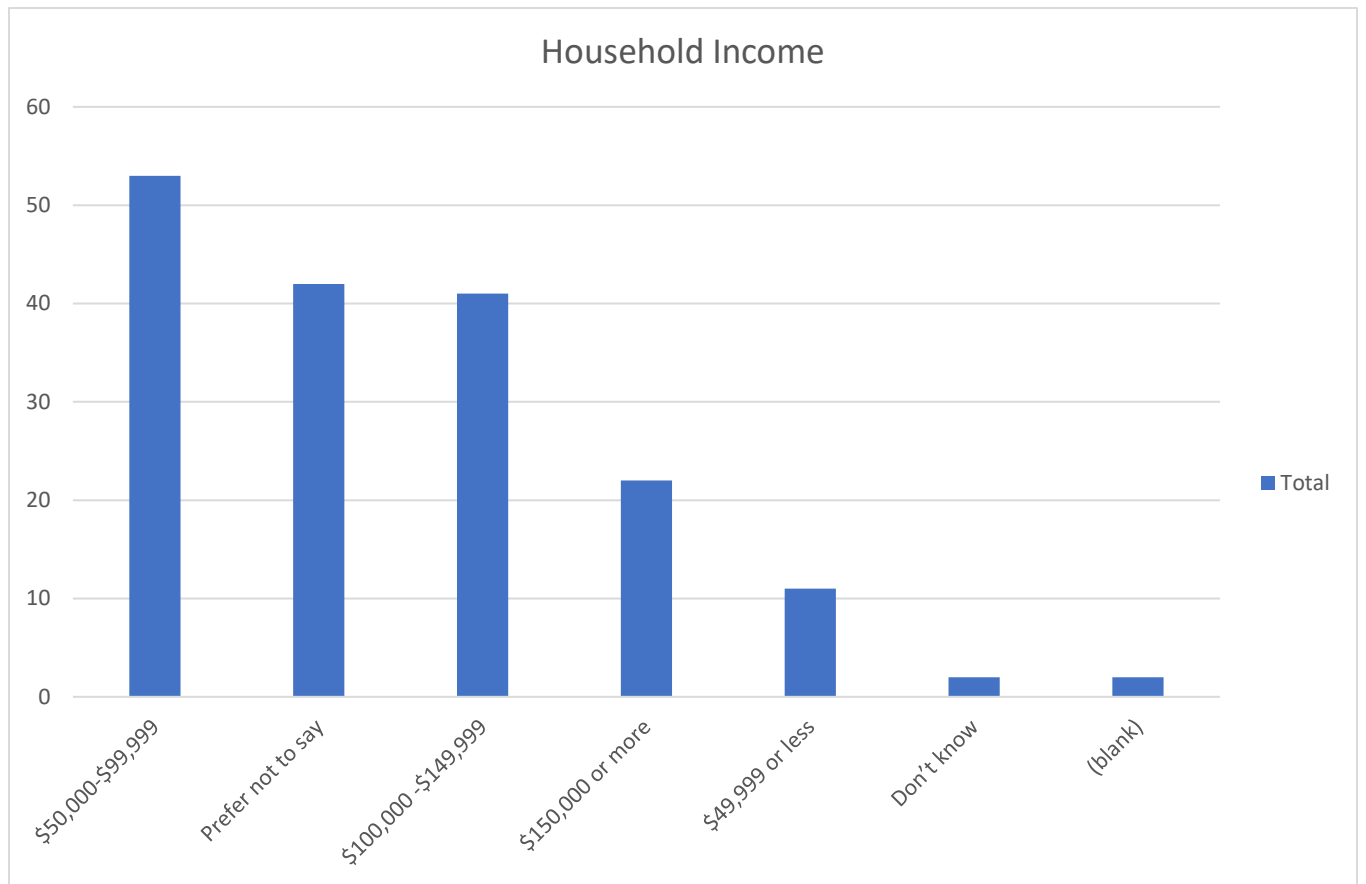
Tree Survey results as of 5/12/21

Total Responses: 173



Tree Survey results as of 5/12/21

Total Responses: 173



Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

1	Beautiful old trees
2	There are a reasonable number of trees, in general. I like trees. They are beneficial, so efforts to manage and increase them are good. Trees in parks are better than trees in parking lots, etc. Vegetation requirements in commercial area merely make to area less walkable, and are bad for the environment.
3	
4	Good
5	In hawks prairie area, treescape management is lacking. I don't understand why many trees have been haphazardly cut down leaving no or small thin barriers between residential sections and warehouse sections. The area behind the Salish middle school and residences of campus Glen being a prime example. Those trees were thinned for no reason even though they provided many benefits to separate different zones if the city (including a sound barrier, where now people are street racing in an empty giant unoccupied warehouse on campus Glen rd basically nightly). The city of Lacey has basically devalued property by doing this. There are many other examples in the hawks prairie NE area as well where residences back up to warehouses with no tree protection even though trees were once there.
6	I like them. makes it nice especially in older neighborhoods and it seems newer ones have too many homes and too few trees
7	Love the abundance of them. Makes the city more beautiful.
8	There are pockets of remnant forest stands - primarily doug fir that are under varying levels of community stewardship. There doesn't seem to be protection of mature trees with newer developments and construction, or incentive for developers to work around or make space for trees.
9	They are being cut down at an alarming rate.
10	Lovely. A big reason I decided on this area to live. I love the forested feel to many neighborhoods.
11	Lacey will soon be the city of lost trees.
12	Under threat from development, vulnerable
13	I love the trees, especially seeing the old growth.
14	They are a beautiful asset to our town's well being and overall health and liveability.
15	There's a lot of them
16	I LOVE the canopy of trees in Lacey prefer that the city protects the trees as much as possible. I'm concerned about the new growth of homes and developments. Looks as though clear cutting is used for new developments. I don't see as much protection of existing trees for newer developments. Seems like something has changed and the emphasis has been on new growth and not protection of green space. I've also noticed less emphasis on protection of existing trees in established neighborhoods. Seems that neighbors are taking down more trees than years past. Are they permitted? It doesn't appear so. Perhaps more enforcement is needed.
17	You keep allowing them to be chopped down
18	
19	I wish we had more trees 🌳
20	
21	Beautiful, but several dead trees in my area and massive undergrowth.
22	Being cut down and it's making the area crowded with new construction and losing the rural feel.
23	Poor job done by the city in preservation of trees. The city approved the warehouse to strip all tress now we have a forest of cement buildings across I-5. Terrible since the state park and

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

	estuary is so near. The communities spreading out are also stripping all the trees. If the city requires permits to remove trees then why are you allowing the businesses to strip them? Money over preservation. It seems like the taxes are already very high in the City of Lacey. What are you doing with the revenue from the warehouse forest?
24	It's good, but we can be better. There need to be more trees! Too often when development happens, lovely old trees get razed during the land prep process. We can do better.
25	It was my favorite thing about Lacey living among the trees but it seems like they are disappearing quickly.
26	very well done, lots of roadside trees
27	Martin Way from Carpenter to Marvin needs help! Especially near the road. We need more small/medium conifers. The winter is bleak in areas with a lot of deciduous trees.
28	city has built over large tree spaces.
29	I like trees which clean the air for us.
30	Diminishing rapidly
31	It is very nice to see the variety on city streets and in neighborhoods. Only issue in planting them near our under overhead power lines.
32	Most are nice, but some close to homes are much too tall and drop very large branches during windy periods.
33	
34	Gorgeous trees! We moved here 10 years ago. Sadly you are allowing too much to be cut down without replacement. Too much is being build and land is being clearcut to build poor quality expensive homes. I wish residents actually had a say in what went on in out area. Homes that should never have been built get around current regulations too easily. It is disgusting to see the sheer amount of space cleared for those HIDEOUS warehouses north of Hawks Prairie. Our city our people our planet need the trees not more asphalt.
35	We need more trees along road ways.
36	The trees in Lacey are the #1 reason I moved here. I live off of Ruddell road and enjoy driving down the beautiful pine tree lined street. Then, the new project to put in sidewalks and a new retainer fence came and cut down a lot of beautiful old pine trees that had been there for years and years. Sickened me to see them go down and I don't even like to drive down Ruddell road anymore. There was no way for the city to put in a sidewalk and fence and still keep a few of the pines?? So sad...
37	Lacey has a good mix of developed land and green spaces, including trees. I love the greenness of Lacey and the northwest.
38	You seem to be removing a lot during road improvements.
39	Nice canopy of trees, nice variety. I read the tree plan and know that certain species are selected for certain areas. What I disagree with is in commercial construction zones and many housing areas, they knock down all the large fir trees to do their building. Then they plan ornamental, non-native trees. I believe planners and construction project managers can work around old trees instead of crushing and ripping them out. We don't need to develop every single corner of trees into a commercial taxable building. It will create heat pockets, poor drainage, pollution and takes away natural habitat for wildlife - rabbits, birds, bees, etc.
40	They are beautiful and I want more of them; I want the Douglas fir Evergreens protected like diamond rings; and I want a continued mix of types of trees (but I want us to honor what trees are native to the other animals that depend on them in this region).
41	Trees are important. Inside the city of Lacey some areas are beautiful with full trees. Some areas don't even have trees like these damned housing development areas. The rules that we have I have to have 31 trees on my lot. I have to get permission to cut down trees whether diseased or not. city of Lacey should not be managing this I should not have to go to the city of Lacey to cut down trees if I maintaining the required amount of trees on my lot let me manage it

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

	not you. Also if Lacey once so many trees make a more affordable. also give credit for bigger trees I was told that the city of Olympia gives you credits for larger trees instead of: one tree it would actually be three trees. Don't know if that's correct but that would make it easier for me to manage my property
42	Good.
43	Love Love Love all the trees in Lacey.
44	They look sad and tired. There is a lot of air pollution and just the overall homeless issue right now and the homeless people not caring for the area they're utilizing.
45	Trees are a necessary part of a healthy city, but some trees close to houses are no beneficial.
46	Overall good. Please keep them trimmed back for traffic safety & never planted in center of round-a-bouts.
47	To many regulations exist governing what I can do with trees on my own property.
48	They are being either butchered (in the name of pruning) or cut down at an alarming rate.
49	They are beautiful. We LOVE them. Best thing about Lacey.
50	as long as they aren't going to blow over and KNOCK OUT MY POWER FOR MULTIPLE DAYS I'm pretty content
51	They are being removed at a fast pace.
52	Too many Maples, need more diversity. Would like to know the composition and number of tree species and numbers of varieties if available. Tree regulations need to be publicized more. Citizens should be required to hire licensed and insured arborists who are members of the International Society of Arborists and obtain a permit. Also, tree planting in new sidewalk cutouts and median strips should be done with more careful soil preparation.
53	Not as many as in Olympia
54	Lots of them are dead or dying. You talk about trees, but then let developers clear-cut hundreds of acres of trees because that's easier than preserving them. Lacey has ridiculous rules (requiring permits) for taking out/replacing trees on private/residential property, but lets commercial developers wipe out forests.
55	Trees are great! We need to keep as many big trees as we can.
56	good amount of greenery and well-maintained. I'd like to see Lacey continue this as well as keep up the good work on the parks
57	The trees are mostly on private property.
58	generally good, depends on what part of Lacey environs
59	Pretty good
60	That they're diminishing, same as everywhere. I would like to see more preservation and education, to curb the impulses of people who want Washington to be like Arizona.
61	The trees are beautiful all over town they provide a very good feel to our public spaces.
62	The more the better!
63	Street trees have become a hazard to individuals, raising sidewalks, roots intruding into grates, making messes, and clogging catch basins we need to look at fewer trees and perhaps smaller less onerous plants to maintain.
64	There have been some poor choices given to developers in the past. I am in White Fir Estates off Meridian Rd. north. Pretty sure the city mandated flowering cherries for this neighborhood. Roots are lifting my driveway and sidewalks.
65	Beautiful!
66	don't ask for more money for this, but stop spending money on something else and shift the budget
67	My general impression is that trees are not valued by our city planners. Clear cut for business and housing with no thought to preserving forested areas.
68	Lacey is cutting down too many large trees and replacing them with little sticks.
69	Trees add a lot to the community and should be reasonably retained.

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

70	They create a beautiful and friendly atmosphere.
71	Big warehouse projects are nearly clear cutting native conifers and replacing with deciduous trees, removing critical nesting areas for eagles, owls and other raptors.
72	Love them and sad so many warehouses and buildings are being put in to their demise
73	Plenty planted, but not thoughtfully: too many have roots that push up sidewalks.
74	Impressed with amount and variety. More please.
75	
76	Nice to see them.
77	There are a lot.
78	Too many being cut or bulldozed down, too much habitat loss.
79	They're beautiful, especially the flowering ones in Spring. Too many trees are being clear cut for warehouses. Far too many.
80	They are beautiful and I really hate to see them cut down
81	The trees in Lacey are not kept well. Various areas they are planted and just forgot about. Over grown with bushes, and lifting sidewalks and make it extremely difficult for mobility as a disabled person. But the shade is nice and there are lots of birds.
82	They are nice..
83	I appreciate them and would like to see more of them.
84	The new street plantings are wonderful addition.
85	The trees are well placed and nice.
86	There is a distinct difference between "old Lacey" and the newer developments. While older sections of Lacey seem to have been built to embrace the natural environment (Lacey City Hall, for example, or the Providence medical buildings), it seems that ALL new development sites completely wipe out groves of trees and then seem satisfied to plant tiny landscape trees around completely barren sites. Heartbreaking to witness, on a regular basis.
87	It is smart to have worked with HOA housing developments to provide street lined roadways with trees. The difference between old Lacey and new Lacey are quite prevalent in the fact New Lacey communities wipe out all existing pine and birch groves without a thought to the natural beauty between old Lacey and new developing tracts. More groves of the existing landscapes need to be included in city plans. The Salish school is the perfect scenario of growth with corporate mismanagement of green spaces. The trees that we have replaced in these urban extensions are always small requiring years to become old Lacey in concept of what our environment represents. Old Lacey looks and feels comfortable such as our City offices and Police and library complex. The need to create green areas is important in these developers keeping Lacey joined as one township of a healthy setting unlike the urban sprawl it's allowing to become. Tacoma we are not, keep the pine and birch groves. So you failed to ask what trees we may like to see around the city that preserve our streets and walkways...the Chinese Pistachio is a great example of a tree that can save the Lacey community monies. Yes and lets not forget to have these developers dig deeper holes for planting the trees.
88	Mostly positive but it seems to be much too easy to remove trees and ignore buffer requirements.
89	Adds to beautiful environment
90	They're great. How many are native species?
91	There are some areas of dead or diseased trees that need to be removed and replanted. I see most of that in neighborhoods. A lot of trees have been cut down lately due to construction which is sad. In addition, we need better management of large trees near power lines to avoid power outages.
92	I love all of the old growth trees and really want to see more preservation of them rather than the wiping out of them that has been happening recently (Ruddel & Mullen for example).

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

93	LOVE them. Too restrictive on homeowners though. Trees ruin foundations and lead to many neighborly disputes. Totally unreasonable to expect a tiny lot to have 5 trees. Educate developers or require them to plant trees that don't grow so huge.
94	I love that we have so many trees. It really adds to the beauty and natural feel of the area.
95	I like them. Recently it seems quite a few have been cut down. Sometimes the pruning of street trees makes them look distorted.
96	Love them the more the better!
97	Generally very positive, I enjoy being in a city that still had beautiful trees.
98	We have a lot of lovely areas and I appreciate that. I'm not sure how feasible I would be to add some greenery to Martin between Carpenter and Marvin. That stretch of road looks pretty rough. Thanks for all you do!
99	The more trees the better
100	They are precious and beautiful! More trees!
101	We could always use more! In fact, there were more 10 years ago...
102	It's good. Lots of different types and they are nice to look at.
103	Beautiful!!
104	The more trees the better!
105	Born and raised here (71 yrs. old) I love the Trees. I would rather go back to seeing more trees and a lot less houses, apartments, cars and people.
106	There's not enough
107	I love the abundance of trees in Lacey, and appreciate that they are protected.
108	When I first moved here, there were so many. Now, there are few. We need to preserve what old growth we have left and plant more trees to replace those lost.
109	I enjoy the fact we have mature trees native to the Pacific Northwest in many areas. I believe that in new housing developments, these are the same trees that should have been planted rather than the non-native species developers thoughtlessly plant instead. In new developments, small areas of diverse species are completely cleared. Any plantings put in are perpetually scrawny, unwell and not native to the region. Landscapers give no thought to viable soil depth. Plantings in new developments are often trying to grow in 5 inches of new soil atop non-fertile soil dredged up from building. On the other hand, the more mature stands of trees really improve bird habitat and small animal habitat.
110	They are beautiful and enjoy the beauty they bring throughout the different seasons.
111	Love the trees and nature in general. Provides fresh air compared to more urbanized areas.
112	
113	Beautiful and add to the feel and charm of the city. I feel like we have lost that much in harks p.
114	too many shallow rooted trees destroying fences, concrete and roads. You should reimburse those people who lose fences and sidewalks because of poor city planning.
115	They are beautiful but need to be groomed more along roadways and power lines
116	I love having trees in our city!
117	there used to be a lot and now you are allowing big business to clear acres and acres to install warehouses
118	I see a nice variety of trees in public spaces. I'm sad to see so many lots get cleared for population growth.
119	We have too many, too many on the right of way. A lot need to be removed, cut back for safety.. We also believe trees in yards should be taken out, too close to homes. A lot of people can't afford it. We have seen houses in this area devastated by falling trees.
120	

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

121	We are losing our native trees which affects our ecosystem
122	Like them
123	Some trees around the city need maintenance but definitely are very needed in our city.
124	Not enough trees. Street trees should be planted near street edges to slow traffic. Only plant trees that will not harm sidewalk smoothness.
125	I would like to see trees in the mall parking lots to add character to the mall and inside the malls as well. Also I think when a new subdivision is built the amount of trees that need to be removed should dictate the minimum number of trees that need to be planted.
126	Love them, and want to save as many as possible
127	The trees were the reason I moved to Lacey.
128	Good in some areas, poor in new construction
129	Beautiful
130	The government should not require a permit to remove a tree on their property. This is an unconstitutional taking without compensation. Public lands manage away. Recommendations are the limit I want to see for private land tree management.
131	Overgrown and obstructing electric lines
132	Massive tree lover here. I live here because I love the greenery. It's beautiful. The more trees the merrier!
133	Lacey is a City in a forest.
134	My general impression of trees in Lacey is they were here before we built in this area. We must plant more trees for the next generation. Trees give us homes for people and birds to live, fire, furniture, oxygen, shade and fruit. Trees are beautiful to see, smell and hear. They give you peace of Mindfulness. When you step outside your house and walk through a pathway with trees and shrubs all around you, your mind, body and soul connect with nature.
135	
136	Beautiful
137	They are a large part of the character of Lacey, but unfortunately they are being replaced by urbanization.
138	Excellent. But I get upset seeing new subdivisions taking out trees or not planting new trees.
139	I like the trees in Lacey more than anything north of JBLM. They seem older, and taller and feels more like the PNW
140	beautiful, many old large trees - too many recent cuttings
141	not enough of them, far too many removed for development!
142	In the retail areas of Lacey I feel we could use more trees.
143	They are being cut down at a rapid rate and full grown mature trees are replaced by either nothing or saplings that will take decades to replace. There are no negative consequences for cutting down trees illegally that make any difference whatsoever to the person doing the cutting. Existing trees and urban forested areas should be strongly protected! Why is there no Climate Change benefit in the drop down menu of urban trees benefit???
144	We love them, DON'T want to lose them, and always need MORE TREES. Too many neighbors are cutting their trees too often, without regard to protection of trees. We see it all the time, as well as developments planned in our area which require clear-cutting and adding more impermeable surfaces. Trees protect us from flooding and are urgent for habitat.
145	Not enough of them.
146	Our trees are lovely but the number of trees needs to be vastly increased, due to the need -- driven by rapidly increasing climate change--of having mature trees to remove carbon dioxide from the air. SAVE ALL MATURE TREES AND PLANT NEW ONES.
147	Terrible policy that is felling trees/forest right and left and center. We moved to Lacey four years ago and the majority of vest forests in existence then on our drives to Olympia have been replaced with warehouses. The trees and understory are irreplaceable in my life time, my kids,

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

	my grandkids. I am outraged and saddened at this public policy choice of greed over public health
148	I like the trees in Lacey and I think we need more. They need to be protected.
149	I like the tree landings along the streets. I think Lacey residents enjoy and see the benefits of tree plantings.
150	Wonderful. The trees in and around residential neighborhoods dramatically improve appearance and desirability. They provide shade, contrast, shelter, and habitat for birds and critters.
151	Living here at Panorama sets the bar quite high to us as a benchmark. There are commercial areas that overwhelm such as the Library and the Lacey City Hall area. Any neighborhoods in SE Lacey have beautiful canopies but within mall areas that are poorly cared for and perhaps poor choices to begin with.
152	
153	I love the trees we have in the community, it is always sad to see old trees taken down. I hope for more native plants and trees in our area
154	I love all the trees in the central part of Lacey. When I moved here, I selected Lacey because of all the groves of trees in NW Lacey. It has been heart breaking to see large plots of land clear cut for warehouses and homes. I can understand and appreciate growth in our area but don't see much effort to replace loss of that action on the environment.
155	I love them! We moved to Lacey in 2018 for a number of reasons, INCLUDING the trees.
156	Generally very favorable. I am concerned about the mass stripping of trees between residential and warehouse/ industrial areas and the failure to maintain trees in areas where new warehouses/ storage units are built.
157	I love the trees that we have along the main roads. Very pretty. I love that we have a great amount of trees in the city.
158	Beautiful but some large trees are not healthy
159	Lacey allows developers to clear cut large acreage plots for urban development. At what cost? The idea that you can mitigate CO2 with sidewalk and meridian trees is simply not logical. A true climate plan would create urban development like the City of Lacey's City Hall and the police station. Integrate urban growth with old tree stands with creative development designs that enhance communities. I met someone who bought a house out at Meridian Campus because they loved living surrounded by trails and trees. They decided to move a few years later because when they looked out of their windows the forest had been logged. Now the view was not nature but more and more houses. People love nature. Why not use existing stands of older Doug fir Maple and Hemlock to implement carbon sequestration and only allow development to enhance nature and human well being. Implement credits and incentives for new housing developments that build around trees and create wonderful environments like the City Hall and library. Keep Lacey green for future generations. Once its all logged you can't go back.
160	I feel like there is a decent amount of trees in the area, but would like to see more, but in practical places. One thing I hate seeing around the city is trees lining a street that have had their top half cut off to allow room for power lines.
161	The more the better
162	I like the trees and appreciate that the city of Lacey has a wide variety of healthy and mature trees as well as newer plantings. I would like to see Lacey keep as many of its trees as possible.
163	depends on where you look in Lacey, some areas are great others not su much.
164	favorable, but mostly in newer neighborhoods
165	Too many non evergreen trees being planted... these are generally not native species... create iddues cleaning up leaves ... and are often more serious hazards in wind storms as the grow anx mature and become top heavy ...
166	Love them, a little concerned with large branches falling on roadways, don't want them cut down, plant more!

Tree Survey Responses– Fill in the Blank “What are your general impressions about the trees in Lacey?”

167	What the city has allowed to happen in northeast Lacey is disgraceful. By letting whole forests be cut to build warehouses and developments, the city can no longer call itself the city of trees. You should be ashamed of yourselves! You talk one game and play another in reality.
168	
169	I live in the neighborhood of Lake Forest and for my neighborhood, I wish we had a greater variety of trees. I love trees, but Douglas Fir, Red Cedar, Western Hemlock, some of them have gotten so big that they block out all the light in my neighborhood. We have some beautiful maples, aspen, birch, alder, and dogwoods...just wish there were more deciduous trees.
170	Lacey has way too many trees to close to roads and power lines
171	Lacey needs to plant more trees.
172	decorative but small
173	They are nice.

#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.