CONVENE: 7:00 p.m.

PRESENT: Chair Trent Grantham and Boardmembers Michael Jackson, Tanya Nozawa, Hannah Ohman, and Jim Sedore.

Absent: Boardmembers Brent Chapman and Brodrick Coval.

Staff: Sustainability Coordinator Alyssa Jones Wood.

CHANGES TO AGENDA: There were no changes to the agenda.

APPROVAL OF TREE BOARD MEETING MINUTES - APRIL 10, 2023 & JULY 10, 2023:

MOTION: **Chair Grantham moved, seconded by Boardmember Sedore, to approve the minutes of April 10, 2023 and July 10, 2023 as presented. A voice vote approved the motion.**

TREE BOARD MEMBER REPORTS: Boardmember Sedore commented on the recent tour by the Board and staff of three sites in the City. The discussion included collaborating with staff to identify the best species for planting on the sites. He anticipated receiving a response by staff with respect to planting plans for the sites but believes when staff is ready to move forward, the Board will be contacted to provide feedback.

COORDINATOR'S REPORT: Coordinator Jones Wood reported the implementation of the new Washington Wildland-Urban Interface Code by the Washington State Building Code Council has been delayed until March 15, 2024. Forestry code updates for the City will continue to be on hold until the state code is finalized by the Building Code Council because of potential impacts to any changes the City might enact. The City in conjunction with the Washington Association of Cities (AWC) sent a letter to the Building Code Council outlining the ways the code could be improved and potential impacts to cities by the code interacting with existing ordinances and other environmental rules. The proposed ordinances will not be presented to the Tree Board for review until the code is completed by the state. The timeline coincides with the 2024 legislative session with other jurisdictions considering the possibility of introducing other bills to improve the Washington Wildland-Urban Interface Code.

Boardmember Sedore asked how the delay affects the contract with the City's consultant. Coordinator Jones Wood said the City extended the contract with the consultant.

Coordinator Jones Wood shared information on additional uncertainties surrounding the new requirements, especially as it pertains to wildlife corridors.

Boardmember Sedore remarked that based on his interpretation of the proposed code changes by the state, it might be necessary for the Board to review some of the work completed to date on code amendments, particularly regarding public comment and the Board's evaluation of how to implement the proposed codes. He asked whether a reassessment might be necessary of the work completed to date or whether it might be necessary to restart the process. Coordinator Jones Wood said it is likely the Board's review will include as much of the data acquired to date that would be allowed within the new state code. Staff is working on some obstacles the code creates for the City by working with other jurisdictions to ensure the new state code considers local impacts to habitat, water, and other environmental considerations.

Coordinator Jones Wood reported next month, the Board is scheduled to receive information from Intern Amita Devarajan on the status of the Street Tree Review Project.

Boardmember Sedore asked whether the November meeting agenda also includes a discussion on the recommended tree list. Coordinator Jones Wood said the discussion has been deferred due to the delay in the adoption of the Washington Wildland-Urban Interface Code. All tree codes are impacted by the delay in the state code. A draft Street Tree Plan was submitted to the Department of Natural Resources (DNR) as part of the grant application to fund the work. At this time, all actions will be delayed moving forward until the adoption of the state code.

Boardmember Sedore asked whether the recommended tree list included on the City's website was included within an adopted ordinance. Coordinator Jones Wood advised that the ordinance would include an approved street tree list. The draft list has been expanded with some species added and some species removed based on the work completed by Intern Devarajan.

PUBLIC COMMENT:

There were no public comments.

CARBON SEQUESTRATION WHITE PAPER:

Allison Osterberg, Planning Manager, Thurston Regional Planning Council (TRPC), briefed the Board on the Carbon Sequestration White Paper released in February 2023. The briefing included background information and the context of the Thurston Climate Mitigation Plan, sequestration baseline, and policy options and conclusions.

The Thurston Climate Mitigation Plan (TCMP) includes carbon sequestration among the strategies and actions identified to meet the region's goal of reducing locally generated greenhouse gas emissions 85% from 2015 levels by 2050. The report outlines existing information and resources for policymakers and staff to inform next steps for increasing carbon sequestration in the Thurston region.

Carbon sequestration is a process of drawing carbon dioxide from the atmosphere and storing it in various objects either natural or artificial. The process is natural and occurs continually, and it can be an artificial process for various purposes. In the context of the report, carbon sequestration is any action removing carbon dioxide from the atmosphere and storing it naturally (soil, vegetation, ocean, etc.) or artificially. From a climate change perspective, carbon sequestration is a mitigation strategy in the Thurston region, as well as globally to reach climate targets to reduce or help avoid predicted dire impacts from climate change.

Carbon stock refers to where carbon is stored, such as vegetation, soil, rocks, gas, liquids, etc. Stored carbon is considered stable and is measured in tons. Carbon flux refers to carbon movement from one location to another location. Carbon flux activity is measured in metric tons of carbon dioxide equivalent or greenhouse gases per year.

Forests are important for carbon sequestration while new plantings of trees draw down carbon dioxide from the atmosphere as they grow. For the purpose of the Thurston Climate Mitigation Plan, the focus is on terrestrial sequestration of forests and trees with carbon dioxide pulled from the atmosphere through photosynthesis and stored in vegetation, roots, and soil, as well as agricultural sequestration through agricultural activities. The plan also speaks to carbon sequestration associated with prairies. Prairies are a unique ecosystem in Thurston County contributing much carbon sequestration as prairie plants have extensive root systems.

The Thurston Climate Mitigation Plan was completed in 2020 and developed through collaboration between the cities of Lacey, Olympia, Tumwater, and Thurston County. TRPC provided support in the development of the plan. The plan established greenhouse gas emissions reduction targets for the region as common goals to reduce local contributions to climate change by 45% by 2030 and 85% by 2050. The plan includes 22 strategies to achieve the goals through more than 70 actions. Sequestration will be used to offset countywide greenhouse gas emissions by harnessing the power of local ecosystems to drawdown more carbon from the atmosphere to offset emissions created locally. Much work is underway to preserve and restore local ecosystems. Another strategy is the assumption that carbon sequestration would not account for emissions occurring outside of Thurston County.

Boardmember Sedore asked whether there is a strategy to minimize the increase in greenhouse gas emissions or reduce current emissions. Ms. Osterberg replied that the plan targets are mostly focused on reducing locally generated emissions from the transportation and building sectors, as well as reducing emissions from agriculture, water and waste processing, and other sources of emissions. One section in the plan focuses on how to offset emissions generated through carbon sequestration. Other strategies consider population growth.

The plan includes a scenario analysis of the targets and identifying ways to achieve those targets. Policies in the plan account for recent state policies, such as the Clean Energy Transformation Act for shifting the source of electrical power in the state to renewable energy, changes to building codes, and transportation policies. Local policies were identified to achieve the targets. Although state policies contribute much to reduce local emissions, the policies in themselves would not enable the region to achieve the 2030 and 2050 targets. Local policies to reduce local emissions particularly in the transportation sector helped the region meet the short-term target in 2030 and meet the 45% reduction goal but it was not sufficient to meet the end goal of 85% reduction by 2050. Carbon sequestration was a contributing factor to help offset regional emissions to meet the long-term goal. Carbon sequestration could offset emissions by 10%.

The Thurston Climate Mitigation Plan established a target of sequestering 380,000 metric tons of carbon dioxide equivalent per year by 2050. To achieve the target, the plan considers different options from agricultural soil carbon with the potential of contributing 3,300 metric tons of carbon dioxide per year and afforestation and reforestation for the remaining amount. Many other options were not included in the estimate, such as what existing trees, forests, and other land cover contribute to carbon flux on an annual basis or estimates on the sequestration that could be provided by restoring prairies, the role of urban trees versus rural trees, and how changes in land use might affect sequestration levels in the future.

Following completion of the plan, questions remaining surrounded the amount of carbon land in Thurston County sequestered and that a baseline should be established to enable tracking progress towards the targets. Another outstanding question was how much more sequestering could occur in the future if actions were different. Other issues surrounded the question of whether the targets were feasible or even possible for the region to achieve. Those outstanding questions prompted the development of the white paper. One of the first examinations was whether it is possible to develop a baseline estimate for the region and how the environments in Thurston County contribute to carbon sequestration. The result is that it is partially possible using a recently developed tool by ICLEI known as LEARN. LEARN uses aerial images to compare over time to identify changes in land use. The tool helps to compute estimates on how changes in general land use categories translate into changes in carbon sequestration. The LEARN tool was used to develop a sequestration baseline. The function of the LEARN tool is somewhat limited as it only accounts for the role of trees and forested areas and does assess changes in carbon sequestration due to agricultural, prairies, or other land uses. The baseline established for the region is 926,800 metric tons of carbon dioxide per year. At that time, the overall countywide greenhouse gas emissions were approximately 3.3 million metric tons of carbon dioxide per year resulting in approximately one-third of the emissions offset through carbon sequestration.

The bulk of sequestration is provided by forests in the rural areas with a smaller

amount contributed by trees in urban areas. The total equals the carbon sequestration baseline. To achieve the targets in the plan, it is necessary to achieve outcomes above the baseline requiring an additional 375,000 metric tons of carbon dioxide a year. Strategies were considered to increase carbon sequestration in the Thurston region. A literature review of the analysis, tools, and assessment of different sequestration strategies assisted in identifying a number of actions with some included in the plan and others not included. Actions in the plan focused on increasing regenerative agriculture, increasing the storage of carbon in soil and vegetation, reforestation and afforestation actions, and prairie preservation. Other actions not included in the plan focused on areas managed for timber harvest by extending the rotation of timber harvesting, avoiding conversion of forests, and potential restoration in tidal and wetland areas. Each action was assigned high or low outcomes. Despite the additional actions, the 2050 target is not achievable. Consequently, actions by regional partners were considered to move toward the goal. Thirty actions were identified to pursue including technical assistance and outreach, regulatory changes for consideration by the jurisdictions, financial incentives, and filling data gaps.

Four major categories identified as priorities include:

- Support rural forest conservation and incentive programs through advocacy for the management of large forestlands (controlled by private timber management, private ownership, or state lands)
- Consider ways to align existing programs with sequestration goals. Potential options are comprehensive plan updates, efforts on the Habitat Conservation Plan by the City of Tumwater and Thurston County, and the possibility of reviewing and updating the Thurston Climate Mitigation Plan.
- Fill existing data gaps.
- Continue to build relationships with community partners and continue to track state and federal programs.

Ms. Osterberg said the focus on rural forests in the policy recommendations was based on an assessment of land cover and land use in Thurston County. Approximately one-half of Thurston County land is forested with 93% of that area located in rural areas. Approximately 60% of forested land is managed for timber harvest with a majority of the land owned by private timber companies and DNR. Local governments are typically not involved in the state's regulatory role in terms of state-owned lands; however it becomes much more important in terms of the role of carbon sequestration within the region. Only 3% of forested land is designated as park or preserve.

Boardmember Sedore asked whether any data are available reflecting how much of the county was forested 20 years ago. Ms. Osterberg advised that TRPC has some data that are tracked for the agency's Profile publication that addresses land use cover change over time. The amount of forested area in Thurston County is reducing over time. Boardmember Sedore said he would be interested in

knowing whether current policies are reducing the forestland base or increasing the current forested land base. Ms. Osterberg replied that the LEARN tool enabled a comparison of different timeframes. Forested area in Thurston County has increased to some extent based on new timber management practices. Wildfire poses a risk of losing forested land. New imaging using the LEARN tool would document the reduction; however, stored carbon released into the atmosphere from a forest fire would not be captured by the tool. Other resources are available to track that type of information.

Ms. Osterberg reported Department of Natural Resources is rethinking how the department manages state forests for climate change and has incorporated those considerations into recent planning efforts. The department launched a new carbon project that identifies some state land to be managed for carbon markets rather than for timber harvesting. The Thurston County Conservation District has a number of programs that can address regenerative agriculture. The Voluntary Stewardship Program has information on stewardship on agriculture lands, and the Sustainable Farms and Fields Program could be a potential funding source for assisting in filling data gaps pertaining to agriculture practices. The state's Climate Commitment Act enacted a cap and invest system offering a potential for more carbon-related projects. Funding from the program would help to fund efforts for identifying carbon offsets that are tied to reforestation, forest conversion, or improving forest management. Carbon credit programs have generated interest in how they could provide economic benefits and assist in quantifying the economic benefits of ecosystems. However, she cautioned that there is the potential issue for double counting as forests and prairies in Thurston County are a substantial resource to include the value provided in offsetting greenhouse gas emissions.

Existing forests and trees in Thurston County sequester approximately 927,000 metric tons of carbon dioxide a year. More data are necessary to identify a complete baseline. Based on the review, targets in the Thurston Climate Mitigation Plan are ambitious and will be difficult to achieve. The partners may want to reconsider the role of carbon sequestration in the mix of other methods to achieve the targets. A menu of different options was provided to the partners moving forward within the carbon sequestration space.

Boardmember Sedore commented on population as a contributing factor to greenhouse gas emissions. He asked about any national or global effort to reduce carbon emissions generated by human beings by encouraging a limit on family size. Ms. Osterberg said recent efforts have focused on the carbon sequestration as part of the Thurston Climate Mitigation Plan, which is focused on the region's impact on climate change. Population growth in the region is affected mostly by migration rather than an increase in birth rates. Birth rates are not addressed in the plan, as the region does not believe it contributes to local emissions.

Coordinator Jones Wood displayed the online En-ROADS Climate Solutions Simulator, a free simulator providing anyone with the ability to test and explore

cross-sector climate solutions. The tool developed by Climate Interactive, the MIT Sloan Sustainability Initiative, and Ventana Systems offers users the ability to view the long-term effects of global climate policies and actions. She shared the example of global temperature change. Should population growth continue at status quo with all other factors remaining consistent, global temperature would increase by $3.3^{\circ C}$ by 2100. A higher increase in population would increase global temperature. If growth was at a lower feasible rate, global temperature would only decrease by $0.1^{\circ C}$ Coordinator Jones Wood emphasized that controlling global population growth is fraught with potential issues and has a low return in terms of reducing global average temperature compared to many other climate solutions. She encouraged the Board to visit the site as the data informing the model is updated frequently, sometimes even weekly. Other important factors affecting climate change are transportation, buildings, primary source of energy, land and forestry, food, and temperature. The online tool provides the ability to forecast different scenarios but not beyond what is feasible or humane.

Chair Grantham asked whether the report factored freeway through traffic. Ms. Osterberg said the information was not included. TRPC receives information on traffic counts but elected to exclude traffic traveling through Thurston County from the county's overall transportation emissions because the region has no control of interstate traffic, which would likely be a state issue for its climate change work.

Coordinator Jones Wood referred to population growth and cited another online resource known as Drawdown, which is a comprehensive look at climate change that quantifies different actions to produce different outcomes. A large section features information about educating and empowering women.

Boardmember Sedore said that based on the presentation by Ms. Osterberg and conversations with Coordinator Jones Wood, the Board advocates for trees and the environment but the Board is not a significant facilitator in reducing climate change in Thurston County. It is important to increase tree canopy and maintain tree canopy for climate change, but there are other participants that might have a bigger impact on climate change than the Board.

Coordinator Jones Wood relayed a question from Boardmember Nozawa, who was experiencing microphone difficulties. The recent planned commercial development proposal by Kingswood does not align with the county's goals of protecting existing forests. The nine-acre parcel contains 108 trees. The developer is required to retain 31 trees. Many developers will replant trees; however, the trees are not of the same quality and will not help to increase carbon offset because planted trees will require years to grow to the size of trees removed. She asked about any plans to save more existing trees in Tumwater as the City has a number of large development projects and she is not aware of any policies or changes that require developers to retain existing trees. Coordinator Jones Wood advised that the Board and staff were making some progress with

updates to the codes; however, the update process has been paused because of the delay in implementing the new Washington Wildland-Urban Interface Code The proposed changes would have changed how new developments would account for trees with larger trees receiving more credits. Smaller trees sequester carbon but not to the same degree as larger trees. Different types of trees are capable of sequestering more carbon. However, the code amendments do not address sequestering capabilities in terms of tree selection. The Board may choose to evaluate some options when the update process is reinitiated. However, there are also some trade-offs between habitat values of trees and carbon sequestration value.

TUMWATER PUBLIC URBAN FOREST INVENTORY:

Coordinator Jones Wood reported the grant proposal submitted to DNR was selected and a grant agreement between the City and DNR was fully executed on July 7, 2023. The City issued a proposal for a consultant to assist staff with the project. The City contracted with Davey Resource Group, Inc. The project is scheduled to start on Tuesday, October 10, 2023.

Coordinator Jones Wood referred to the grant documents and the scope of work. The work is to be completed by April 20, 2024. As the City also received federal funding, the turnaround time has been shortened. The service provider agreement includes the scope of work for the contractor and tree inventory data requirements. She plans to recruit volunteers to assist in ground-truthing the 2018 Street Tree Inventory. New trees have been added to the inventory as they are planted. However, the inventory does not reflect trees that have been removed or replaced. Between now and late December volunteers will be recruited for ground-truthing to meet the consultant's timeline.

Coordinator Jones Wood reviewed the timeline for other major tasks for completing the inventory. Inventory data will be converted to a GIS story map to enable the public to view different City-owned parcels identifying when the trees were inventoried, the number of trees, amount of carbon sequestered on the property, and other pertinent information. The consultant is tasked to develop a maintenance prioritization strategy (an action in the Urban Forestry Management Plan), strategy for future plantings and costs, and create a planning strategy for improving tree canopy equity. Although the plan calls for a four-year maintenance plan, the consultant is recommending a seven-year maintenance schedule. Planning for tree canopy equity considers a tool to assess tree equity scores. The tool is available through American Forests and scores a number of socioeconomic factors, goals, and a guide path for building understanding, commitment, and action around tree equity in the community. Scores are based on tree canopy, surface temperature, income, employment, race, age, language, and health factors. A 0-to-100-point system identifies tree equity throughout the City. The information will support the planning strategy for adding more trees to ensure all community members have access to trees.

Coordinator Jones Wood reviewed some items to be completed within the scope of work. All City-owned properties with the exception of the golf course will be

inventoried. All City parks are also included. She asked Boardmembers to consider volunteering to assist in inventorying sites.

Coordinator Jones Wood advised that DNR will be offering a new grant next year. Because of available resources, she is unsure at this time whether the City will apply for another grant. However, she encouraged the Board to consider other actions in the Urban Forestry Management Plan that might benefit from a grant.

Coordinator Jones Wood reviewed the minimum required data collection attributes for Washington urban tree inventories.

TREE BOARD 2023 MEETING SCHEDULE:

Coordinator Jones Wood reviewed the meeting agenda for the November and December meetings:

November 13, 2023:
Briefing: Intern Street Tree Review Project – Intern Amita Devarajan
Briefing: Tree Inventory Project
Discussion: Proposed Non-Regulatory Programs and Incentives

December 11, 2023:
Discussion: Annual Meeting with Department Directors regarding UFMP Implementation Status
Briefing: Tree Inventory Project

Coordinator Jones Wood encouraged members to advise her of any additional agenda topics to include.

NEXT MEETING DATE:

The next meeting is scheduled on Monday, November 13, 2023.

ADJOURNMENT:

With there being no further business, Chair Grantham adjourned the meeting at 8:30 p.m.

Prepared by Valerie L. Gow, Recording Secretary/President
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