

2023 Tree Canopy Monitoring Report

January 1, 2023 – December 31, 2023



Published January 31, 2024
Snohomish County

Executive Summary

The 2023 Tree Canopy Monitoring Report details the amount of tree canopy preserved and planted for new residential permits in urban unincorporated Snohomish County. This monitoring report is required under [Snohomish County Code 30.25.016](#).

To find past reports and learn more about tree canopy monitoring in Snohomish County, please visit <https://snohomishcountywa.gov/2737/Tree-Canopy-in-Landscaping>.

This report summarizes the outcomes from the tree canopy regulations on an annual basis to assess their effectiveness and to determine whether any adjustments or refinements should be considered.

Newly planted canopy calculations are measured by the estimated square footage size of a 20-year mature tree. The numbers below highlight the total amount of proposed and required 20-year tree canopy coverage in 2023, and the total new and retained tree canopy from 2014 to 2023. In 2023, every proposed landscape plan that was approved met or exceeded the minimum 20-year tree canopy coverage required in SCC 30.25.016(3).

Summary of 2023 Urban Tree Canopy Monitoring.

888,521 sq. ft.

2023 Total 20-Year Canopy
Area (New & Retained)

1,816

2023
New Trees
Planted

689,974 sq. ft.

2023 Total 20-Year Canopy
Area Required
(New & Retained)

44%

2023 Retained
Canopy

15,512,279 sq. ft.

Total 20-Year Canopy Area (New &
Retained) from 2014-2023

56%

2023 Newly
Planted
Canopy

Introduction

On October 8, 2014, Snohomish County Council passed Amended [Ordinance No. 14-073](#), relating to new regulations for tree canopy coverage. These new regulations, effective October 27, 2014, modified development standards for urban residential landscaping to preserve tree canopy in addition to individual significant trees. These regulations are located in [Chapter 30.25](#) of the Snohomish County Code (SCC). The code requires that significant trees be retained in all Critical Area Protection Areas (CAPA). Significant trees and existing tree canopy are also incentivized to be retained outside of CAPA and perimeter landscaping buffers per SCC 30.25.016(5).

Included in Amended Ordinance No. 14-073 was a requirement for the Department of Planning and Development Services (PDS) to prepare an annual report on the effectiveness of the county's tree canopy regulations. The report is required to be submitted to the County Council by January 31 of each year.

Per SCC 30.25.014, PDS is required to provide data on the following five topics for the applications it approved within the reporting period:

1. The number of applications exempted from tree canopy requirements by each of the exemptions in SCC 30.25.016(1).
2. The number of applications to which the tree canopy requirements are applied, subtotaled by type of application.
3. The number of applications using the Tree Survey method and the number using the Aerial Estimation method for estimating existing tree canopy (applicable when the retention of existing canopy is to be used – in whole or in part – to meet the requirements).
4. For each application to which the tree canopy requirements are applied:
 - a. The tree canopy required by Table 30.25.016(3) prior to any adjustments.
 - b. Any adjustments to the required tree canopy, the specific type of incentive or other adjustments, and the specific code authority for the adjustment.
 - c. The required tree canopy after all adjustments are made.
 - d. The use and effect of applying any other incentives for tree retention.
 - e. The result of the calculation of existing canopy.
 - f. The canopy of trees retained.
 - g. The number of new trees planted.
 - h. The result of the calculation of 20-year canopy.
5. For every allowable type of adjustment, the total number of applications that used it and the total reduction in required tree canopy resulting from it.

Methodology

Table 1 contains a summary of how report methodologies have changed since the first tree canopy monitoring report was prepared in 2015.

Table 1. Tree Canopy Monitoring Report Data Collection Methods 2015-2023.

Report Year	Data Collection Method
2015 & 2016	Included data for proposed landscaping plans for <i>all</i> residential land use applications within the urban growth area that were either submitted or approved in the prior year.
2017 & 2018	Included only data from landscape plans for <i>approved</i> development activities that were subject to tree canopy regulations in SCC 30.25.016. Data collection time frames varied and generally included the previous year's approved landscape plans (but also included more than a 12-month timeframe)
CY 2018 & CY 2019	These reports follow the same methodology as the 2017 and 2018 reports, apart from limiting the timeframe to 12 months. The timeframe for data collection is now a calendar-year (CY), and the report titles reflect this change.
2020- 2023	These reports follow the same methodology established as the previous three years. The 2020-2023 reports have removed the calendar-year based title heading for further clarity.

Due to the nature of monitoring and reporting, the methodology for data collection included in the report has evolved since 2015. In the 2018 report, PDS staff recommended transitioning to a calendar year (CY) reporting timeframe. This change created a standardized 12-month reporting period so that the information in each year's report could be more consistently compared over time. The CY 2018 report was the report to adopt this recommendation. Please see past monitoring reports for a breakdown of the different methodologies used in prior reports.

This 2023 report uses the same methodology as the past four reports and includes information from 40 approved landscape plans within approved residential development activity applications. These landscape plans were approved between January 1, 2023, and December 31, 2023. Due to the revised methodology, information from reports prior to the CY 2018 report will be used sparingly to avoid false comparisons. The 2015 through 2018 reports summarized data only from landscaping plans that were submitted prior to approval, so including them in this report would potentially double-count tree canopy.

Background

The genesis for the current tree canopy regulations (adopted in 2014) was feedback from developers who identified a number of issues with the regulations adopted in 2009, including:

- Concerns about the survivability of newly planted trees when planted in inappropriate locations or dense clusters to meet the requirements;
- Costs to complete a survey of significant trees on forested parcels;
- Unavailability of off-site replanting areas within the immediate vicinity of many projects (allowed by code when there was insufficient area on-site for replacement trees); and
- Developers bypassing heavily forested sites due to the cost of complying with the 2009 tree retention regulations.

In addition, PDS staff hypothesized that under the tree retention/replacement regulations, the full build-out density of urban residential sites as prescribed by the Growth Management Act (GMA) Comprehensive Plan might not be feasible on some heavily forested parcels. This was noted as a potential conflict with the GMA goals and Puget Sound Regional Council's (PSRC's) Vision 2040, which encourages development within UGAs to preserve rural and resource lands.

In 2014, PDS proposed amending the code to focus on the concept of preserving and expanding tree canopy rather than just on retaining and replacing individual trees. The staff proposal included incentives for retaining significant trees. Following Planning Commission review, extensive public outreach and participation, and several public hearings, the County Council adopted the code amendments in October 2014.

The code amendments were passed under [Ordinance 14-073](#), which amended Title 30 SCC and updated the county's landscaping standards. The ordinance's goal was to maintain canopy coverage through the retention and replacement of existing tree canopy while providing flexible options for developers to obtain urban densities as prescribed in the Snohomish County Comprehensive Plan.

Tree Canopy Coverage Analysis Background

In order to establish baseline percentages for tree canopy coverage in UGAs for developing the 2014 regulations for urban residential tree canopy, the county relied on a high-level GIS analysis of the National Land Cover Data provided by the US Geologic Service (USGS). This data was analyzed in 2013 utilizing USGS Land Cover Data from 2011. Every five years USGS releases updated land cover data.

The analysis in 2013 determined the unincorporated UGAs of Snohomish County contained an estimated 30% canopy coverage between public and private lands. The ordinance sought to maintain 30% tree canopy coverage in unincorporated UGAs of Snohomish County. Snohomish County Code does not currently require further analysis of USGS Best Available Land Cover Data post 2013, and canopy coverage is measured individually by permits.

For the 2020 Tree Canopy Report, PDS staff took the opportunity to update the tree canopy coverage beyond the individual projects approved within unincorporated urban Snohomish County. While this was not a required element of the monitoring report, PDS staff wanted a better understanding of how tree canopy coverage was changing in the county. It should be noted that both the original and updated analysis of satellite imagery covered the entire urban

unincorporated areas, although Snohomish County's tree canopy regulations only apply to new urban residential development.

The 2020 Tree Canopy Monitoring Report included an updated tree canopy coverage analysis that used canopy coverage data from the USGS National Land Cover Database and the National Oceanic and Atmospheric Administration (NOAA) National Agriculture Imagery Program that was then analyzed by Snohomish County's Surface Water Management (SWM) division. Three maps and datasets were produced: 2011 USGS data, 2016 USGS data, and the 2015 NOAA/SWM data.

To learn more about the analysis and results of updated tree canopy maps and datasets, you can find the '2020 Annual Report on Tree Canopy' at: <https://snohomishcountywa.gov/2737/Tree-Canopy-in-Landscaping>

2023 Updated Tree Canopy Coverage Analysis

The 2023 Tree Canopy Monitoring report includes a new mapping that was originally created for the 2024 Comprehensive Plan Update. These maps offer enhanced insights into the types and maturity of trees forming the canopy (refer to Maps 1 through 4). Generated by Snohomish County's SWM team, this data relies on NOAA datasets spanning from 2019 to 2020. The 2020 tree canopy coverage data employs satellite imagery of forested areas via NOAA's Coast Change Analysis Program (CCAP) and Light Detection and Ranging (LiDAR) systems. NOAA's CCAP, a remote sensing technology, furnishes high-resolution land cover data, while LiDAR employs laser sensors to measure surface coverage, yielding more comprehensive landscape insights. Compared to previous reports utilizing USGS datasets, NOAA's analysis offers greater detail. The latest aerial canopy imagery provides comprehensive tree canopy coverage across the entire [unincorporated Urban Growth Area \(UGA\)](#) and the unincorporated [Southwest Urban Growth Area \(SWUGA\)](#). The SWUGA is a subset of all unincorporated UGAs in the county and is highlighted because of its anticipated population growth and increasing developments in this area.

2023 Canopy Coverage Maps

Appendix 1: Overall Canopy Coverage in UGA and SWUGA

Appendix 2: Residential Canopy Coverage in UGA and SWUGA

Tree Canopy Regulations outlined in SCC 30.35.10 delineate guidelines for new tree canopy plantings, and new data in the 2023 coverage maps, establishing a baseline of 38% total tree canopy coverage in both the UGA and SWUGA. Within this total coverage, immature canopy constitutes 12%, mature deciduous trees 9%, and mature Evergreen canopy 17%. Appendix 2 maps share canopy coverage for unincorporated UGA and the SWUGA with a focus on residential and non-residential canopy coverage. New urban residential developments must adhere to the regulations set forth in [SCC 30.25.016\(3\)](#), mandating the maintenance of 30% canopy coverage in unincorporated urban areas of Snohomish County.

Appendix 1 details the entire canopy coverage in the county, encompassing both Urban Growth Areas

and areas outside them. In the current report, Appendix 2 maps provide tree canopy coverage delineations for residential and non-residential areas in Snohomish County, using data from the overarching canopy coverage maps. This detail allows staff to differentiate between canopy cover within the UGA concerning residential and non-residential land uses. This continued data collection will facilitate reporting on changes to canopy levels in future annual tree canopy monitoring reports.

The canopy data gathered by SWM highlights the canopy coverage areas subject to urban tree regulations. Map 3 shares the percentage breakdown of residential tree canopy coverage in the unincorporated UGAs, 9% comprises mature deciduous canopy, while 10% is in non-residential areas. Mature Evergreen coverage amounts to 19% in residential areas and 12% in non-residential areas. Immature tree canopy coverage stands at 13% within residential areas and 9% in non-residential areas. Map 3 shares a total canopy coverage of 41% in the unincorporated residential UGA, compared to the overall 38% canopy coverage across all unincorporated UGAs.

Map 4 provides the percentage breakdown of residential tree canopy coverage in the unincorporated SWUGA, designated as the Southwest Urban Growth Area of Snohomish County. In residential areas, 9% represents mature deciduous tree canopy coverage, while 11% is in non-residential areas. Mature Evergreen canopy coverage accounts for 18% in residential areas and 12% in non-residential areas. Amateur tree canopy coverage is 13% within residential areas and 10% in non-residential areas. Map 4 depicts a total canopy coverage of 41%, compared to the 38% canopy coverage across the entire unincorporated SWUGA.

Canopy coverage is higher in unincorporated residential UGAs compared to the overall unincorporated UGA boundaries, due to a smaller total footprint and the exclusions of future land use designations which are not viable or appropriate for dense canopy coverage. These designations include but are not limited to, bay, right-of-way, riverway commercial farmland, transit/pedestrian village, urban center, urban commercial, urban industrial, and urban village. In comparison, unincorporated residential UGA designations are more conducive to healthy tree canopy coverage than non-residential UGA designations.

WA DNR Tree Canopy GIS Data:

<https://data-wadnr.opendata.arcgis.com/>

To learn more about WA DNR Urban and Community Forestry Program:

<https://www.dnr.wa.gov/urbanforestry>

Future Tree Canopy Mapping

The 2024 Comprehensive Plan Update includes a new proposed Urban Tree Canopy subelement to within the Natural Environment Element. The Urban Tree Canopy subelement was drafted in response to a referral from the County Council via [Motion No. 22-096](#) to PDS and the Planning Commission for consideration and recommendation. The proposed subelement includes policies that support future mapping and tree canopy analysis, and support the county pursuing designation as an [Evergreen Community](#) ([proposed policies](#) NE 9.A.1 and 9.A.6).

The public strongly endorsed the proposals for Urban Tree Canopy policies and the preservation of trees throughout the county both during the Planning Commission’s Public Hearing and the hundreds of written public comments received before the hearing. On November 14, 2023, the Planning Commission formally recommended the adoption of the proposed Urban Tree Canopy subelement to the County Council for the 2024 Comprehensive Plan Update. As of the writing of this monitoring report, the County Council has not made final decisions about the subelement.

If adopted as written, the Urban Tree Canopy policy NE 9.A.6 would require the county to perform periodic tree canopy monitoring and inventory for to identify areas for protection and enhancement. Policy NE 9.A.6 expands on the currently required yearly tree canopy monitoring by identifying implementation and adaptative management strategies for evaluating and improving the proposed urban tree management program.



Photo 1: Walt Bailey Trail, Photo Credit PDS Staff

To help implement this potential policy, Snohomish County has plans to acquire imagery data that can be used for tree canopy mapping. The county has partnered with other cities, tribes, and agencies to commit to flying high resolution imagery every other year for a total of five flights (2018, 2020, 2022, 2024, 2026).

The Washington State Department of Natural Resources (DNR) and the Urban and Community Forestry Program (UCF), along with support and funding from the USDA Forest Service Urban Forestry Program and other partners, collaborated in developing a high-resolution urban canopy assessment for every incorporated municipality in King, Pierce, and Snohomish Counties. These assessments were published in 2023 and are available on the [Urban and Community Forestry in](#)

[Washington State page](#). This Snohomish County Monitoring Report will continually pursue the use of updated federal, state, and local data for future tree canopy coverage analysis.

Tree Canopy Regulations

Snohomish County tree canopy regulations are contained in SCC 30.25.016. The regulations establish a minimum amount of tree canopy to be provided for each new urban residential development on a sliding scale, depending on the type of residential construction (e.g., detached versus attached) and the number of lots or units (see Table 2). Under this approach, a higher canopy percentage is required for low density single family than multiple family developments to balance environmental goals with increased density and to accommodate future population growth in an efficient manner. Table 2 presents the amount of tree canopy required for new residential development applications.

Table 2. Tree Canopy Coverage Requirements (SCC 30.25.016(3))

Type of Development	Required 20-Year Tree Canopy Coverage (gross site area)
Subdivisions for Single Family Residential (10+ lots)	30%
Short Subdivisions for Single Family Residential (4 to 9 lots)	25%
Short Subdivisions for Single Family Residential (< 4 lots)	20%
Single Family Detached Units, Cottage Housing, Townhouse, Multi-family (10+ units)	20%
Single Family Detached Units, Cottage Housing, Townhouse, Multi-family (< 10 units)	15%
Urban Center (residential and mixed use projects only)	15%

These tree canopy requirements apply equally to sites that have existing canopy and those that do not, and they can be met through tree retention, new planting, or a combination of both. This is an important change from the 2009 tree replacement regulations which only applied to sites with significant trees. The current approach provides an opportunity to expand the urban tree canopy on redevelopment sites or sites that have been cleared in the past. As the current Snohomish County Code does not require a one-for-one replacement requirement for significant trees,

heavily forested lots proposed for residential development may lose tree canopy when developed. This compromise was struck to balance the growing demand for housing and to comply with Growth Management Act (GMA) goals to incentivize growth in urban areas, reduce sprawl, protect the environment, and provide affordable housing.

Retaining significant trees remains an objective of the current regulations. Incentives exist to encourage developers to retain both individual significant trees and stands of significant trees. The tree canopy regulations also maintain the pre-2014 requirements that significant trees in critical areas and perimeter landscaping buffers be retained. The regulations also address species mix, encouraging more native trees to be planted to minimize disease and improve survivability. Finally, the regulations promote planting the right tree in the right place to ensure long term survivability.

You can find the Snohomish County Code (SCC) Tree canopy requirements in SCC 30.25.016:

<https://snohomish.county.codes/SCC/30.25.016>

Measuring New and Existing Canopy

Newly planted canopy calculations are measured by estimating what the square footage size of the tree will be when it is a 20-year old mature tree ([SCC 30.25.016\(4\)](#)). Snohomish County uses a [Tree Canopy Coverage List](#) of approved landscaping trees to measure the mature canopy area. Applicants can also provide a report from a qualified landscape designer for trees not on the Tree Canopy Coverage List. The existing canopy is measured using either an aerial survey or a tree survey done on site.

Annual Report on Tree Canopy: Five Requirements

The assessment of the five reporting requirements, pursuant to SCC 30.25.014 outlined in the Introduction section of this report, is based on a review of approved residential development activities between January 1, 2023, and December 31, 2023, that are subject to the tree canopy regulations in SCC 30.25.016. Each of the five specific reporting requirements is discussed in the following sections.



Photo 2: Lake Ballinger. Photo credit PDS Staff.

Report Requirement #1:

Number of Applications Exempt from Requirements

The following activities, which are listed in SCC 30.25.016(1), are exempt from the tree canopy requirements in SCC 30.25.016:

1. Removal of any hazardous, dead, or diseased trees as necessary to remedy an immediate threat to person or property as determined by a letter from a qualified arborist;
2. Construction of a single family dwelling, duplex, accessory, or non-accessory storage structure on an individual lot created prior to April 21, 2009, or created by a subdivision or short subdivision for which a complete application was submitted prior to April 21, 2009;
3. Construction or maintenance of public or private road network elements, and public or private utilities including utility easements not related to development subject to chapters 30.23A, 30.34A, 30.41G, or 30.42E SCC;
4. Construction or maintenance of public parks and trails when located within an urban residential zone; and
5. Pruning and maintenance of trees.

Since PDS does not issue permits for pruning or the removal of hazardous trees, there is no method to accurately track and report these two activities. Collecting data for the three remaining exempted activities is also challenging because available permit data does not provide a means to track or report on these activities. As a result, no data was collected for this, or any past, reports. The development of a system to collect, monitor, and assess this information would be a major program effort.

Report Requirement #2:

Number and Type of Applications

During this reporting period (January 1, 2023, through December 31, 2023), a total of 40 urban residential development applications subject to tree canopy regulations were approved. The 2023 report analyzes the 40 approved development applications and compares them with data from previous reports.

Chart 1 shows the overall trends of permit applications that have been subject to tree canopy regulations since 2017. Table 3 summarizes the number and type of applications that are subject to the tree canopy requirements in SCC 30.25.016. It should be noted that some of the townhouse applications also involved land subdivisions pursuant to SCC 30.41A.205 but were not double counted.

Chart 1. Total Permit Applications Subject to Tree Canopy Regulations

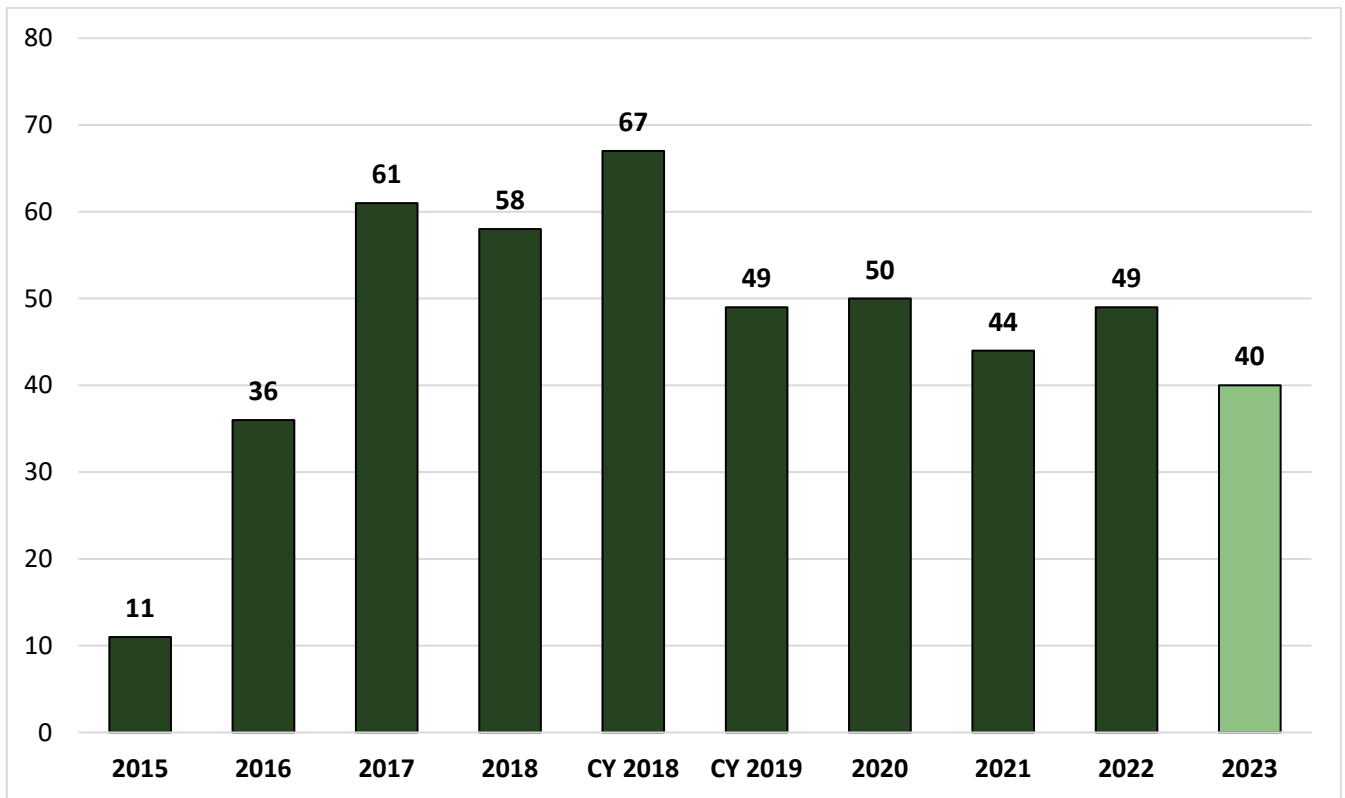


Table 3. Number and Type of Applications (CY 2018 – 2023)

Application Type	CY 2018 Report (1/18- 12/18)	CY 2019 Report (1/19 – 12/19)	2020 Report (1/20- 12/20)	2021 Report (1/21- 12/21)	2022 Report (1/22- 12/22)	2023 Report (1/23- 12/23)	CY 2018 - 2023 Report Totals
Subdivision (10+ lots)	18	9	10	9	7	4	57
Short Subdivision (4 – 9 lots)	14	9	7	3	9	10	52
Short Subdivision (< 4 lots)	8	3	11	5	5	1	33
Single Family Detached Units (10+ units)	7	10	4	5	6	2	34
Single Family Detached Units (<10 units)	6	6	12	8	5	3	40
Cottage Housing (10+ units)	0	0	0	0	0	0	0
Cottage Housing (< 10 units)	0	0	0	0	0	0	0
Townhouse (10+ units)	5	3	3	8	11	13	43
Townhouse (<10 units)	3	2	3	2	3	1	14
Multiple Family (10+ units)	3	4	0	1	0	0	8
Multiple Family (<10 units)	0	0	0	1	0	3	4
Urban Center (residential and mixed use only)	3	3	0	2	3	3	14
Total	67	49	50	44	49	40	299

Report Requirement #3:

Number of Applications Calculating the Retained Existing Tree Canopy

Applicants who propose retaining a portion or all the existing tree canopy on a subject property to meet the minimum tree canopy requirements have two options for calculating canopy coverage: the tree survey method or the aerial estimation method. Under the tree survey method, the average 20-year canopy is calculated for each tree to be retained, whereas, under the aerial estimation method, an applicant can calculate the extent of the canopy by using a recent aerial photo.

Table 4 shows the number of applications that elected to retain tree canopy, and the specific method used to calculate existing canopy. Applicants that choose to plant new canopy, calculate their 20-year canopy coverage for each new tree planted as previously discussed in this report. The percentage of retained canopy in the approved landscape plans by report year is displayed in Table 5.

For this reporting period, one application utilized the tree survey method while 15 applied the aerial estimation method. The remaining 24 applications (55%) used new canopy to meet the required canopy coverage. There were three applications that relied on existing tree canopy only.

For the approved landscape plans that exclusively utilized new tree canopy to meet the canopy requirements, the landscape plans indicated that some existing canopy and some significant trees were still retained. This retention could have been to meet other landscaping requirements outside of the requirements SCC 30.25.016(3), although the retained trees were not counted towards the minimum canopy coverage requirement. This information is not included in the canopy calculations relied upon for this report primarily because the existing canopy coverage information was not consistently provided on these plans.

Data presented in Table 4 suggests that aerial estimation is used more often by applicants to measure existing canopy potentially because it costs less than identifying individual trees within a tree survey. Despite the cost and labor for developers to conduct a tree survey and the canopy bonuses acquired through retaining significant trees, most applicants preferred to use the Aerial Estimation method. To further assess this trend, it may be useful to survey developers to better understand their reasoning for utilizing or not utilizing a particular incentive.

Table 5. Retained Tree Canopy Data (CY 2018 – 2023)

Tree Canopy Estimation Method	CY 2018 Report (1/18 – 12/18)	CY 2019 Report (1/19 – 12/19)	2020 Report (1/20- 12/20)	2021 Report (1/21- 12/21)	2022 Report (1/22- 12/22)	2023 Report (1/23- 12/23)	Cumulative Retained Canopy (CY 2018-2023)
Tree Survey (sq. ft.)	84,051	35,420	22,418	6,199	32,131	40,889	221,108
Aerial Estimation (sq. ft.)	253,004	475,231	1,041,803	370,662	523,339	349,776	3,013,815
Total Retained Canopy (sq. ft.)	337,055	510,651	1,064,221	376,861	555,470	390,665	3,234,923
Percent of Total Canopy Coverage Retained	19.9%	28.1%	51.8%	32.8%	43.4%	45%	36.9%

Table 4. Number of Applications by Method (CY 2019 – 2023)

Tree Canopy Estimation Method	CY 2018 Report (1/18 – 12/18)	CY 2019 Report (1/19 – 12/19)	2020 Report (1/20- 12/20)	2021 Report (1/21- 12/21)	2022 Report (1/22- 12/22)	2023 Report (1/23- 12/23)	CY 2018-2023 Report Totals
Tree Survey	19	4	7	4	8	1	43
Aerial Estimation	11	15	19	11	15	15	86
New Canopy Only	37	30	24	29	26	24	170
Total	67	49	50	44	49	40	299
Percent of Permits that Retained Canopy Coverage	45%	39%	52%	34%	43%	45%	43%

Report Requirement #4 and #5:

Data for Each Application & Number of Adjustments Used

These two reporting requirements require additional detailed information about each of the 40 applications approved during this reporting period. The specific data required for each application is enumerated below and is provided in its original form within Appendix 3 to this report. Table 5 focuses on retained canopy and Table 6 provides an aggregated overview of all the data requirements listed below.

1. The tree canopy required by Table 30.25.016(3) prior to any adjustments;
2. Any adjustments to the required tree canopy, the specific type of incentive or other adjustments, and the specific code authority for the adjustment;
3. The required tree canopy after all adjustments;
4. The use and effect of applying any other incentives for tree retention;
5. The result of the calculation of existing the canopy;
6. The canopy of trees retained;
7. The number of new trees planted; and
8. The result of the calculation of 20-year canopy.

Overall, two bonuses were used in one application in 2023. This application obtained additional square footage for retaining canopy under SCC 30.25.16.016(5). Identified individual significant trees receive 125% of their actual canopy area of bonus, and clusters and stands of five or more trees receive 150% of their actual canopy area of bonus. For this single application, three significant trees were surveyed and retained, and two tree clusters received square footage percentage bonuses. Due to different reporting methods, the full canopy of each individual significant tree that was retained was not fully reported (such as when the trees were in clusters), but the full canopy from each of these reporting methods is included in this report. Additionally, as there are no requirements for listing if there were any significant trees or clusters as existing retained canopy that wasn't utilized for a bonus, data is inconclusive if more significant trees and clusters were retained.

**Table 6. Aggregate Data for Approved Applications
(CY 2018 - 2023)**

Reporting Requirement		CY 2018 Report (1/18-12/18)	CY 2019 Report (1/19 – 12/19)	2020 Report (1/20-12/20)	2021 Report (1/21-12/21)	2022 Report (1/22-12/22)	2023 Report (1/23-12/23)	Total (1/18 – 12/23)
Number of applications		67	49	50	44	49	40	299
Tree canopy required by code (sq. ft.)		1,464,513	1,455,244	1,933,354	1,126,694	1,107,055	689,974	7,776,834
Existing Canopy Retained	<i>Tree Survey (sq. ft.)</i>	84,051	35,420	22,418	6,199	32,131	40,889	221,108
	<i>Aerial Estimation (sq. ft.)</i>	253,004	475,231	1,041,803	370,662	523,339	349,776	3,013,815
New Canopy (sq. ft)		1,409,735	1,308,286	984,551	770,738	723,004	497,856	5,542,514
Total number of trees planted		4,297	3,989	2,844	3,306	2,766	1,816	19,018
Cumulative 20-year tree canopy calculation (sq. ft.)		1,686,790	1,818,937	2,054,772	1,147,599	1,278,474	888,521	8,757,909



Photo 3: Residential Trees near 76thth Avenue. Photo credit PDS Staff.

Tree Type Diversity

In past monitoring reports, there was a recommendation to track tree type diversity from the already provided planting information on the landscape plans. Incorporating this data into the report provides an improved picture of the new canopy diversity. You can find the full species diversity list in Appendix 3 of this report. There were 65 different tree species utilized in approved landscape plants in 2022, and this diversity increased with 83 different tree species planted in 2023. Table 7 shows the eight most popular tree species planted out of the total 1,816 new trees planted in urban residential permits in 2023. The eight tree species in Table 7 represent 59.8% of all the trees that were planted in 2023. These eight tree species are the most frequently planted tree species of the all new trees planted.

For additional information about each tree listed here and in Appendix 3, please visit <https://snhomishcountywa.gov/2737/Tree-Canopy-in-Landscaping> and click the “Tree Canopy Database PDF”. Information about the species, growth type, drought tolerance, estimated 20-year canopy square footage, and more are included in this document.

Table 7. Top 8 Planted Tree Species within Approved Applications

Tree Species – Common Name	Tree Species – Scientific Name	Native Species	2023 Trees Planted	% of Trees planted in 2023
Douglas Fir	<i>Pseudotsuga menziesii</i>	Yes	167	9.2
Excelsa Western Red Cedar	<i>Thuja plicata</i> 'Excelsa'	No	165	9.1
Vine Maple	<i>Acer circinatum</i>	Yes	164	9.0
Western Red Cedar	<i>Thuja plicata</i>	No	152	8.4
Edith Bougue Southern Magnolia	<i>Magnolia Grandiflora</i> 'Edith Bougue'	No	125	6.9
Warrenred Pacific Sunset Maple	<i>Acer truncatum</i> x <i>A. platanoides</i> 'Warrenred'	No	123	6.8
Columnar American Arborvitae	<i>Thuja occidentalis</i> 'Fastigiata'	Yes	97	5.3
Pacific Wax Murtle	<i>Myrica Californica</i>	No	92	5.1
Total:			1,085	59.8

Summary of 2023 Data

Every proposed landscape plan that was approved in 2023 met or exceeded the minimum 20-year tree canopy coverage required in SCC 30.25.016(3). 10 out of 40 of the landscape plans (24%) had at least five percentage points or more canopy than necessary to meet their minimum requirements. This is compared to 2022 which had 9 out of 49 (18%) landscape plans, 7 out of the 44 landscape plans (16%) in 2021, and 2020 which had 13 out of 50 landscape plans (26%).

A total of 1,816 new trees were proposed to be planted to meet the specific tree canopy requirements of SCC 30.25.016 for 2023. The trees were planted to meet other landscaping requirements, such as parking lot landscaping and street trees. In many applications, those trees are not always included in the canopy calculations (although they could be eligible if located on the subject property) because of the species mix requirements applicable to new canopy coverage trees. For this reason, the actual tree canopy provided by urban residential development is often under-reported by the canopy calculations provided by the applicants and compiled into this report. Similarly, the actual retention of tree canopy and existing significant trees is likely under-reported and is often greater than is indicated by the canopy calculations. Since retention is

required within perimeter landscaping and critical areas, there is often no tree survey performed in those areas where no land disturbance is planned.

For this reporting period, one application utilized canopy bonuses (adjustments to canopy requirements) available for significant tree retention in SCC 30.25.016(5)(a) and SCC 30.25.016(5)(b), compared to the 6 in 2022. Two tree clusters and three significant trees were retained, giving this application a 125% bonus to their existing canopy coverage. In addition, this application also met the bonus criteria in SCC 30.25.016 (5)(b) that allows for clusters of five or more trees to count each tree as 150% of its actual canopy area. These bonuses added a cumulative 24,366 sq. ft. for 2023, compared to the 9,595 sq. ft. in bonuses in 2022.

In the 2022 report, the only bonuses used were for individual significant trees under SCC 30.25.016(5)(a), which counts individual significant trees retained on site to be counted as 125% of their actual canopy area, and SCC 30.25.016(5)(c) which allows clusters or stands of five or more significant trees to be counted at 200 percent of its actual canopy area. This suggests that overall there were fewer applications for 2023, and more bonuses were used

Overall, seven projects met their canopy requirements exclusively through retention of the existing canopy, compared to four from 2022, two from 2021, six from 2020, and one from CY 2019. 22 projects met their requirements entirely through the planting of new trees. The remaining 15 projects used a combination of canopy retention and new trees to meet the canopy requirements. This diversity of approach suggests that the regulations are flexible enough to accommodate different site conditions within the UGAs. It also indicates that the regulations are producing both canopy retention and new canopy creation within urban residential areas to help mitigate the inevitable loss of tree canopy from development on previously undeveloped urban sites.

Because pre-development tree canopy calculations are not required, except for projects and site areas where retention is used to meet the canopy requirements, it is not possible to measure the overall net change in the urban tree canopy using only the data available for these monitoring reports. Even if such canopy measurements were made, other factors, such as changes to landscaping after development approval despite requirements in code to retain proposed landscaping, would hamper efforts to accurately monitor changes in the overall canopy.

These canopy calculations do not accurately reflect new canopy because they frequently exclude trees used to meet other landscaping requirements where species mix is not also required. The best tool for overall canopy monitoring remains the satellite imagery available that is discussed in 'Tree Canopy Coverage Analysis Background' found earlier in the report.

Proposed Urban Tree Canopy Policies

As discussed above within Future Tree Canopy Mapping, the Snohomish County 2024 Comprehensive Plan Update proposes amending the existing Natural Environment Element to include a subelement on Urban Tree Canopy Policies. The motion includes revising **Goal 9** in the Natural Environment Element that outlines the aim to achieve a healthy urban forest including tree canopy cover to contribute to the economic vitality of the community, increase environmental

stability and resiliency, and promote a better quality of life.

The Planning Commission voted unanimously in favor of recommending the addition of the urban tree canopy subelement to the County Council during the November 15, 2023, deliberations. This vote is available to the public on the Planning Commission Agenda Web page in the [Special Session](#). This proposed subelement is under consideration by the County Executive and will be presented in an ordinance before the County Council in Spring 2024 to consider to be included in the Comprehensive plan update. The subelement includes revising the baseline urban canopy that is established as no net loss, to a minimum canopy coverage goal for urban unincorporated areas of at least 38%. The objectives are to develop an urban forest management program for urban unincorporated areas and identify, protect, maintain, and restore forests and plants that have significant environmental habitat, cultural public health, and aesthetic value. The newly proposed urban tree canopy subelement is subject to approval by the County Council in 2024.

Recommendations for 2023 and Beyond

PDS staff intends to continue to refine administrative processes to make the documentation and review steps associated with the canopy regulations streamlined for both the customer and PDS staff. Staff has also explored ways to better utilize PDS's permit tracking system (AMANDA) to complete the data collection and compilation processes required to complete this annual report.

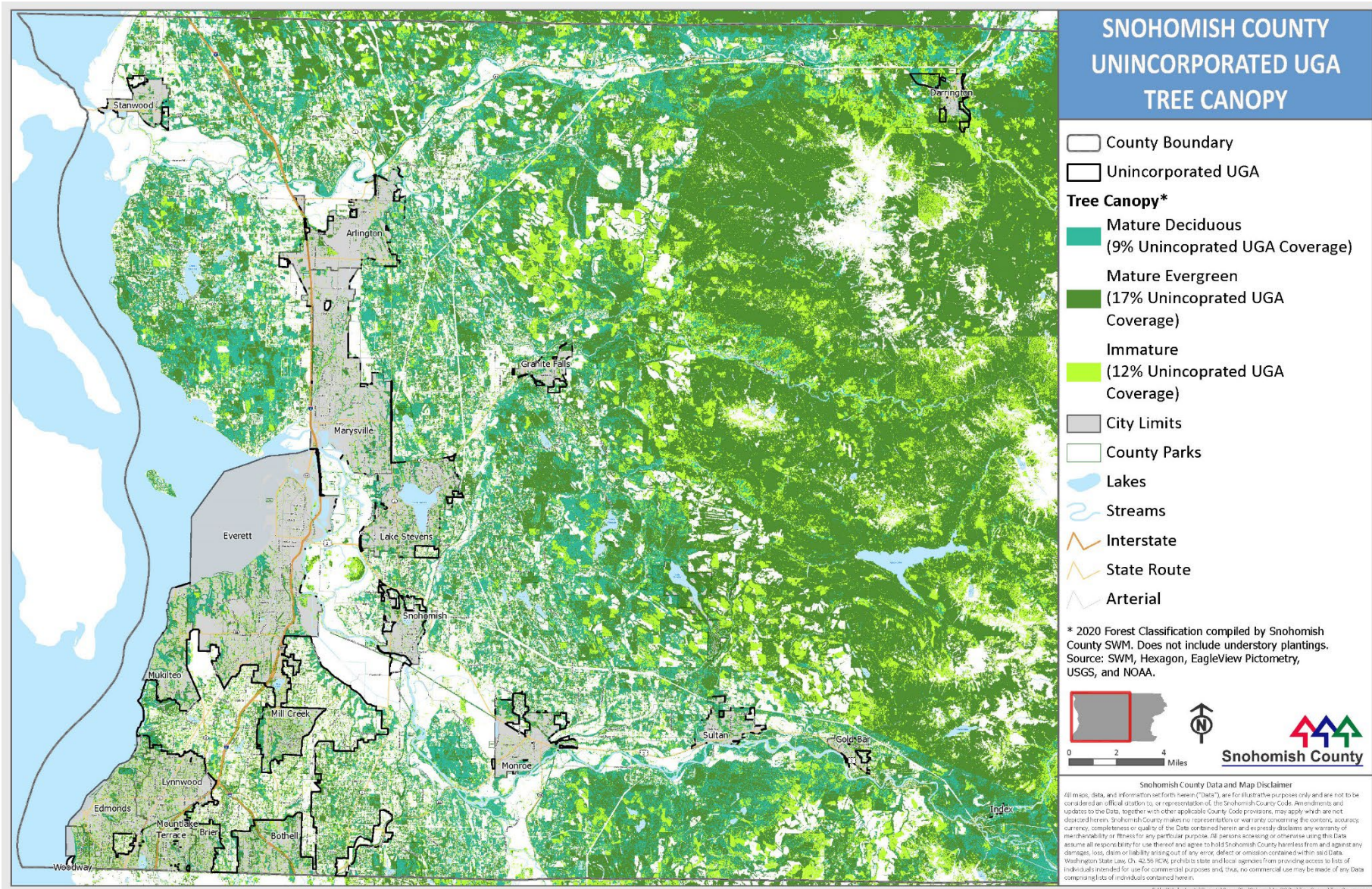
The following recommendations represent efforts that could streamline the administrative process, improve the quality of the data collected, and further expand flexibility for applicants.

1. Pursue additional mapping of unincorporated Snohomish County tree canopy. The Amended Ordinance No. 14-073 identified that the urban areas of unincorporated Snohomish County had 30% tree canopy coverage and that the intent of the Tree Canopy requirements was to maintain this percentage. Currently, Snohomish County Code does not require further GIS analysis of the most recent USGS Best Available Land Cover Data or improved dataset. Through updates to the most recent data, the county would benefit from a better understanding of how effective the current policies are at complying with their original intent and provide better data for future reports to use for analysis. Continuing to update the mapping on canopy coverage will improve the reporting process overall.
2. There are improved changes to the monitoring report through the potential adoption of the Urban Tree Canopy subelement by the County Council. The amended [Motion no. 22-096](#) strengthens the implementation of Tree Canopy monitoring assessments by developing an Urban Forest Management program. The program includes evaluating the successes and failures of the methodologies and the use of the best available practices and Lidar/Satellite imagery. The recent mapping for the proposed Urban Tree Canopy subelement updates county canopy coverage to a minimum of 38% for urban unincorporated areas.

3. We recommend continual updates to the growing list of Native Tree Species. Providing an updated list to developers would help to broaden the available tree species to include in the landscape plan, potentially increase the diversity of trees selected within developments, and more accurately represent the predicted 20-year canopy coverage.
4. Continue to track the proposed tree canopy policies for the 2024 Comprehensive Plan Update. These proposed policies include mapping analysis, new goals for urban tree canopy coverage, coordination with jurisdictions on tree canopy, pursuing Evergreen Community status, and more.
5. Many Tree Canopy Calculation worksheets left some questions unanswered and incomplete. Many applicants who opted to use the Aerial Estimation method, indicated some retention of existing canopy but did not share the total existing tree canopy coverage. We left the existing canopy coverage as unavailable in our reporting process while accounting for the retained canopy data. Having the existing total canopy number helps us to create the most robust report. Many applications without existing canopy coverage accounted for were left out of the report as unavailable.

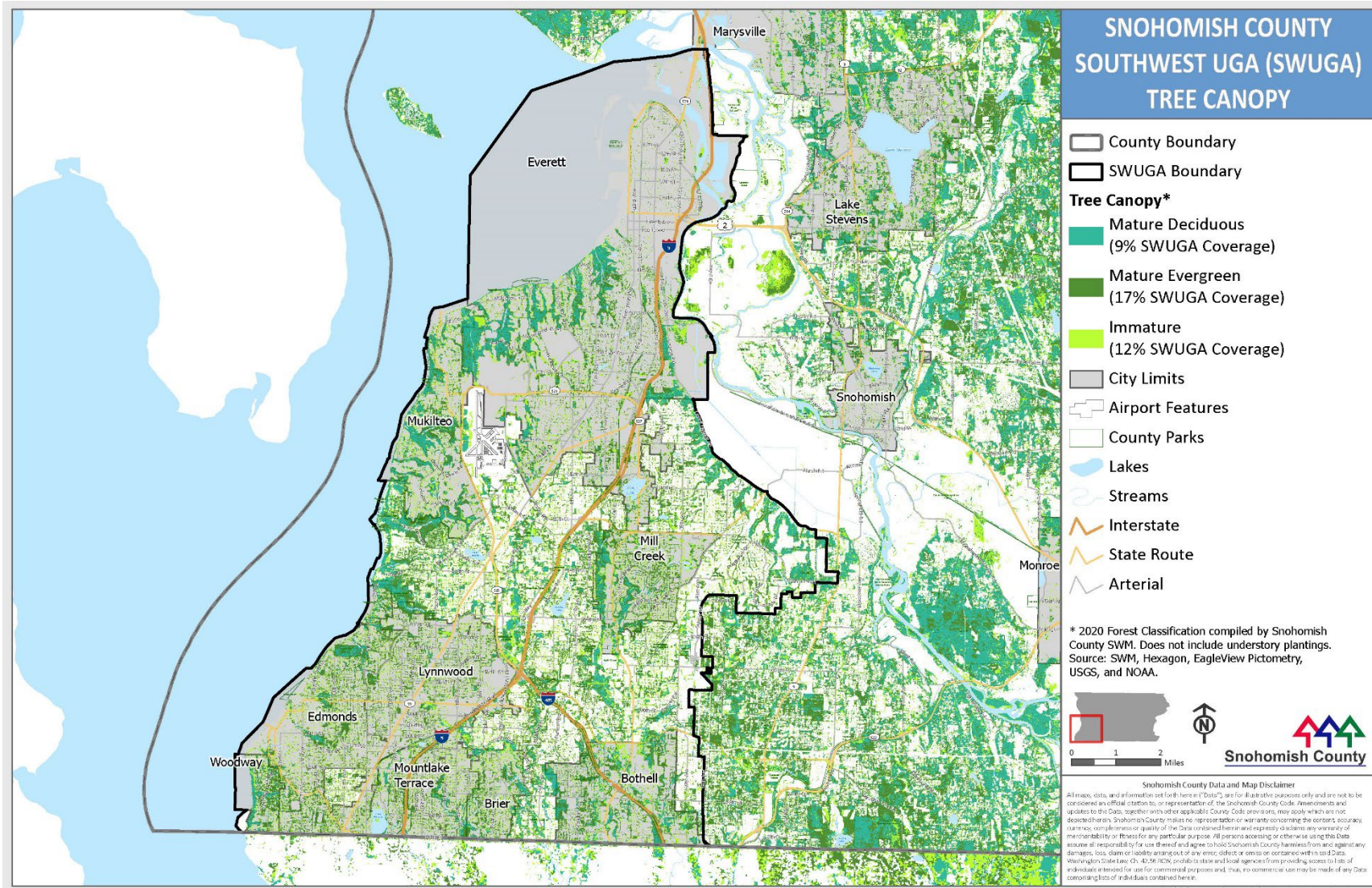
APPENDIX 1

Map 3. Tree canopy coverage data for the Unincorporated Urban Growth Area (UGA) in Snohomish County



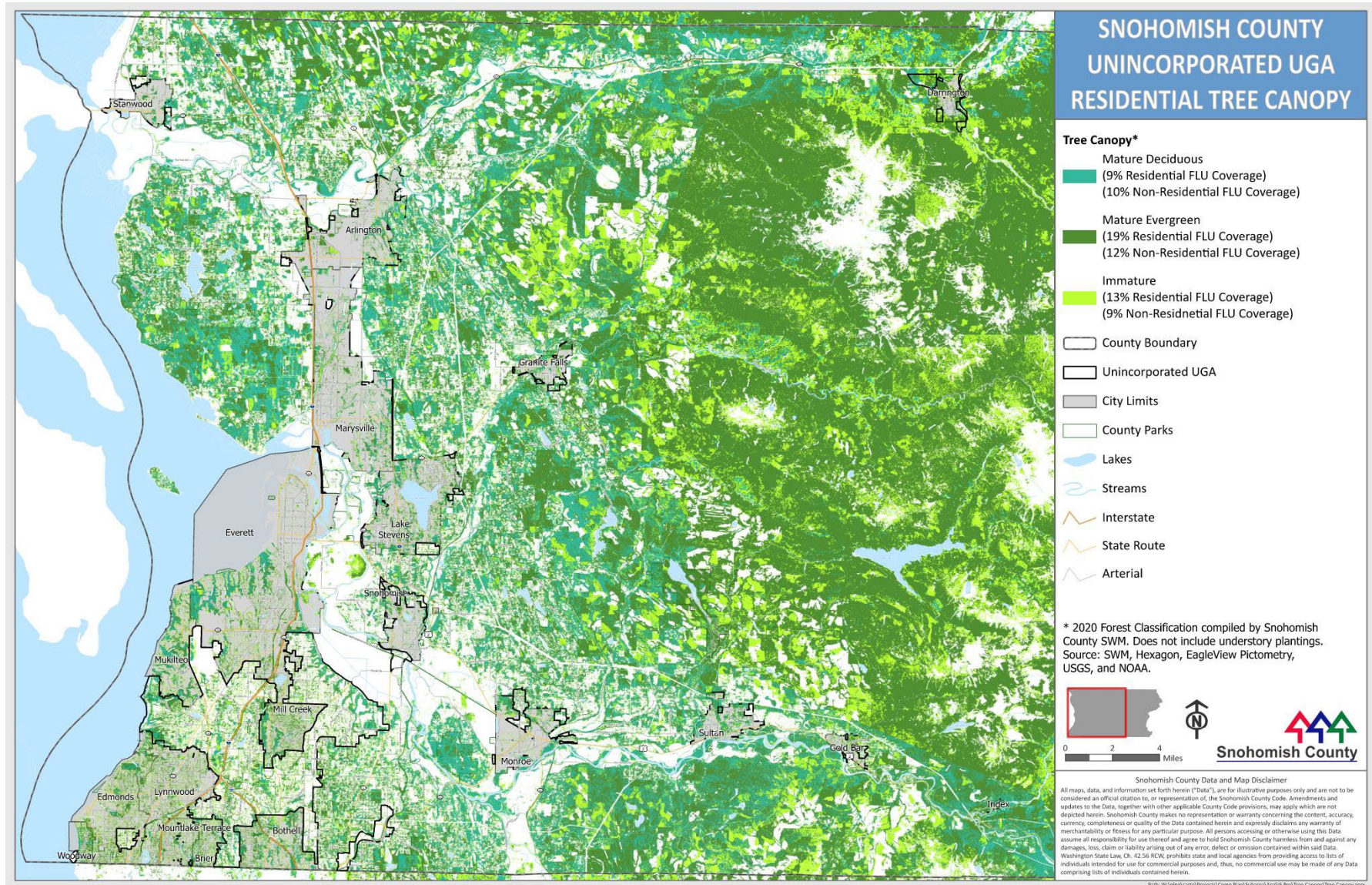
APPENDIX 1

Map 4. Tree canopy coverage data focused within the Southwest Urban Growth Area (SWUGA)



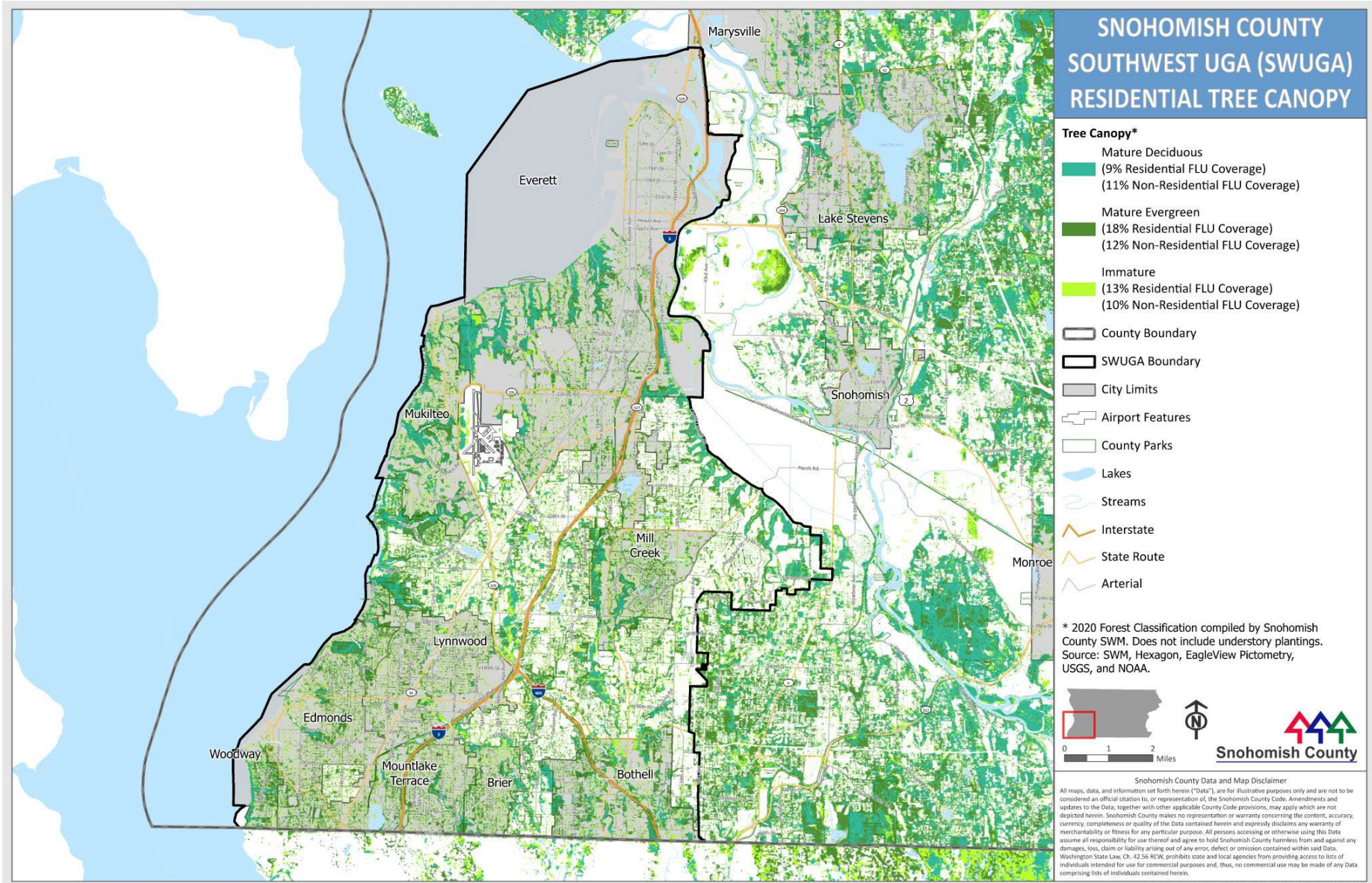
APPENDIX 2

Map 1: Tree Canopy Coverage for residential and non-residential in Snohomish County UGA and surrounding rural areas



APPENDIX 2

Map 2: Tree Canopy Coverage for residential and non-residential in SWUGA in Snohomish County



APPENDIX 3

Table 9: Tree Types Planted from January 1, 2022, through December 31, 2023.

Tree Species - Common Name	Scientific Name	Native	2021	2022	2023
Alaska Yellow Cedar	<i>Chamaecyparis nootkatensis</i>	No	60	32	55
American Hornbeam	<i>Carpinus caroliana</i>	No	16	55	7
American Sweet Gum	<i>Liquidambar styraciflua</i>	No	12	5	2
Autumn Applause Ash	<i>Fraxinus americana</i>	Yes	31	0	0
Autumn Gold Maidenhair Tree	<i>Ginkgo bilboa</i> 'Autumn Gold'	Yes	7	1	2
Bigleaf Maple	<i>Acer macrophyllum</i>	No	18	0	9
Bloodgood Londong Plane Tree	<i>Platanus acerifolia</i> 'Bloodgood'	No	3	0	0
Bowhall Maple	<i>Acer rubrum</i> 'Bowhall'	No	60	85	22
Chokecherry	<i>Prunus virginiana</i>	No	0	7	0
Columnar American Arborvitae	<i>Thuja occidentalis</i> 'Fastigiata'	Yes	208	210	97
Columnar Sargent Cherry	<i>Prunus sargentii</i> 'Columnarus'	No	6	6	6
Douglas Fir	<i>Pseudotsuga menziesii</i>	Yes	301	242	165
Eastern redbud	<i>Cercis canadensis</i>	No	0	11	17
Eddie's White Wonder Dogwood	<i>Cornus</i> 'Eddies White Wonder'	Yes	0	1	0
Edith Bougue Southern Magnolia	<i>Magnolia Grandiflora</i> 'Edith Bougue'	No	70	99	125
European Beech	<i>Fagus Sylvatica</i> 'Dawyk Purple'	Yes	2	0	0
European Plum	<i>Prunus domestica</i>	Yes	2	2	2
Excelsa Western Red Cedar	<i>Thuja plicata</i> 'Excelsa'	No	115	165	57
Flowering Peach	<i>Prunus persica</i>	No	2	2	2
Freeman's Maple	<i>Acer x freemani</i> 'Jeffersred'	No	0	65	18
Giant Green Arborvitae	<i>Thuja plicata</i> 'Green Giant'	Yes	37	85	69
Grand Fir	<i>Abies Grandis</i>	No	30	12	25
Green Column Maple/Black Maple	<i>Acer saccharum</i> 'Green Column'	No	0	2	0
Greenspire Linden	<i>Tillia cordata</i> 'Greenspire'	No	21	16	0
Hedge Maple	<i>Acer campestre</i>	No	7	5	0
Himalayan Birch	<i>Betula jaquemontii</i>	No	0	4	6
Hinoki cypress	<i>Chamaecyparis obtusa</i>	No	0	20	28
Incense Cedar	<i>Calocedrus decurrens</i>	No	130	98	36
Japanese Snowbell	<i>Styrax Japonicus</i> 'Emerald Pagoda'	No	1	5	6
Jonagold Apple	<i>Malus x domestica</i> 'Jona Gold'	No	2	2	2
Juniperus scopulorum	<i>Juniperus scopulorum</i>	No	7	26	10

Tree Species - Common Name	Scientific Name	Native	2021	2022	2023
Katsura Japanese Maple	Acer palmatum 'Katsura'	No	4	0	0
Katsura Tree	Cercidiphyllum japonicum	No	43	31	39
Kousa Dogwood	Cornus kousa	No	20	42	30
Kwanzan Cherry	Prunus serrulata 'Kwanzan'	No	4	4	5
Leyland Cyprus	Cupressocyparis leylandii	No	13	24	0
Limber Pine	Pinus flexillis	No	0	6	0
Mountain Hemlock	Tsuga mertensiana	No	16	22	13
Noble Fir	Abies procera	No	2	0	0
Northern Red Oak	Quercus rubra	No	0	4	10
Northern White-Cedar	Thuja occidentalis	No	0	6	0
Oregon Ash	Fraxinus latifolia	Yes	56	0	5
Osakazuki Japanese Maple	Acer palmatum 'Osakazuki'	No	1	0	0
Pacific Madrone	Arbutus menziesii	No	240	0	3
Pacific Wax Murtle	Myrica Californica	No	102	43	92
Paper Birch	Betula papyrifera	No	23	7	0
Paperbark Maple	Acer griseum	No	75	119	25
Pear tree	Pyrus calleryana	No	46	40	0
Persian ironwood	Parrotia persica	No	2	0	0
Prariefire Crabapple	Malus x 'Prariefire'	No	0	7	8
Princeton Sentry	Ginkgo bilboa 'Princeton Sentry'	No	4	0	0
Pyramidal European Hornbeam	Carpinus betulus 'Fastigiata'	No	36	6	75
Quaking Aspen	Populus Tremuloides	Yes	4	40	6
Rainier Cherry	Prunus avium 'Rainier'	Yes	2	2	2
Raywood Ash	Fraxinus oxycarpa 'Raywood'	No	23	23	23
Red maple	Acer rubrum	Yes	9	18	22
Redspire Callery Pear	Pyrus calleryana 'Redspire'	No	109	63	7
Saskatoon Serviceberry	Amelanchier Alnfolia	No	34	30	33
Scarlet Oak	Quercus coccinea	No	88	5	15
Shademaster Honeylocust	Gleditsia triacanthos 'Shademaster'	No	60	33	3
Shore Pine	Pinus contorta	Yes	69	175	89
Silver Fir	Abies amabilis	Yes	6	0	0
Sitka Spruce	Picea sitchensis	No	7	4	4
Slender Hinoki Cypress	Chamaecyparis obtusa 'Gracillis'	No	40	22	6
Sour Gum	Nyssa Sylvatica	No	4	45	3
Spire Cherry	Prunus x hillieri 'Spire'	No	3	11	0
Stellar Pink Dogwood	Cornus x 'Rutgan'	No	1	3	0

Tree Species - Common Name	Scientific Name	Native	2021	2022	2023
Subalpine Fir	<i>Abies lasiocarpa</i>	No	15	3	0
Sugar Maple	<i>Acer saccharum</i>	No	3	7	3
Tulip Tree	<i>Liriodendron Tulupera</i>	No	11	16	0
Vanderwolf's Pine	<i>Pinus flexillis 'Vanderwolf's Pyramid'</i>	No	3	35	11
Vine Maple	<i>Acer circinatum</i>	Yes	299	210	164
Warrenred Pacific Sunset Maple	<i>Acer truncatum x A. platanoides 'Warrenred'</i>	No	238	105	123
Washington Hawthorne	<i>Crataegus phaenopryum</i>	No	62	65	21
Western Flowering Dogwood	<i>Cornus nuttalii</i>	No	20	0	12
Western Hemlock	<i>Tsuga heterophylla</i>	Yes	25	18	23
Western Larch	<i>Larix occidentalis</i>	No	14	0	8
Western Red Cedar	<i>Thuja plicata</i>	No	296	205	152
Whitebarked Himalayan Birch	<i>Betula utilis jacquemontii</i>	Yes	2	0	6
Zelkova 'Village Green'	<i>Zelkova serrata 'Village Green'</i>	No	24	4	10
TOTAL TREES			3306	2766	1816

*For additional information about each tree listed here, please visit <https://snohomishcountywa.gov/2737/Tree-Canopy-in-Landscaping> and click the "Tree Canopy Database PDF". Information about the species, growth type, drought tolerance, estimated 20-year canopy square footage, and more are included in this document.

APPENDIX 4

Table 8: Detailed Information by Application for Approvals from January 1, 2023, through December 31, 2023.

#	Application	Development Type	Tree Canopy Percent Required	Required Tree Canopy Area (sq. ft.)	Gross Site Area (sq. ft.)	Option 1 Total Retained Canopy Area with Bonus (sq. ft.)	Option 2 Total Retained Canopy Area with Bonus (sq. ft.)	New Canopy Area (sq. ft.)	Number of New Trees Planted	20 Year Canopy Area Proposed (New & Retained) (sq. ft.)	Total Tree Canopy Percent Proposed
1	Bing Rd PRD SP	Short Subdivision (4 - 9 lots)	25%	13,338	53350	-	-	13,514	51	13,514	25%
2	Ambleside SFDU	Single Family Detached Units (10 or more lots)	20%	41,877	209386	-	-	47,717	126	47,717	23%
3	Cassie's Landing	Townhouse (10 or more units)	20%	6,433	32167	-	183	6,406	25	6,589	20%
4	Edgemont Townhomes ULS	Townhouse (10 or more units)	20%	8,237	41185	-	14,763	0	0	14,763	36%
5	Penney Creek SP	Short Subdivision (4 - 9 lots)	25%	17,533	70132	-	32,787	0	0	32,787	47%
6	Aberdour Landing SFDU	Townhouse (10 or more units)	20%	43,701	218507	-	118,128	0	0	118,128	54%
7	DGR Cascadian Way	Townhouse (less than 10 units)	15%	3,293	21952	-	-	3,299	12	3,299	15%
8	Coyote Ridge PRD	Subdivision (10 or more lots)	30%	49,112	163707	-	14,012	35,104	108	49,116	30%

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9	Blanca PRD	Subdivision (10 or more lots)	30%	34,858	116192	-	-	35,170	84	35,170	30%
10	Meridian SP	Short Subdivision (less than 4 lots)	20%	6,414	32070	-	-	7,390	37	7,390	23%
11	Singh Short Plat	Short Subdivision (4 - 9 lots)	25%	9,357	37427	-	13,645	0	0	13,645	36%
12	Winesap PRD	Subdivision (10 or more lots)	30%	34,439	114797	-	13,534	26,080	79	39,614	35%
13	Downfield ULS	Townhouse (10 or more units)	20%	12,098	60489	-	-	16,205	42	16,205	27%
14	Edmonds Hardy ULS	Townhouse (10 or more units)	20%	26,561	132805	-	55,891	0	0	55,891	42%
15	19212 Filbert Townhomes 9 lot ULS	Multiple Family (less than 10 units)	15%	6,262	41748	-	18,216	0		18,216	44%
16	MSR Bliss Homes II	Urban Center (residential and mixed use only)	15%	5,156	34,371	-	-	6,585	39	6,585	19%
17	Delaney Park ULS	Townhouse (10 or more units)	20%	26,312	131561	-	-	28,864	127	28,864	22%
18	Alderwood Manor Townhomes ULS	Townhouse (10 or more units)	20%	4,975	24875	-	4,369	1,130	5	5,499	22%

#	Application	Development Type	Tree Canopy Percent Required	Required Tree Canopy Area (sq. ft.)	Gross Site Area (sq. ft.)	Option 1 Total Retained Canopy Area with Bonus (sq. ft.)	Option 2 Total Retained Canopy Area with Bonus (sq. ft.)	New Canopy Area (sq. ft.)	Number of New Trees Planted	20 Year Canopy Area Proposed (New & Retained) (sq. ft.)	Total Tree Canopy Percent Proposed
19	Baldwin PRD SP	Short Subdivision (4 - 9 lots)	25%	11,424	45696	-	-	11,572	32	11,572	25%
20	Redford Townhomes ULS	Townhouse (10 or more units)	20%	8,425	42126	-	-	8,622	23	8,622	20%
21	MSR Twin Oaks 1 ULS	Townhouse (10 or more units)	20%	20,357	101784	40,889	-	0	0	40,889	40%
22	Harvest Road SP	Short Subdivision (4 - 9 lots)	25%	18,455	73818	0	9,349	9,118	29	18,467	25%
23	Beverly Park SFDU	Single Family Detached Units (less than 10 units)	15%	4,187	27916	-	-	4,205	15	4,205	15%
24	Avenue West Homes SFDU	Single Family Detached Units (less than 10 units)	15%	2,377	15845	-	-	2,422	7	2,422	15%
25	Madison Park SFDU	Single Family Detached Units (10 or more lots)	20%	12,462	62308	-	-	13,041	40	13,041	21%
26	106th St Duplex	Multiple Family (less than 10 units)	15%	2,680	17868	-	-	2,890	8	2,890	16%

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27	Bellemont Corner Short Plat	Short Subdivision (4 - 9 lots)	25%	22,377	89507	-	21,580	820	4	22,400	25%
28	105th St Townhomes ULS 5 Lot	Townhouse (10 or more units)	15%	2,482	16545	-		2,580	8	2,580	16%
29	164th St Apts - Admiralty Way Improvements	Urban Center (residential and mixed use only)	15%	32,020	213,466	-		34,915	174	34,915	16%
30	Foxmoore PRD	Multiple Family (less than 10 units)	30%	33,045	110150	-	-	33,721	179	33,721	31%
31	Fern Wood Estates SP	Short Subdivision (4 - 9 lots)	25%	10,438	41752	-	-	10,715	31	10,715	26%
32	Nolan Square ULS	Urban Center (residential and mixed use only)	15%	16,663	111087	-	7,936	10,139	39	18,075	16%
33	Milagro II PRD	Townhouse (10 or more units)	30%	28,712	95708	-	7,053	23,356	63	30,409	32%
34	Edington 8-Lot Short Plat	Short Subdivision (4 - 9 lots)	25%	14,668	58671	-		14,699	68	14,699	25%
35	Ashford 9 SP	Short Subdivision (4 - 9 lots)	25%	16,944	67775	-	4,956	12,016	34	16,972	25%

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36	Sunset Road Short Plat	Short Subdivision (4 - 9 lots)	25%	16,441	65763	-	7,800	12,240	36	20,040	30%
37	Audrey Court	Subdivision (10 or more lots)	30%	27,318	91,059	-	-	27,677	73	27,677	30%
38	Edmonds 80th Ave W SFDU	Single Family Detached Units (less than 10 units)	15%	3,032	20,215	-	-	3,240	12	3,240	16%
39	Lockwood Lane TH	Townhouse (10 or more units)	20%	19,998	99,990		5,574	14,429	84	20,003	20.0%
40	Alder Way Townhomes	Townhouse (10 or more units)	20%	15,515	77,573	-	-	17,975	122	17,975	23.2%