PLANNING COMMISSION
MEETING AGENDA

Online via Zoom and In Person at
Tumwater City Hall, Sunset Room, 555
Israel Rd. SW, Tumwater, WA 98501

Tuesday, May 14, 2024
7:00 PM

1. Call to Order
2. Roll Call
3. Changes to Agenda
4. Approval of Minutes
   a. Tumwater Planning Commission Minutes March 26, 2024
   b. Tumwater Planning Commission Minutes April 23, 2024
5. Commissioner's Reports
6. Manager's Report
   a. Ongoing 2024 Planning Commission Meeting Schedule
   b. Ongoing Comprehensive Plan Update Master Schedule
   c. Housing Element Stakeholders
7. Public Comment
8. 2025 Comprehensive Plan Periodic Update – Conservation
9. Next Meeting Date - 05/28/2024
10. Adjourn

Meeting Information
The public are welcome to attend in person, by telephone or online via Zoom.

Watch Online
https://us02web.zoom.us/webinar/register/WN_su25E3yXS-gAt-G4fFMscg

Listen by Telephone
Call (253) 215-8782, listen for the prompts, and enter the Webinar ID 840 0816 3007 and Passcode 038310.

Public Comment
The public is invited to attend the meeting and offer comment. The public may register in advance for this webinar to provide comment:

https://us02web.zoom.us/webinar/register/WN_su25E3yXS-qAt-G4fFMscg

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

The public may also submit comments prior to the meeting by sending an email to: cdd@ci.tumwater.wa.us. Please send the comments by 1:00 p.m. on the date of the meeting. Comments are submitted directly to the Commission Members and will not be read individually into the record of the meeting.

If you have any questions, please contact Planning Manager, Brad Medrud at (360) 754-4180 or bmedrud@ci.tumwater.wa.us.

Post Meeting
Audio of the meeting will be recorded and later available by request, please email CityClerk@ci.tumwater.wa.us.

Accommodations
The City of Tumwater takes pride in ensuring that people with disabilities are able to take part in, and benefit from, the range of public programs, services, and activities offered by the City. To request an accommodation or alternate format of communication, please contact the City Clerk by calling (360) 252-5488 or email CityClerk@ci.tumwater.wa.us. For vision or hearing impaired services, please contact the Washington State Relay Services at 7-1-1 or 1-(800)-833-6384. To contact the City's ADA Coordinator directly, call (360) 754-4128 or email ADACoordinator@ci.tumwater.wa.us.

What is the Planning Commission?

> *The Tumwater Planning Commission is a citizen advisory commission that is appointed by and advisory to the City Council on the preparation and amendment of land use plans and implementing ordinances such as zoning. Actions by the Planning Commission are not final decisions; they are Commission recommendations to the City Council who must ultimately make the final decision. If you have any questions or suggestions on ways the Commission can serve you better, please contact the Community Development Department at (360) 754-4180.*

Decorum Statement
Welcome to the Planning Commission meeting. We thank you for attending.

The City Council encourages community engagement in local government and provides a variety of ways to participate.

The Chair of the Planning Commission will be responsible for conducting orderly and efficient meetings within the scheduled time. To accomplish that, the Chair will maintain order and decorum and can regulate inappropriate debate, repetitious discussion, and disruptive behavior when needed.

The Chair will recognize those that wish to speak and may limit the time allowed for individual comments. City staff will record questions and comments during the meeting. If an issue or question cannot be addressed during the meeting, City staff will address the issue or respond to the question by following up with the individual.

We respectfully request that attendees refrain from disruptions during the meeting and comply with decorum rules.

Thank you for participating.

TUMWATER PLANNING COMMISSION
MINUTES OF MEETING
March 26, 2024 Page 1

CONVENE: 7:00 p.m.

PRESENT: Chair Elizabeth Robbins and Commissioners Grace Edwards, Terry Kirkpatrick, Brandon Staff, Michael Tobias, and Anthony Varela.

Staff: Planning Manager Brad Medrud and Land Use and Housing Planner Erika Smith-Erickson.

APPROVAL OF TUMWATER PLANNING COMMISSION MINUTES:

NOVEMBER 28, 2023, DECEMBER 12, 2023, JANUARY 9, 2024, JANUARY 23, 2024, FEBRUARY 13, 2024, & FEBRUARY 27, 2024:

MOTION: **Commissioner Varela moved, seconded by Commissioner Tobias, to approve minutes of November 28, 2023, December 12, 2023, January 9, 2024, January 23, 2024, February 13, 2024, and February 27, 2024 as published. A voice vote approved the motion unanimously.**

COMMISSIONER'S REPORTS: There were no reports.

MANAGER'S REPORT: Manager Medrud reported on the recent departure of Economic Development Manager Austin Ramirez to return to California.

Staff is preparing for the joint tour with the City Council on April 9, 2024 at 6 p.m. to tour housing in Tumwater and Olympia.

Planner Smith-Erickson advised of the Council's approval of the resolution for the Hazard Mitigation Plan and adoption of the floodplain overlay amendment.

Manager Medrud reported the state approved the City's floodplain ordinance, which was also forwarded to the Federal Emergency Management Agency (FEMA).

Restarting urban forestry proposed amendments will begin after the

Legislature passed the Wildland-Urban Interface Code with agreement to defer some provisions for additional review. Currently, a joint work session of the Planning Commission and the Tree Board is scheduled in June to restart the amendment review process.

PUBLIC COMMENT: There were no public comments.

2025 COMPREHENSIVE PLAN PERIODIC UPDATE – COMMUNITY SURVEY RESULTS:

Manager Medrud noted that the presentation would review the results of the community survey, which is not considered a scientific survey. The survey format was designed as a self-responding survey posted on the City's website. The City's community engagement process for the 2025 Comprehensive Plan Periodic Update seeks meaningful opportunities throughout the process with the community and stakeholders to participate in the update. The survey represents the first community outreach as part of that process. Moving forward, outreach will focus on individual topics and comprehensive plan elements. Results of the survey will inform the review of the comprehensive plan and guide future discussions.

The community received notification of the survey by a postcard mailed to addresses in the City in November 2023. The objective for the survey was to inform the community about the periodic update, obtain information from the community on specific issues and elements of interest, and seek information on future notification methods for meetings and events. The survey also helped inform staff as to those in the community responding and those in the community that did not. Other notices announcing the community survey were included on the City's social media platforms and on the City's webpage. The survey closed on February 14, 2024. The survey generated 975 responses compared to a similar survey in 2016 of only 120 responses.

Demographic responses from the survey compared to the 2023 Statistical Profile prepared by Thurston Regional Planning Council (TRPC) reflect the difference between the profile of survey respondents and the population of the community. Demographic questions related to respondents' employment, residency, housing type, income, gender, race/ethnicity, age, household size, and education. Approximately 80% of the respondents reported living in the City with 25% living in the City less than five years. A majority of the respondents have lived in the City more than 11 years. A majority of the respondents live in a single-family home. Most of the respondents (68%) were homeowners, 10% are renters, and 20% did not answer the question or did not live in the City. Statistical data from TRPC reflects that 58% of the community owns their homes and 42% rent their homes. Survey responses were reflective of more homeowners and the need to improve outreach to renters. Staff is pursuing some strategies to improve outcomes.

Approximately 40% of the respondents work in the City, 10% reported owning a business in the City, and over 37% reported an annual household income of over $125,000. The area median income for the City is $102,000.

Commissioner Varela asked whether the percentage for jobs reflects only those individuals who physically work in the City or whether the figure also includes respondents who work remotely for other employers outside the City. Manager Medrud said the survey question did not specify the location of the job. Commissioner Varela commented that with the increase in remote and telework, infrastructure might be deserving of a review for improving capabilities.

Commissioner Tobias asked whether the survey question on annual household income accounts for household size. Manager Medrud said the responses were reflective of all household income and did not specify those who were contributing income. Planner Smith-Erickson added that the survey also included a question on the make-up of the household. Respondents also had an option to skip specific questions.

Manager Medrud reported more females completed the survey than males reflecting a higher percentage of females compared to TRPC statistical data. In terms of race and ethnicity, the results compared favorably to TRPC statistical data. Most of the respondents were aged between 35 to 65 years with those less than 35 years old considerably less. Most of the respondents were married with both children and no children. Respondents reporting as single were underrepresented compared to other City data. Results on education tracked closely with TRPC statistical data with a high number of college-educated community members living in the City.

Respondents were asked to provide feedback on how they receive information and personal preferences for receiving information. Basic questions asked respondents about the best times for engagement. Based on the survey results, staff plans to schedule open houses on Wednesday and Thursday evenings. Preferred ways to communicate with the City included email and telephone. A majority of the respondents preferred to attend virtual meetings versus in-person meetings. Respondents reported email as the primary source of learning about community information followed by other community members, the City's website, social media, direct mail and utility bill inserts, and newspapers.

Manager Medrud reviewed the results of questions on City services, quality of life, critical issues facing the City, and the City's greatest assets. Respondents rated the City well in police and fire services with

parks and recreation following. However, roads, sidewalks, and bicycle lanes were not rated as high. Because of the amount of construction occurring in the City and the frequency of interaction of those services by the community, the ratings were lower with other provisions of services rating average or better.

Questions related to quality of life generated some common themes with safety often a repeated theme with a "good place to raise a family" rated as very important by 70%. Comments depicted that proximity to employment and shopping opportunities were not as important to the community as other quality of life questions. Manager Medrud said the response for programs for seniors reflected a high percentage of "not sure" and did not match as closely for "yes" compared to parks and recreation.

Commissioner Varela asked whether the structure of the question was too vague as programs for seniors can include many elements ranging from activities in parks, medical services, and rehabilitation services.

Commissioner Tobias offered that many of the responses of "not sure" could be attributed as "not applicable" to their particular situation or because of their age.

Chair Robbins asked whether the survey included any questions about walkability within the City. Manager Medrud advised that walkability was not specifically addressed within the quality-of-life questions. However, it is possible to extrapolate general themes from responses to the quality of sidewalks and bike lanes because many respondents indicated a need for improvements. Chair Robbins noted that many of the respondent comments addressed the need to provide sidewalks, paths, trails, and in particular, between neighborhoods and neighborhoods and small businesses. Manager Medrud added that staff is finalizing a scope of work for the transportation consultant. The scope includes development of a bike and pedestrian plan as part of the Transportation Plan within the Comprehensive Plan. Chair Robbins stressed the importance of walkability in addition to services for seniors. Walkability is important for quality of life for seniors as it hinges on successfully assessing services by walking.

Planner Smith-Erickson said that based on many respondent comments, walkability and sidewalks in terms of quality of life were an area of concern. Many of the survey questions were open-ended enabling respondents to provide comments.

Manager Medrud said the survey asked respondents to rate Tumwater on quality-of-life factors. In terms of shopping opportunities, housing options, and streets and roads, the response was overall average or less

than the other quality of life questions. Other issues rated as high concern are critical areas, crime and public safety, housing costs and rent, and homelessness with jobs and the economy, racism, and equity rated lower as a concern. He encouraged Commissioners to review the written responses.

Commissioner Kirkpatrick noted that the question is phrased as "Please pick the two most critical issues facing Tumwater "today." The question does not necessarily reflect that the respondent is thinking of today but could be envisioning the future especially as to the question about concerns on homelessness and safety because of what is occurring in neighboring communities and in Seattle. Manager Medrud noted that at the community meeting in February of over 130 participants, similar questions generated a strong response from participants. Most of the comments acknowledged that the City is currently not experiencing those issues but want to avoid those types of situations in the future.

Chair Robbins commented on the importance of acknowledging how much homelessness actually exists in the City. Manager Medrud responded that the City has data based on the Point in Time survey for homelessness, as well as service provisions for the homeless to document on-the-ground issues currently in existence today. Since 2016, he has been involved in the Point in Time Count in the City. The annual counts do not reflect a dramatic increase in homelessness, and it has never reached the level experienced by the City of Olympia or City of Lacey. However, poverty conditions are much more difficult to hide in the City because of the lack of a downtown as readily apparent in downtown Olympia. Based on areas of encampments in the City, there has not been a dramatic change over the years.

Commissioner Tobias asked whether the areas of concern are similar each year or whether different encampments are occurring in different areas of the City over the years. Manager Medrud said there are some areas that include encampments or have housed encampments in the recent past based on geography and proximity to services.

Commissioner Varela asked whether data exists that correlates the level of homelessness with crime over the last five years. Manager Medrud said the City's data reflects no change in level of crime; however, property crime continues to be high and affects many in the community. He offered to follow up with the police department on recent data as well as from monthly reports produced by the police department.

Manager Medrud reported common themes from written responses to the City's greatest assets included:

- Parks, landscape, trees, proximity to recreation, community events
- Small town feel and central location
- Schools and community
- Police, fire, government, and crime prevention
- Not many homeless encampments
- Historical background

The survey included questions about quality of life now and in five years, housing, growth strategies, topics of greatest interest for the periodic update, top three priorities, and other comments and ideas that City leadership should hear about. The question on "How would you rate the overall quality of life in Tumwater today?" generated a response of 71.66% as excellent or good. Interestingly, the question on "Looking ahead 5 years from now, how do you expect to rate the quality of life in Tumwater?" generated a response of only 62.53% as excellent or good.

A question on different strategies the City should pursue generated the following responses:

- 27.84% - Encourage development near transit services
- 45.85% - Provide more options to get around without a car
- 22.22% - Allow for higher density development
- 61.87% - Increase open space or green space in urban areas
- 49.47% - Support the development of affordable housing
- 68.19% - Encourage walkable and bikeable communities
- 57.78% - Protect environmentally sensitive areas
- 41.17% - Prepare for climate change
- 45.73% - Diversify and increase job and business opportunities

A question on topics of most interest to comment on generated the following responses:

- 48.45% - Affordable housing
- 31.96% - Climate and environment
- 44.67% - Economic development
- 34.02% - Transportation
- 14.78% - Utility services
- 24.57% - Other

The top three priorities ranked by respondents are (1) police, fire, and crime, and City services, (2) housing, and (3) economic development. Comments included reducing homelessness, prioritization of public safety and reducing crime and drugs, hiring more firefighters, police, provide programs for the homeless, more programs for special needs or family needs, maintain a clean City, and improving schools. The survey

generated approximately 500 written comments on the priorities.

Responses for housing included:

- Reduce sprawl
- Keep small town feel
- Have more affordable options for owning/renting
- Create more middle housing
- Improve building permit process
- Create affordable senior housing

Responses for economic development included:

- More local shops/restaurants
- Redevelop the brewery
- Create a downtown
- Create a more uniform building code/theme
- Create more jobs
- Bring in and attract more employers and industries
- Diversify business
- Create more community spaces for events/venues

When asked how respondents believe the current housing situation is on a scale of 0 to 10, where zero is "not a problem and ten is "a crisis," the average survey response was 5.5. The survey response does not match other survey results, such as affordable housing ranked as one of the most important things for the City to consider.

A number of the survey questions focused on housing, services (important components of the Comprehensive Plan update), and whether the City offers a mix of housing and services that encourages residents to continue living in the community at every stage. The responses ranged from Yes, No, No Opinion, or Not familiar with what Tumwater offers. Written responses provided some insight:

- Not enough housing for seniors, retirement homes, fixed income, or assisted/independent living
- Need more middle housing and mixed development – with options to buy duplexes/condo/smaller houses
- Not enough affordable housing – rent or owning. Rentals are too high priced, and people cannot save to buy houses
- Smaller more affordable single-family residences or multifamily units that could be purchased
- Concerns about homelessness and crime in public places/parks

Chair Robbins inquired as to whether the survey addressed housing purchased by large corporations (multifamily and single family) as it

speaks to policies the City might consider adopting that would slow the practice, which in many locations is responsible for driving housing costs upwards. Manager Medrud said the question is interesting as the City is also experiencing much single-family housing development in the City despite the shift in the last three years to multifamily development based on the number of permits issued. Staff knows of some completed subdivisions that are withholding some of the homes as rental homes and one development where the entire subdivision will be rental units. The City has no regulatory control over those types of situations in terms of ownership of property. Chair Robbins conceded that it is likely any regulations preventing such situations would require action by the State Legislature; however, there are some mechanisms that promote individual home ownership and better pricing for rental properties to ensure generational wealth occurs over time. Manager Medrud advised that he does not believe the City has the authority to determine the outcome of units after construction.

Commissioner Varela pointed out that some homeowner associations have some leverage in terms of the percentage limitation on the number of homes rented. He questioned whether the City might have a similar option to reduce rental-owned subdivisions and limit the number of homes purchased by large corporations. Manager Medrud responded that except for specific ongoing maintenance requirements for stormwater or private roads, the City does not review or approve HOA covenants, as covenants are a private issue and are typically established by the developer. State laws guide provisions included within covenants.

Chair Robbins acknowledged the City's limitations but suggested consideration of ways the City could encourage land trusts or homeownership trusts to ensure properties continue to remain available at a more affordable price to primary residents. Manager Medrud said land trusts are a good example as the City and the Regional Housing Council are looking at land trusts in terms of manufactured home parks. The City of Tumwater's zoning restricts the use of those lands for mobile home parks with limited ability to change the property's use. Additionally, the City, in 2018, worked with land trusts to help residents in mobile home parks jointly purchase the property to control costs and preserve mobile home housing. Unfortunately, the cost to purchase the land is often prohibitive for owners of mobile homes.

Manager Medrud said the survey generated written comments about concerns of high-density housing, overcrowding of schools, lack of infrastructure to support growth (roads and utilities), and population growth. There were also concerns surrounding short-term rentals, and private companies purchasing housing and using them as rentals, as well as ideas for controlling the rental market and prices. A number of

comments spoke to anti-growth and development, keeping single family and not building more apartments, and that more housing would not solve homelessness. Other housing considerations addressed level of traffic, increasing impact fees, streamlining and creating a faster permitting process, halting the increase in property tax to incentivize more affordable housing, behavioral health services and treatment centers, and housing affordability of all income and age groups.

Commissioner Tobias asked whether there was any correlation between the City incentivizing the development of more housing and increasing property taxes for residents. Manager Medrud said the program offered by the City is the multifamily tax exemption program. The program provides tax exemption for 12 years for a limited number of units. The program reduces the property tax burden to the owner of the property with the property tax reallocated to other property owners in the City. One of the discussions is how development must pay for impacts. However, the building industry views those costs as a disincentive to construct housing as those costs are in addition to the costs of construction and land acquisition. When development occurs, those costs exist because capacity must be increased to accommodate growth and changes in services. The issue is who must absorb those costs – the developer or the community.

Commissioner Kirkpatrick pointed out that the City of Tumwater's property tax assessment includes a voter-approved levy to purchase fire engines. Another portion of property tax is for voter-approved bonds or levies to improve schools.

Discussion ensued on the status of the Tumwater School District both in enrollment and facility needs.

Manager Medrud encouraged the Commissioners to review the 227 survey responses to a question asked of respondents to provide additional comments or ideas they would like City leadership to hear. The responses are varied.

Next steps include a joint tour with the City Council on April 9, 2024 for housing and a joint tour on August 13, 2024 for transportation. Joint work sessions with City Council are scheduled on the following Comprehensive Plan Elements and 2025 Work Program:

- Tuesday, June 25, 2024 – Development Code
- Tuesday, July 9, 2024 – Climate
- Tuesday, July 23, 2024 – Economic Development
- Tuesday, October 22, 2024 – Land Use and Development Code
- Tuesday, December 10, 2024 – 2025 Work Program

Upcoming open houses have been scheduled with the caveat that the dates might change because of staff resources. Each open house will be in person with a separate online component starting the day of the open house and remaining active for two weeks:

- Wednesday, May 29, 2024 – Housing
- Wednesday, July 31, 2024 – Climate
- Wednesday, October 2, 2024 – Development Code

Chair Robbins complimented staff for successfully outreaching to the community to generate nearly 1,000 survey respondents, as well as the information contained in the staff report by including many of the comments that spoke to different graph results.

Manager Medrud acknowledged the support of Planner Smith-Erickson for summarizing survey results. The presentation will be provided to the General Government Committee in April.

Commissioner Tobias reported he would be unable to attend the joint tour with the City Council on April 9, 2024.

Chair Robbins encouraged members to share information with their friends and coworkers about the possibility of applying for a position on the Commission. The Commission currently has three vacant positions.

NEXT MEETING DATE: The next meeting is a joint tour with the City Council on April 9, 2024 from 6 p.m. to 8 p.m.

ADJOURNMENT: **Commissioner Tobias moved, seconded by Commissioner Varela, to adjourn the meeting at 8:12 p.m. A voice vote approved the motion unanimously.**

Prepared by Valerie L. Gow, Recording Secretary/President
Puget Sound Meeting Services, psmsoly@earthlink.net

TUMWATER PLANNING COMMISSION
MINUTES OF MEETING
April 23, 2024 Page 1

CONVENE: 7:00 p.m.

PRESENT: Chair Elizabeth Robbins and Commissioners Grace Edwards, Terry Kirkpatrick, Brandon Staff, Michael Tobias, and Anthony Varela.

Staff: Planning Manager Brad Medrud and Land Use and Housing Planner Erika Smith-Erickson.

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

COMMISSIONER'S REPORTS: There were no reports.

MANAGER'S REPORT: Manager Medrud reported on meetings with the Mayor and City Administrator to fill vacant positions on the Commission. The Commission currently has three vacant positions.

The Community Development Department is advertising for a Senior Planner position.

The City has contracted with a transportation consultant, climate consultant, and the economic development consultant.

The City advertised for the replacement of Austin Ramirez, Economic Development Manager. The position may be reformatted with assigned responsibilities supporting the City's Habitat Conservation Plan and responsibilities for economic development within the City.

PUBLIC COMMENT: **Amy Tousley, Municipal Manager, Puget Sound Energy,** said she is engaging in the City's update of the Comprehensive Plan and is interested in the discussion on housing as it pertains to energy and climate change.

2025 COMPREHENSIVE PLAN PERIODIC UPDATE – HOUSING: Manager Medrud and Planner Smith-Erickson briefed members on the results of the Commission and City Council joint tour of housing areas in the City and Olympia on April 9, 2024, an update on the status of the Housing Stakeholder Group, and the open house scheduled for the Housing Element on May 29, 2023 both in-person and a two-week online component.

Manager Medrud invited members to share feedback on the joint housing tour in terms of areas viewed, areas of importance, and any follow-up requests.

Chair Robbins complimented staff for the great execution of planning

the tour. A number of community members joined the tour. Manager Medrud confirmed the tour attracted participation by 10 members of the public. Five members represented local realtors and a reporter from *Jolt* participated.

Commissioner Kirkpatrick conveyed his thanks for the tour as it proved to be interesting to view different types of housing. He was amazed as to how some housing units were hidden. Unfortunately, he did not encounter any affordable housing. He asked staff about the tour's focus on affordable housing. Manager Medrud responded by sharing that some of the discussions between staff and the stakeholders have centered on the current status of the housing market lacking any affordable units unless some units are subsidized. More exploration is necessary to identify other types of affordable housing existing in the City, such as room sharing because some level of affordable housing is necessary. One common theme from meetings with stakeholders was the common experience of parents housing their adult children. Other conditions are not as easily captured.

Commissioner Kirkpatrick cited some apartments off Tyee Drive in the final stage of construction. He asked whether staff has information on the rental rates of the units. Manager Medrud said at this point, the information is not available. The City should receive information because the developer applied for the City's Multifamily Tax Exemption Program. To apply, the developer is required to report the rental rate of affordable housing units (80% of Area Median Income {AMI}) by bedroom size.

Commissioner Edwards extended her appreciation to staff for coordinating the tour. The tour was informative as well as amazing in terms of discovering different housing types. She has lived in the area her entire life and had no idea there were so many hidden multifamily housing units. She appreciated the opportunity to participate in the tour with the City Council, as it was very beneficial to have the opportunity to engage and continue to build a mutual relationship.

Commissioner Varela echoed similar sentiments. The tour was very helpful. He noted that as the Commission considers some improvements in Tumwater, such as the Craft District area, more businesses will be attracted to the City causing an impact on the housing market, as it will improve the desirability of living in Tumwater, which may increase housing prices. He recommended studying those types of potential impacts as improvements increase the competitiveness of the housing market.

Manager Medrud acknowledged the concern because if the City achieves desired development, the question is how it might affect the

housing environment for housing prices. At this time, the City's development pipeline includes 2,500 housing units that have been permitted but not completed. It would be interesting to identify potential impacts of those units released to the market to either maintain or increase prices.

Commissioner Staff said the size of the units in the Olympia area were of note as many of them were at least 1,700 square feet in size at a cost of approximately $500.000. He asked about the availability of cottage housing of approximately 800 square feet in size or possibly classifying ADUs as permanent dwelling units that are affordable and easier to permit. The tour highlighted future opportunities in the City. Streamlining the ADU process might increase affordable housing.

Manager Medrud shared that of the stakeholder groups, staff met with the Olympia Master Builders, Thurston Chamber of Commerce, Thurston Realtors, and several other entities. The main message from the development community was not to focus on housing size because costs are similar for different sized housing units because of requirements for bathrooms, kitchens, and HAV systems. The cost to build small is not necessarily less. A local architect assisted jurisdictions in building a set of ADU plan sets preapproved for anyone to build. The architect's experience has shown that despite attempting to build affordable units on a smaller scale, it does not pencil out. Some other interesting comments involved the notion of moving beyond stick built homes and seeking more prefabricated units as it makes no sense labor wise to build a stick built ADU in a backyard because of the cost of labor and materials. Creating a prefabricated ADU and placing it by crane in a backyard might be considered the first level of saving housing costs. Exploring those types of options is one avenue to consider as a potential solution.

Commissioner Staff inquired as to the availability of prefabricated vendors that might work with the City. Manager Medrud advised of the difficulty of identifying those types of companies within the local area. Some companies construct prefabricated housing; however, he is not aware of any local companies that build prefabricated units on a large scale. Realtors shared that they believed it was possible financially, but the hurdles were similar according to developers.

Commissioner Tobias acknowledged that he was unable to participate in the tour. Essentially, it is easy to discuss the pros and cons of either changing zoning regulations or allowing other housing options to reflect progress versus the actual experience of constructing more housing in the City. Builder assertions of fixed aspects of housing for kitchens, bathrooms, and heating and cooling systems also speak to whether any type of ADU could be doubled and placed on a half acre lot as it

concerns the ability of developers receiving a return similar to a return on a larger house. He asked about the possibility of enabling two ADUs in the same space of a larger house. Manager Medrud advised of action by the Legislature that will need to be amended into the City's code to address the number of ADUs allowed on a single lot. Currently, one ADU is permitted in most zone districts. New state law increased the allowance to two ADUs without completing a subdivision process that would essentially enable three units on one single-family lot. Other provisions increase the number of units on a single lot up to a maximum of four units. Realtors referred to pending legislation concerning lot splitting, which would enable easier redevelopment within the City because of fewer requirements. The bill did not pass; however, realtors are supporting the legislation during the next session.

Manager Medrud commented on the ongoing issue of high interest rates and their impact on the housing market. Today, many people with larger homes and low-interest mortgages have no incentive to move and pay higher rates to downsize.

Chair Robbins referred to Councilmember Althauser's comments on the pace of growth outstripping the construction of new units. Due to population growth, the City needs to double housing units over the next 20 years. It is important to consider the time component with respect to housing need over time.

Manager Medrud commented that the region essentially never recovered from the 2008 recession in terms of new housing to keep pace with growth. According to the statistics, to maintain pace with growth, the City would need to add 600 new units each year, which is problematic as in some years, the City only added 300 new units. Another outfall from the recession according to builders was the loss of many smaller developers.

Chair Robbins suggested a need for more data on projected demographic needs over the planning horizon in terms of housing size, age, and income level. Those units fitting within the data set should be targeted by the City to pursue. Additionally, some of the places visited on the tour spoke to carbon dependency of many of the homes. Planning should focus on future service needs of the population in terms of the locations of jobs, schools, medical care, grocery stores, and other services supporting their lives as part of a holistic pattern rather than consideration of housing as a stand-alone. All those factors should be considered as part of housing affordability.

Commissioner Kirkpatrick referred to military family housing provided to military families who pay a monthly rental rate. He referred to a recent article about the construction of a village in Connecticut by the

Society of Friends that acquired land and is developing multifamily housing. No rent will be charged to tenants who will be responsible for utilities. To qualify, tenants must be early child educators who typically cannot afford housing near their employment. He asked whether the state has any legal barriers for a similar process within the state.

Manager Medrud acknowledged the question and recalled his visit to Philadelphia and New Jersey for a planning conference where he was able to visit some housing areas in New Jersey. The State of New Jersey has offered more flexibility in terms of housing types. He viewed some incredible concepts. He does not believe Washington's legal framework would allow for other options, but additional research would be necessary to determine what the state allows or does not allow. The availability of organizations to help pay for those types of developments or the state assuming a much greater role than in the past to provide funding might be a possibility; however, he believes those options are limited in the state today.

Commissioner Kirkpatrick commented on the millions of dollars the state and jurisdictions are spending on housing for the homeless. Some of the funds could be diverted to support such programs, which might help in reducing the number of homeless while providing more options for low-income housing.

Manager Medrud shared information on the efforts by the Regional Housing Council to promote development of housing to help people avoid a homeless situation by providing housing. The message is often lost in conversations about dealing with immediate social and emotional needs of the homeless while also having the vision to realize investment is necessary now with payout expectations in the future to address the larger problem.

Chair Robbins suggested more research is warranted on the Connecticut example in terms of a financial model rather than whether the City has the authority. Research would be helpful on the financial market that supports that type of development or whether it is confined to a non-profit model.

Manager Medrud shared information on housing communities in New Jersey and Pennsylvania constructed with large government subsidies that must include affordable or low-income units.

Discussion ensued on targeting housing types based on population demographics and zoning to enable commercial offices or businesses within housing units for younger entrepreneurs. Manager Medrud noted that Tokyo is encouraging development of small shops with attached housing.

Commissioner Kirkpatrick reported the original design of the Department of Labor and Industries building included a childcare facility and a gym, which were removed by the Legislature. Incentives to include those uses within businesses in Tumwater could accomplish attracting employees seeking childcare services and it would be more affordable. Manager Medrud advised that under state law, childcare facilities of multiple sizes are allowed in most of the City's zone districts. The concept is possible in terms of zoning; however, it speaks to whether the employee base could support childcare facilities.

Manager Medrud asked Commissioner Kirkpatrick to forward information on the Connecticut housing example. Commissioner Kirkpatrick noted that the project is a collaborative and supportive effort by a variety of sources to include Yale University. Manager Medrud commented that the university connection was a subject of discussion with some of the stakeholders in terms of potential discussions with South Puget Sound Community College (SPSCC) other colleges about student housing needs in the community. Student housing presents another opportunity the City has not fully explored. A potential development proposal was reviewed of a quasi-dormitory/apartment building project proposed in Tumwater to support students at SPSCC. The concept justifies more contact with the college for consideration of other opportunities in the City.

Commissioner Staff noted how the shortfall of housing for the Craft District college program for brewing and distilling has been a major drawback for many students because they have not been able to locate affordable housing in the City.

Commissioner Staff asked whether the City's code prohibits ductless heating systems for housing. Manager Medrud said he would follow up with information. However, changes to the energy code have created unhappiness about potential costs and impacts to affordable housing. Staff is reviewing recent changes to ascertain any flexibility the City might have.

Commissioner Staff said when he visits other countries and affordable housing developments, many feature external ductless systems serving the home.

Commissioner Kirkpatrick commented on the idea of banning natural gas in housing, which is ridiculous as the capability is lacking to build electric power generating facilities or distribution facilities to switch all users from gas to electricity and requiring users to pay the cost. Those in support of the proposal should understand clean gas is a transitional source of energy that cannot be legislated from use.

Manager Medrud noted that the builders, Chamber of Commerce, and realtor stakeholders agreed phasing out gas was an issue of concern as well.

Manager Medrud referred to the list of stakeholders and asked members to review the list of groups and offer suggestions on other groups that should be invited to participate in discussions on affordable housing. The discussions are intended to help inform the update of the Housing Element as well as consider the issues of homelessness and affordable housing regionally and identify ways to address those issues. Recent broadening of the outreach scope includes discussions with the Thurston County Food Bank and scheduled meetings with Homes First and a manufactured park renters association. Some groups lacking are ethnic groups. Staff is seeking additional opportunities to identify different ethnic groups to participate and provide feedback on the update process of the Comprehensive Plan.

Commissioner Tobias asked about the possibility of adding a column to the list to classify each organization (non-profit, profit, locally based, chapter of a national organization, etc.) to help identify resources. Manager Medrud explained that the list is representative of the stakeholders invited to be part of the update process. Staff is seeking input from the Commission on other stakeholders to include on the list.

Chair Robbins recommended contacting the military or Veterans Administration, several major employers (large state agencies), smaller and larger grocery stores, and other categories of business.

Planner Smith-Erickson shared information on outreach for the survey, which included providing flyers to local businesses. She spoke with local business owners to encourage their attendance at the open house. She also visited local coffee shops, coffee stands, and other businesses.

Commissioner Kirkpatrick recommended not focusing only on Tumwater businesses but other organizations outside of the City, such as senior organizations headquartered in Olympia but serving all local communities. Meals on Wheels is a good example as the service is located in Olympia but serves all communities.

Chair Robbins inquired about the level of effort by staff to attract private and public sector development. Manager Medrud replied that the model the City has utilized to promote economic development has leaned more to reactive than proactive because of the level of effort required.

Planner Smith-Erickson updated members on preparing for the open

house.

One option is using tables at the Tumwater Library a week before the open house to promote the event and inform the community to attract some of the demographics that were underrepresented within the survey. The open house agenda begins with a review of the background on the update process, state requirements, and needs. Some feedback from stakeholders spoke to breaking down stereotypes of affordable housing and using different terminology, such as working class housing. A review of the AMI reflects that 80% AMI represents an annual income of $85,000 or a working class salary. The open house will help inform and educate. Many of the responses from the survey spoke to a need to explain affordable housing. The City's consultant on middle housing will provide information on middle housing. Additionally, attendees will be asked to provide feedback on what constitutes a "small town feel" and ways to maintain that character.

Other discussion topics will focus on recent state requirements and current codes in the City to address housing today, such as the rental registration program, the City's Housing Action Plan, and collaboration with the Regional Housing Council.

Planner Smith-Erickson invited additional suggestions.

Manager Medrud added that the format focuses more on sharing information rather than distribution of materials. The consultant uses models of middle housing types as a way to share examples of different types of housing units. Staff is exploring other ways to engage in conversation and problem solving rather than only sharing information. The online component will include interactive story mapping and surveying. The in-person session is intended to generate conversations on various topics.

Commissioner Staff suggested setting up a table at the Craft District to seek feedback or at the Family Education Support Center located across the street to inform different demographics of the population.

Manager Medrud shared information on a scheduled conversation with Together, one of the City's primary non-profits that work with the school district to help families and identify issues.

Commissioner Edwards inquired about the process for the community to submit questions prior to the open house. The outreach could include information on methods for submitting questions or inquiries. Manager Medrud replied that the stakeholders also serve as a source of community conversations.

Planner Smith-Erickson described efforts with Communications staff to post information, flyers, and publishing the new QR code for all outreach materials.

Commissioner Staff recommended coordinating with local events to display information. Planner Smith-Erickson noted that after the open house, the online opportunity will open and a QR code will be developed to advertise the online open house.

Commissioner Staff suggested providing a presentation packet of material to local volunteer organizations to share with clients to expand the reach. Planner Smith-Erickson said she would follow up with stakeholders on willingness to promote the open house.

NEXT MEETING DATE: The next meeting is scheduled for May 14, 2024. The agenda includes initial discussions on the Land Use and Conservation Elements.

ADJOURNMENT: **Commissioner Tobias moved, seconded by Commissioner Staff, to adjourn the meeting at 8:18 p.m. A voice vote approved the motion unanimously.**

Prepared by Valerie L. Gow, Recording Secretary/President
Puget Sound Meeting Services, psmsoly@earthlink.net

DRAFT TUMWATER PLANNING COMMISSION - 2024 MEETING SCHEDULE

Note: Schedule is tentative and subject to change; Updated 5/8/24

MEETINGS	AGENDA ITEMS
January 9,2024	Briefing: FP – Floodplain Overlay Amendments (O2023-017) – Erika Work Session: 2025 Comprehensive Plan Update Transportation– Brad/Erika Work Session: 2024 Hazards Mitigation Plan (R2024-001) – Brad/Erika
January 23, 2024	Hearing: 2024 Hazards Mitigation Plan (R2024-001) – Brad/Erika Work Session: FP – Floodplain Overlay Amendments (O2023-017) – Erika Discussion: Attorney General's Advisory Memorandum – Brad
February 13, 2024	Hearing: FP – Floodplain Overlay Amendments (O2023-017) – Erika Discussion: 2025 Comprehensive Plan Update Approaches to Joint Meetings – Brad
February 27, 2024	Work Session: 2025 Comprehensive Plan Update Open House Summary – Brad/Erika
March 12, 2024	[Meeting Cancelled]
March 26, 2024	Work Session: 2025 Comprehensive Plan Update Community Survey Summary – Brad/Erika Work Session: 2025 Comprehensive Plan Update Document Format – Brad/Erika
April 9, 2024	Joint Tour with City Council: 2025 Comprehensive Plan Update Housing – Brad/Erika
April 23, 2024	Work Session: 2025 Comprehensive Plan Update Housing – Brad/Erika
May 14, 2024	Work Session: 2025 Comprehensive Plan Update Conservation – Brad/Alex
May 28, 2024	Work Session: 2025 Comprehensive Plan Update Land Use – Brad/Erika
June 11, 2024	Work Session: 2025 Comprehensive Plan Update Conservation – Brad/Alex Work Session: 2025 Comprehensive Plan Update Lands for Public Purposes/Utilities – Brad/Erika
June 25, 2024	Joint Work Session with City Council: 2025 Comprehensive Plan Update Development Code – Brad/Erika
July 9, 2024	Joint Work Session with City Council: 2025 Comprehensive Plan Update Climate – Brad/Alyssa
July 23, 2024	Joint Work Session with City Council: 2025 Comprehensive Plan Update Economic Development – Brad
August 13, 2024	Joint Work Session with Tree Board: Urban Forestry Amendments – Tree and Vegetation Preservation Regulation Update (O2023-006) – Brad Joint Work Session with Tree Board: Urban Forestry Amendments – Street Tree Plan (O2023-005) – Brad Joint Work Session with Tree Board: Urban Forestry Amendments – Landscaping Regulation Update (O2023-004) – Brad Work Session: 2025 Comprehensive Plan Update Housing – Brad/Erika
August 27, 2024	Joint Tour with City Council: 2025 Comprehensive Plan Update Transportation – Brad/Mary Heather
September 10, 2024	Work Session: 2025 Comprehensive Plan Update Transportation – Brad/Mary Heather
September 24, 2024	Work Session: 2025 Comprehensive Plan Update Development Code – Brad/Erika
October 8, 2024	Work Session: 2025 Comprehensive Plan Update Conservation – Brad/Alex
October 22, 2024	Joint Work Session with City Council: 2025 Comprehensive Plan Update Land Use and Development Code – Brad/Erika

MEETINGS	AGENDA ITEMS
November 12, 2024	Work Session: 2025 Comprehensive Plan Update Climate – Brad/Alyssa Work Session: 2025 Comprehensive Plan Update Lands for Public Purposes/Utilities – Brad/Erika Discussion: Election of New Planning Commission Chair and Vice Chair
November 26, 2024	Discussion: 2025 Work Program Work Session: 2025 Comprehensive Plan Update Economic Development Plan – Brad/Austin
December 10, 2024	Joint Work Session with City Council: 2025 Work Program – Brad/Erika
December 24, 2024	[May Cancel Meeting]

Notes:

January 14, 2025 – Work Session: 2025 Comprehensive Plan Update Land Use – Brad/Erika

January 28, 2025 – Work Session: 2025 Comprehensive Plan Update Housing – Brad/Erika

February 11, 2025 – Work Session: 2025 Comprehensive Plan Update Climate – Brad/Alyssa

Work Session: 2025 Comprehensive Plan Update Development Code – Brad/Erika

February 25, 2025 – Work Session: 2025 Comprehensive Plan Update Transportation – Brad/Mary Heather

Work Session: 2025 Comprehensive Plan Update Development Code – Brad/Erika

March 11, 2025 – Work Session: 2025 Comprehensive Plan Update User Guide – Brad/Erika

March 25, 2025 – Briefing: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

April 8, 2025 – Briefing: 2025 Development Code Update (Ordinance No. O2025-0XX) – Brad/Erika

April 22, 2025 – Joint Work Session with City Council: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

May 13, 2025 – Joint Work Session with City Council: 2025 Development Code Update (Ordinance No. O2025-0XX) – Brad/Erika

May 27, 2025 – Work Session: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

June 10, 2025 – Work Session: 2025 Development Code Update (Ordinance No. O2025-0XX) – Brad/Erika

June 24, 2025 – Work Session: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

July 8, 2025 – Hearing 1: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

July 22, 2025 – Hearing 1: 2025 Development Code Update (Ordinance No. O2025-0XX) – Brad/Erika

August 12, 2025 – Hearing 2: 2025 Comprehensive Plan Update (Ordinance No. O2025-0XX) – Brad/Erika

August 26, 2025 – Hearing 2: 2025 Development Code Update (Ordinance No. O2025-0XX) – Brad/Erika

September 9, 2025 –

September 23, 2025 –

October 14, 2025 –

October 28, 2025 –

November 11, 2025 – Discussion: Election of New Planning Commission Chair and Vice Chair

November 25, 2025 – Discussion: 2026 Work Program

December 9, 2025 – Joint Work Session with City Council: 2026 Work Program

Notes:

The following will need to be scheduled on the Planning Commission meeting schedule:

- Thurston County Code Title 22 – Tumwater Urban Growth Area Zoning – The City completed a draft review of what needs to be updated in Title 22 and it is waiting for Thurston County to schedule it in its work program – Brad

- Planning Commissioner Training – Brad
- Mayor Sullivan Meet and Greet and Q&A with Advisory Boards and Commissions – Brad

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
February 12, 2024	Tuesday, February 13, 2024	Joint Meeting Format								Planning Commission	
	Wednesday, February 14, 2024				Community Outreach					General Government Committee	Community Survey #1 Ends
February 19, 2024											
February 26, 2024	Tuesday, February 27, 2024	Open House Summary									
March 4, 2024											Develop Document Format
March 11, 2024	Tuesday, March 12, 2024										
	Wednesday, March 13, 2024									General Government Committee	
March 18, 2024											Joint PC/CC Housing Tour Prep
March 25, 2024	Tuesday, March 26, 2024	Community Survey Summary Document Format								Planning Commission	
April 1, 2024											
April 8, 2024	Tuesday, April 9, 2024	Joint Tour with CC - Housing	Joint Tour with PC - Housing					Joint Tour with CC/PC - Housing			
	Wednesday, April 10, 2024				Community Survey Summary Housing (1)						
April 15, 2024											
April 22, 2024	Tuesday, April 23, 2024	Housing (1)									
April 29, 2024											
May 6, 2024	Monday, May 6, 2024										Start Work on Housing Open House
May 6, 2024	Wednesday, May 8, 2024				Document Format						Climate Consultant Start
May 13, 2024	Tuesday, May 14, 2024	Conservation (1)									
May 20, 2024											
May 27, 2024	Tuesday, May 28, 2024	Land Use (1)									
	Wednesday, May 29, 2024						Housing – CC Chambers/Online Opens for 2 weeks				

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
June 3, 2024											
June 10, 2024	Tuesday, June 11, 2024	Conservation (2) Lands for Public Purposes (1) Utilities (1)									
	Wednesday, June 12, 2024				Conservation (1) Land Use (1)						
June 17, 2024											
June 24, 2024	Tuesday, June 25, 2024	Joint Meeting with CC - Development Code (1)	Joint Meeting with PC - Development Code (1)						Joint Meeting PC/CC – Development Code (1)		
July 1, 2024											
July 8, 2024	Tuesday, July 9, 2024	Joint Meeting with CC – Climate (1)	Joint Meeting with PC – Climate (1)						Joint Meeting PC/CC - Climate		Joint CC/PC Transportation Tour Prep
	Wednesday, July 10, 2024				Lands for Public Purposes (1) Utilities (1)						Start Work on Climate Open House
July 15, 2024											Climate - Consultant coordination with Communications
July 22, 2024	Tuesday, July 23, 2024	Joint Meeting with CC – Economic Development (1)	Joint Meeting with PC – Economic Development (1)						Joint Meeting PC/CC – Economic Development		Climate - Consultant coordination with Communications
July 29, 2024	Wednesday, July 31, 2024						Climate – CC Chambers/Online Opens for 2 weeks				Climate - Community Engagement Events
August 5, 2024	Tuesday, August 6, 2024										Climate – Community Advisory Workgroup (TCMC)
August 12, 2024	Tuesday, August 13, 2024	Housing (2)	[Recess]					Joint Tour with CC/PC - Transportation			Climate – Remaining Items
	Wednesday, August 14, 2024				[Recess]						
August 19, 2024											

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
August 26, 2024	Tuesday, August 27, 2024	Joint Tour with CC - Transportation	Joint Tour with PC - Transportation								
September 2, 2024	Tuesday, September 3, 2024										Start Work on Development Code Open House
September 9, 2024	Tuesday, September 10, 2024	Transportation (1)									
	Wednesday, September 11, 2024				Development Code (1) Transportation (1)						
September 16, 2024	Wednesday, September 18, 2024										
September 23, 2024	Tuesday, September 24, 2024	Development Code (1)									
September 30, 2024	Wednesday, October 2, 2024						Development Code – CC Chambers/Online Opens for 2 weeks				Climate Action Policy Team (Development Code Draft 1)
October 7, 2024	Tuesday, October 8, 2024	Conservation (3)									
	Wednesday, October 9, 2024				Housing (2) Conservation (2)						
October 14, 2024											
October 21, 2024	Tuesday, October 22, 2024	Joint Meeting with CC – Land Use (2) and Development Code (3)	Joint Meeting with PC – Land Use (2) and Development Code (3)						Joint Meeting CC/PC – Land Use (2) and Development Code (2)		
October 28, 2024											
November 4, 2024											Climate Action Policy Team (Draft 2)
November 11, 2024	Tuesday, November 12, 2024	Climate (2) Lands for Public Purposes (2) Utilities (2)									
	Wednesday, November 13, 2024				Land Use (2) Lands for Public Purposes (2) Utilities (2)						
November 18, 2024											Climate Stakeholder (Draft 2)

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
November 25, 2024	Tuesday, November 26, 2024	Economic Development (2)									
December 2, 2024											
December 9, 2024	Tuesday, December 10, 2024	Joint Meeting with CC – 2025 Work Program	Joint Meeting with PC – 2025 Work Program Climate (3)						Joint Meeting CC/PC – 2025 Work Program		
	Wednesday, December 11, 2024				Economic Development (2) Transportation (2)						
December 16, 2024											
December 23, 2024											
December 30, 2024											
January 6, 2025	Wednesday, January 8, 2025				Land Use (3						
January 13, 2025	Tuesday, January 14, 2025	Land Use (3)									
January 20, 2025											
January 27, 2025	Tuesday, January 28, 2025	Housing (3)									
February 3, 2025											
February 10, 2025	Tuesday, February 11, 2025	Climate (3) Development Code (4)									
	Wednesday, February 12, 2025				Housing (3) Development Code (3)						
February 17, 2025											
February 24, 2025	Tuesday, February 25, 2025	Transportation (2) Development Code (5)									
March 3, 2025											
March 10, 2025	Tuesday, March 11, 2025	User Guide									
	Wednesday, March 12, 2025				Transportation (2) User Guide						
March 17, 2025											

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
March 24, 2025	Thursday, March 27, 2025	Briefing - Comprehensive Plan - Ordinance									
March 31, 2025											
	Tuesday, April 1, 2025										
April 7, 2025	Tuesday, April 8, 2025	Briefing - Development Code - Ordinance									
April 14, 2025	Tuesday, April 15, 2025										
April 21, 2025	Tuesday, April 22, 2025	Joint Meeting - Comprehensive Plan Ordinance with CC	Joint Meeting - Comprehensive Plan Ordinance with PC								
April 28, 2025											
May 5, 2025											
May 12, 2025	Tuesday, May 13, 2025	Joint Meeting - Development Code Ordinance with CC	Joint Meeting - Development Code Ordinance with PC								
May 19, 2025											
May 26, 2025	Tuesday, May 27, 2025	Work Session - Comprehensive Plan Ordinance									
June 2, 2025	Tuesday, June 3, 2025										
June 9, 2025	Tuesday, June 10, 2025	Work Session - Development Code Ordinance									
June 16, 2025	Tuesday, June 17, 2025										
June 23, 2025	Tuesday, June 24, 2025	Work Session - Comprehensive Plan Ordinance									
June 30, 2025											
July 7, 2025	Tuesday, July 8, 2025	Hearing - Comprehensive Plan Ordinance (1									
July 14, 2025		)									
July 21, 2025	Tuesday, July 22, 2025	Hearing – Development Code Ordinance (1)									
July 28, 2025											
August 4, 2025											
August 11, 2025	Tuesday, August 12, 2025	Hearing - Comprehensive Plan Ordinance (2)									
	Wednesday, August 13, 2025										
August 25, 2025	Tuesday, August 26, 2025	Hearing – Development Code Ordinance (2)									

Ongoing Comprehensive Plan Update Master Schedule

Note: Schedule is tentative and subject to change; Updated May 8, 2024

Week	Day	Planning Commission	City Council Work Session	City Council Regular Meeting	General Government Committee	Public Works Committee	Open Houses	City Council & Planning Commission Tours	Joint City Council & Planning Commission Work Sessions	Community Engagement Updates	Other Outreach
September 1, 2025											
September 8, 2025	Wednesday, September 10, 2025				Briefing - Comprehensive Plan Ordinance						
September 15, 2025											
September 22, 2025	Thursday, September 25, 2025										
September 29, 2025											
October 6, 2025											
October 13, 2025	Tuesday, October 14, 2025		Work Session - Comprehensive Plan Ordinance								
	Wednesday, October 15, 2025				Briefing - Development Code Ordinance						
October 20, 2025											
October 27, 2025	Tuesday, October 28, 2025		Work Session – Development Code Ordinance								
November 3, 2025											
November 10, 2025	Tuesday, November 11, 2025			Consideration - Comprehensive Plan Ordinance							
November 17, 2025											
November 24, 2025	Tuesday, November 25, 2025			Consideration - Development Code Ordinance							
December 1, 2025	Tuesday, December 2, 2025										
December 8, 2025											
December 15, 2025	Tuesday, December 16, 2025										
December 22, 2025											
December 29, 2025											

Stakeholders for the Comprehensive Plan Housing Element Update

May 2, 2024

Organization	Contact Info	Interest	Notes
Black Alliance of Thurston County	BlackAllianceThurstonCounty@gmail.com	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.
Boys and Girls Club of Thurston County	Shellica Trevino strevino@bgctc.org info@bgctc.org	Local, Youth, Nonprofit	Sent email invitation April 3, 2024. Applied for 2024 Tumwater CDGB funds.
Center for Independence-Lakewood	info@cfi-wa.org	Local, Seniors, Nonprofit	Sent email invitation April 3, 2024, no response.
Cielo – Centro Integral Educativo Latino de Olympia	(360) 709-0931 info@cieloprograms.org	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.
CYS – Community Youth Services	(360) 943-0780 Nikki Brown, Chief Program Officer nbrown@communityyouthservices.org Victoria Wortberg, Community Engagement Director vwortberg@communityyouthservices.org	Local, Youth, Services, Emergency Provider, Nonprofit	Sent email invitation April 3, 2024, no response. Sent email invitation April 3, 2024, no response.
Egyhop	contact@egyhop.org	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.
Hispanics Roundtable – La Mesa Redonda	Hispanic@HispanicRoundtable.org	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Homes First	Trudy Soucoup, Director ceo@homesfirst.org	Local, Developer, Provider, Nonprofit	Sent email invitation April 3, 2024. Met with on April 24, 2024.
Interfaith Works	(360) 357-7224 office@interfaith-works.org	Local, Services, Emergency Provider, Nonprofit	Sent email invitation April 3, 2024, no response.
Landlords	Todd Monohon todd@olyrents.com	Local, Provider, Profit	Sent email invitation April 3, 2024. Met with on May 2, 2024.
League of Women's Voters	LWV@LWVThurston.org	Local, Services, Nonprofit	Sent email invitation May 2, 2024, no response.
Mountain View Church	Pastor Chad Johnson cjohnson@mvcnlife.org Maegan Cote (volunteer who organizes the satellite food bank there) maegancote@yahoo.com	Local, Services, Nonprofit	Sent email invitation April 3, 2024. Met with on April 24, 2024. Sent email invitation April 3, 2024. Met with on April 18, 2024.
OBEE Credit Union	Andrew Downin, President and CEO	Local, Services, Profit	
Oly Democratic Socialists of America (DSA) Tenants Rights Group O4A	Dave Toler tolerd@gmail.com	Local, Tenants, Nonprofit	Sent email invitation April 3, 2024. Met with on May 2, 2024.
OlyFed	Josh Deck, President and CEO	Local, Services, Profit	

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Oly Indivisible	Lisa Ornstein Olympia.indivisible@gmail.com	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.
Olympia Master Builders	Jessie Simmons, Government Affairs Director ga@omb.org	Local, Developer, Profit	Sent email invitation April 3, 2024. Met with on April 15, 2024
Parents Organizing for Welfare and Economic Rights	(360) 352-9716 info@mamapower.org	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.
Resident Action at Western Plaza Mobile Home Park and Urban Indians Northwest	Kyle Lucas, Chair (360) 464-0085 kyletaylorlucas@msn.com Warren Hoffman Crabby99@comcast.net	Local, Tenants, Nonprofit	Sent email invitation April 3, 2024. Met with on April 25, 2024
Rob Rice Homes	Rob Rice rob@robricehomes.com	Local, Developer, Profit	Sent email invitation April 3, 2024, no response.
SEIU 774 (Long-Term Care Workers Union)	mrc@seiu775.org or press@seiu775.org	Local, Services, Seniors, Nonprofit	Sent email invitation April 3, 2024, no response.
Senior Services for South Sound	Brian Windrope, Executive bwindrope@southsoundseniors.org	Local, Services, Seniors, Nonprofit	Sent email invitation April 29, 2024. Met with on May 2, 2024

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
South Puget Sound Community College	Diversity, Equity, and Inclusion Center Jasmin Faulk-Dickerson, Director of Diversity (360) 596-5324 jfaulk-dickerson@spscc.edu [Note: Dawn Fry's son also works in this office if we do not get any response from Jasmin.] Student Life Electra Gupton, Director of Student Life (360) 596-5217 egupton@spscc.edu	Local, Services, Youth, Nonprofit	Sent email invitation April 3, 2024, no response. Sent email invitation April 3, 2024, no response.
South Sound Habitat for Humanity	Elizabeth Walker, Chief Executive Officer elizabeth@spshabitat.org	Local, Developer, Nonprofit	Sent email invitation April 3, 2024, no response.
Standing Up for Racial Justice Olympia	olympiasurj@gmail.com	Local, DEIB, Nonprofit	Sent email invitation April 3, 2024, no response.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Thurston County Chamber of Commerce	David Schaffert dschaffert@thurstonchamber.com Doug Mah Doug@DougMahAssociates.com Tessa Smith Tessa@ArtisansGroup.com	Local, Developer, Profit	Sent email invitation April 3, 2024. Met with on April 18, 2024, and presented at the April 19, 2024, Chamber meeting. Sent email invitation April 3, 2024. Met with on April 18, 2024, and presented at the April 19, 2024, Chamber meeting.
Thurston County Realtors Association	Chris Lester, Government Affairs Director 360.491.391 chris@tctitle.net Kim Piper, Realtor 360.402.0150 kim@kimpiper.com Mark Makoto Kitabayashi, Realtor 360.888.2210 mark@windermere.com	Local, Provider, Profit	Sent email invitation April 3, 2024. Met with on April 22, 2024. Sent email invitation April 3, 2024. Met with on April 22, 2024. Sent email invitation April 3, 2024. Met with on April 22, 2024.
Thurston County Veterans Assistance Program	tcveterans@co.thurston.wa.us	Local, Services, Veterans, Nonprofit	Sent email invitation April 29, 2024.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Thurston Housing Authority	Craig Chance, Executive Director 360-918-5828 CraigC@hatc.org	Local, Developer, Provider, Nonprofit	Sent email invitation April 3, 2024, no response.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Thurston Thrives – Housing Team	Josefina Magaña, Thurston Thrives Director (360) 357-3362 jmagana@thurstonchamber.com Rental Housing Work Group Senior Housing Team Anna Schlecht, Lead annaschlecht@gmail.com Affordable Housing Team Jerry Bustamante, Lead jerry@thurstonhousinglandtrust.org Also, with Thurston Housing Land Trust: Thea LaCross operations@thurstonhousinglandtrust.org Rebeca Potasnik rebeca@thurstonhousinglandtrust.org	Local, Services, Nonprofit	Sent email invitation April 3, 2024, no response. Sent email invitation April 3, 2024, no response. Sent email invitation April 3, 2024. Met with on April 26, 2024. Met with on April 26, 2024. Met with on April 26, 2024. Met with on April 26, 2024.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
	Robin Downey robin@thurstonhousinglandtrust.org		
Timberland Regional Library	Timberland Regional Library 415 Tumwater Boulevard SW Tumwater, WA 98501-5799 360.943.5001 | 1.877.284.6237 asklib@trl.org Lily Grant, Library Manager (360) 943-7790 ext. 2761 lgrant@trl.org Bernard Weathersbee, Assistance Library Manager bweathersbee@trl.org	Local, Services, Nonprofit	Sent email invitation April 3, 2024. Met with on April 12, 2024. Met with on April 12, 2024.
Together!	Sierra Abrams (she/her), Co-Executive Director – Systems Change (360) 999.0540 sabrams@watogether.org Vanessa Hurst, Program Manager – Host Homes vhurst@watogether.org	Local, Services, DEIB, Youth, Nonprofit	Sent email invitation April 3, 2024. Met with on April 25, 2024, with Tumwater School District.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Tumwater Chamber of Commerce	Gabe Toma, President gabe@woodlawn-funeralhome.com	Local, Provider, Profit	
Tumwater School District	Equity Advisory Committee Becky Parsons, TSD Homeless Liaison becky.parsons@tumwater.k12.wa.us Terri Turner (360) 709-7056 terri.turner@tumwater.k12.wa.us Rental Assistance – Partnered with Together!	Local, Services, Youth, Nonprofit	Sent email invitation April 3, 2024. Met with on April 25, 2024, with Together!
Vine Street Investors	Glenn Wells, Director glennwellsarchitect@gmail.com	Local, Developer, Profit	Sent email invitation April 3, 2024, no response.
YMCA	Jake Grater, Executive Director graterj@ssymca.net	Local, Services, Youth, Nonprofit	Sent email invitation April 3, 2024, no response.
YWCA	Alli Ewing, Co-Executive Director, Community Engagement aewing@ywcaofolympia.org	Local, Services, Youth, Nonprofit	Sent email invitation April 3, 2024, no response.

Stakeholders for the Comprehensive Plan Housing Element Update
April 29, 2024

Organization	Contact Info	Interest	Notes
Washington Homeowner Resource Center	Raquel Munguia, Program and Partnership Coordinator (509) 259-4669 raquel@homeownership-wa.org info@homeownership-wa.org Elizabeth Perez Elizabeth@homeownership-wa.org	State, Services, Nonprofit	Sent email invitation April 3, 2024. Met with on April 25, 2024.

TO: Planning Commission

FROM: Alex Baruch, Senior Planner, and Brad Medrud, Planning Manager

DATE: May 14, 2024

SUBJECT: 2025 Comprehensive Plan Periodic Update – Conservation

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1) Recommended Action:

This is a discussion item about the Conservation Element for the 2025 Comprehensive Plan periodic update.

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2) Background:

On a ten-year cycle, the City is required to conduct a Growth Management Act periodic update of its Comprehensive Plan and related development regulations. For the current cycle, the City is required to complete work on the periodic update by December 31, 2025. Work on the periodic update started last fall.

The updated Comprehensive Plan will address diversity, equity, and inclusion throughout the Plan. 2025 Comprehensive Plan Update | City of Tumwater, WA contains links to guidance material and information about the update.

The intent of this work session is to start the discussion of the Conservation Element by reviewing its goals, policies, and implementation actions.

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4) Alternatives:

- ❑ None.

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6) Attachments:

A. Staff Report
B. Goals, Policies, and Actions
C. Conservation Element, Amended 2021 (C1) and maps (C2 to C8)
D. City of SeaTac Environment Element 2019, in process of being updated

Attachment A

MEMORANDUM

Date: May 14, 2024
To: Planning Commission
From: Alex Baruch, Senior Planner, and Brad Medrud, Planning Manager

2025 Comprehensive Plan Update – Conservation Element

On a ten-year cycle, the City is required to conduct a Growth Management Act periodic update of its Comprehensive Plan and related development regulations. For the current cycle, the City is required to complete work on the periodic update by December 31, 2025. Work on the periodic update started last fall.

The updated Comprehensive Plan will address diversity, equity, and inclusion throughout the Plan and incorporate many State-required changes addressing housing, climate change, and other topics.

The intent of the Planning Commission meeting on Tuesday, May 14, 2024, is to start the discussion of the Conservation Element goals, policies, and implementation actions.

Contents

1 – Growth Management Act – Conservation Goals

The state Growth Management Act (Chapter 36.70A Revised Code of Washington (RCW)) requires that the City demonstrate that each Element in its Comprehensive Plan meets the relevant fifteen planning goals contained within the Act. The fifteen goals guide the development and adoption of the City's Comprehensive Plan and development regulations.

The following is a summary of how the updated Conservation Element will need to meet the two goals related to conservation. The Environment goal (Goal #10) was updated by the state legislature in 2023.

8. ***Natural resource industries***. *Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forestlands and productive agricultural lands, and discourage incompatible uses.*

   The Conservation Element has specific guidelines and policies that ensure the viability of natural resource industries and activities. Additionally, the Conservation Element will need to ensure the viability of natural resource industries in the City through the identification of such lands in the Conservation Element text and maps.

   While the City has limited natural resource lands as defined by the Growth Management Act, it does have mineral resources and forestry lands. In addition, the City does not have Growth Management Act designated agricultural lands, it does have urban agricultural lands that will be discussed in the Conservation Element with supporting goals, policies, and implementation actions.

10. ***Environment***. *Protect and enhance the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.* [Updated in 2023]

    The state legislature updated this goal in 2023 to add the requirement to enhance the environment. The Conservation Element contains specific policies relating to air and water quality, water availability, and protection and preservation of critical areas and will now need to address how to enhance the environment. Additionally, each land use designation in the Conservation Element will need to be of an appropriate intensity for where it is applied. Areas of environmental sensitivity will need to be designated as open space or a lower intensity designation than other areas of the City.

2 – Current Conservation Element

A – Background

While not required by the Growth Management Act, the City's Comprehensive Plan includes a Conservation Element that addresses both natural resource lands, such as forestry and mineral resource lands, and critical areas, such as wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas in the City. Under the Growth Management Act, natural resources lands, such as agricultural,

forestry and mineral resource lands, are typically designated outside of cities and urban growth areas as those types of uses are more rural in nature.

The 2016 Conservation Element of the Tumwater Comprehensive Plan (Attachment C1) was prepared in accordance with the requirements of the Growth Management Act, adopted Thurston County-Wide Planning Policies, and Sustainable Thurston Policies and Actions and covered the 20-year planning period from 2015 to 2035. The Conservation Element of the Comprehensive Plan was last fully updated in 2016 and amended in 2021. Areas that are within Tumwater's Urban Growth Area are addressed through the Tumwater and Thurston County Joint Plan in accordance with adopted County-Wide Planning Policies.

The goals, policies, and actions of the current Conservation Element are found in Appendix B of the staff report.

The 2016 Conservation Element Maps (Attachments C2 to C8) show where resource lands are designated and the general extent of critical areas in the City. The actual boundaries of critical areas are determined on a project level using the methods found in TMC Title 16 *Environment*.

B – Structure

The current Conservation Element consists of the following chapters:

1. Introduction
2. Agricultural Lands
3. Forest Lands
4. Mineral Resource Lands
5. Wetland Areas
6. Critical Aquifer Recharge Areas
7. Frequently Flooded Areas
8. Geologically Hazardous Areas
9. Fish and Wildlife Habitat Conservation Areas
10. Conservation Goals, Policies, and Actions

Conservation Maps

A. Critical Aquifer Recharge Areas Map
B. Forestry Lands Designation Map
C. Frequently Flooded Areas Map
D. Geologically Hazardous Areas Map
E. Mineral Resource Lands Map

F. Shorelines of the State Map

G. Wetlands Map

3 – Specific Topics Addressed as Part of the Element Update

- Incorporate consideration of Diversity, Equity, and Inclusion throughout.

  1. Environmental Justice

     - Special consideration for environmental justice in goals and policies (E2SHB 1181)

- Comprehensive Plan Update

  1. General

     - Create a new format for the Comprehensive Plan that will be shorter, leaner, and more user friendly. The updated Comprehensive Plan will consist of shorter individual Elements and Plans with appendices that contain the required technical information.
     - Create a new Comprehensive Plan Goal and Policy Guide for use by staff and policymakers.
     - Create a new User Guide to the Comprehensive Plan for the community.
     - Create a new Glossary for the Comprehensive Plan.
     - Revise planning period to 2025 – 2045.
     - Ensure that the updated Comprehensive Plan is internally consistent.
     - Ensure that all the Elements and Plans are consistent with County-Wide Planning policies, the Growth Management Act, coordinated with the Plans of adjacent jurisdictions, individual Elements and Plans, and the future land use map.
     - The County-Wide Planning Policies (2015) will not be revised for the 2025 periodic update.
     - Update City strategic priorities.
     - Update list of all adopted Plans.
     - Update all maps that are a part of the Comprehensive Plan.
     - Update discussion of Growth Management Act goals.
     - Add references to the updated Shoreline Master Program (2019), Thurston Climate Mitigation Plan (2021), and Urban Forestry Management Plan (2021).
     - Provide for a mutually agreeable Memorandum of Agreement between the City and tribes about collaboration and participation in the planning process unless otherwise agreed at the end of a mediation period.

- Provide for consideration for preserving property rights. The City must evaluate proposed regulatory or administrative actions to assure that such actions do not result in an unconstitutional taking of private property.
- Simplify, reduce, and update goals, policies, and actions.

2. Conservation Element
   - Simplify the language of the goals and policies of the Conservation Element and focus on developing implementation actions that include identifying resources to implement the action and a timeline.
   - Use the City of SeaTac Environmental Element as an example of how to format the Element (Attachment D).
   - Discuss how habitat conservation plans are used for the effective management of affected listed species and prairie eco-systems across private and public lands in the City.
   - Update policies to designate and protect critical areas including wetlands, fish and wildlife habitat protection areas, frequently flooded areas, critical aquifer recharge areas, and geologically hazardous areas. In developing these policies, include best available science to protect the functions and values of critical areas and give "special consideration" to conservation or protection measures necessary to preserve or enhance anadromous fisheries.
   - Update policies on urban agriculture and mineral resource lands.
   - If forest lands of long-term commercial significance are designated inside the City, update policies and implementation actions related to authorizing transfer or purchase of development rights in coordination with the County.
   - Move the policies related to climate mitigation and greenhouse gas emission targets to the new Climate Element to address HB 2311 as part of Planning Commission's 2022 Comprehensive Plan amendment cycle recommendations.
   - Address the Urban Forestry Management Plan.
   - Update Maps.
3. Critical Areas Regulations
   - As part of the 2025 Development Code Update, TMC Title 16 *Environment* will be updated as required in the State Department of Ecology's Critical Areas Checklist.

4 – Goals, Policies, and Implementation Actions Review

A – Introduction

Goals and policies describe how the City proposes to address identified needs. Goals are statements of desired outcomes or intended achievements. Policies are specific statements that guide actions and provide a framework for future decision-making. Actions are specific implementations of goals and policies.

Example from the current Conservation Element:

GOAL C-3: **In accordance with the Growth Management Act, designate and protect natural resource lands including agricultural, forest, and mineral lands that have long-term significance to conserve and protect these areas.**

Policy	Action	
C-3.4	Work with community groups to support the continued viability of agriculture and encourage community support for it.	
	C-3.4.1	Support the efforts of the Thurston Food System Council to develop a vibrant food system through access to healthy, local, affordable, culturally appropriate, sustainably produced food to assist the community in having reliable access to sufficient quantity of affordable nutritious food.

How key terms are used in goals, policies, and actions:

- "Shall" means implementation of the policy is mandatory and imparts a higher degree of substantive direction than "should".
- "Should" means implementation of the policy is expected but its completion is not mandatory.
- "May" means the actions described in the policy are either advisable or are allowed.
- "Ensure" means actions described in the policy are guaranteed.
- "Must" means implementation of the policy is an obligation.
- "Require" means implementation of the policy is compulsory.
- "Support" means to advocate for implementation of the policy.
- "Promote" means to help bring about implementation of the policy.
- "Encourage" means to foster or help implementation of the policy.
- "Consider" means to take into account.
- "Coordinate" means to bring into a common action, movement, or condition.
- "Implement" means to carry out or accomplish.

- "Integrate" means to form, coordinate, or blend into a functioning or unified whole.
- "Make" means to enact or establish.
- "Engage" means to do or take part in something.

B – Policy Strength Continuum

When developing goals and policies, it is important to understand the policy strength continuum. The Puget Sound Regional Council developed the following example.

Passive	Policy Strength	Active
Statements of Inclination Conveys intent, but establishes no target or definition of success	**Statements of Principle** Describes clear targets or conditions of success	**Statements of Impact** Go further, describing specific situations where protecting critical areas is a priority
Example The City shall encourage protection of prairie lands.	**Example** The City shall endeavor to support the maintenance of 100-acres of conservation land.	**Example** Work with nonprofits to support active maintenance of prairie conservation lands to protected habitat standards.

For an example of how policies can be written to be more active and how implementation strategies can be established for policies, include identifying who will be responsible for implementing the policy and the timeframes to do so, see Attachment D – City of SeaTac Environment Element.

C – Initial Review

Attachment B is the initial staff review of the Conservation Element goals, policies and actions.

Additional work needs to be completed with City staff on the scope and content of the proposed new goals, policies, and actions, but Attachment B is included to allow the Planning Commission to review and provide comment on the proposed format staff will be using to present all amendments to goals, policies, and actions in the updated Comprehensive Plan.

There will be a follow up discussion on the Conservation Element goals, policies and actions with the Planning Commission on June 11, 2024.

Appendix A – Guidance

The State Department of Commerce has provided guidance specific to the periodic update on their Periodic Update webpage.

https://www.commerce.wa.gov/serving-communities/growth-management/periodic-update/

www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics

In addition, the Puget Sound Regional Council is conducting a series of workshops on a variety of topics related to the periodic update.

www.psrc.org/our-work/passport-2044-comprehensive-plan-workshop-series)

The Municipal Research Services Center has a Comprehensive Planning webpage.

https://mrsc.org/getdoc/d7964de5-4821-4c4d-8284-488ec30f8605/Comprehensive-Planning.aspx

Appendix B – Current Conservation Element Goals, Policies, and Actions

10.1 Introduction

This Chapter of the Conservation Element specifies goals, policies, and actions meant to set forth a direction to identify, protect, and conserve critical environmental areas and valuable natural resources in Tumwater. The goals, policies, and actions also serve to ensure coordination with separate Comprehensive Plan Elements, regional plans, Sustainable Thurston Policies, and County-Wide Planning Policies. Additionally, they serve as an action plan for implementing certain recommendations within the Conservation Element.

10.2 Conservation Goals, Policies, and Actions

Goal C-1: Recognize the significant role played by natural features and systems in determining the overall environmental quality and livability of Tumwater.

Policy	Action
C-1.1	Protect the ecological integrity of the natural environment while allowing for compatible growth and development.
C-1.2	Promote conservation of natural resources and the environment in cooperation with residents, business owners, schools, affected jurisdictions, and tribes.
C-1.3	Encourage and support active measures to protect and enhance Tumwater's natural environment.
C-1.4	Implement the mitigation goals, objectives, and initiatives contained in the most recent version of the adopted *Natural Hazards Mitigation Plan for Thurston County*.
C-1.5	Maximize retention of a healthy tree cover and native vegetation and encourage restoration, replacement, and enhancement of unhealthy trees and disturbed vegetation.
C-1.6	Reduce communitywide greenhouse gas emissions 45 percent below 2015 levels by 2030 and 85 percent below 2015 levels by 2050 to ensure that local communities do their part to keep the global average temperature from rising more than 2°C.
C-1.7	Implement the strategies contained in the most recent version of the accepted *Thurston Climate Mitigation Plan*.

Goal C-2: Designate and protect critical areas including wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas in accordance with the Growth Management Act to protect the functions and values of these areas as well as to protect against threats to health, safety, and property.

Policy	Action
C-2.1	Include best available science in developing policies and development regulations to protect the functions and values of critical areas and consider conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.
C-2.2	Use incentive programs, acquisition, appropriate regulations, and other techniques to preserve critical areas as permanent open space where development may pose hazards to health, property, or important ecological functions.
C-2.3	Require that prior to any development, critical areas are identified and protected.
C-2.4	Ensure the effectiveness of critical area mitigation by requiring adequate critical area studies and mitigation plans, the application of mitigation sequencing, financial assurances from developers to ensure mitigation success, and by improving City oversight of maintenance and monitoring of mitigation sites.
C-2.5	Require and enforce mitigation to ensure no net loss of critical area functions.
C-2.6	Support restoration of river and stream channels and associated wetland and riparian areas to enhance water quality, improve fish and wildlife habitat, and mitigate flooding and erosion.
C-2.7	Allow public access to wetlands, streams, and lakes for scientific, educational, and recreational use, provided the public access is carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.
C-2.8	Protect wetlands not as isolated units, but as ecosystems, and essential elements of watersheds.
C-2.9	Protect the quality and quantity of groundwater used for public water supplies.
C-2.10	Prevent land alterations that would increase potential flooding and minimize the alteration of natural surface water features that retain or carry floodwaters, such as wetlands, floodplains, rivers, streams, and lakes.
C-2.11	Require mitigation for adverse environmental impacts from engineered flood control measures.
C-2.12	Work cooperatively to meet regulatory standards for floodplain development as these standards are updated for consistency with relevant federal requirements including those related to the Endangered Species Act.
C-2.13	Regulate development intensity, site coverage, and vegetation removal in geologically hazardous areas in order to minimize drainage problems, soil erosion, siltation, and landslides.
C-2.14	Minimize soil disturbance and maximize retention and replacement of native vegetative cover for any land uses permitted in erosion and landslide hazard areas.

C-2.15 Encourage special building design and construction measures in areas with severe seismic hazards to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.

C-2.16 Protect and preserve habitats for species, which have been identified as endangered, threatened, or sensitive by the state or federal government, giving special consideration: to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

C-2.17 Maintain habitats that support the greatest diversity of fish and wildlife through conservation and enhancement of critical areas.

C-2.18 Implement salmon habitat protection and restoration priorities in approved Water Resource Inventory Area 13 and 23 plans.

C-2.19 Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross-jurisdictional lines.

C-2.20 Promote the enhancement or restoration of streams, rivers, lakes, and wetlands as adjacent development activities occur.

C-2.21 Protect wildlife corridors to minimize habitat fragmentation, especially along existing linkages and in patches of native habitat by enhancing vegetation composition and structure, and incorporating indigenous plant species compatible with the site.

Goal C-3: In accordance with the Growth Management Act, designate and protect natural resource lands including agricultural, forest, and mineral lands that have long-term significance to conserve and protect these areas.

Policy **Action**

C-3.1 Recognize the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of Tumwater.

C-3.2 Zone designated agricultural lands at very low densities to ensure the conservation of the resource for continued agricultural use.

C-3.3 Limit non-agricultural development within designated agricultural areas to non-prime farmland soils where possible.

C-3.4 Work with community groups to support the continued viability of agriculture and encourage community support for it.

C-3.4.1 Support the efforts of the Thurston Food System Council to develop a vibrant food system through access to healthy, local, affordable, culturally appropriate, sustainably produced food to assist the community in having reliable access to sufficient quantity of affordable nutritious food.

C-3.5 Ensure that harvesting for conversion to other uses occurs in a manner compatible with land uses of the surrounding area and maintenance of water quality and environmentally critical areas.

C-3.6 Allow mineral extraction industries to locate where prime natural resource deposits exist.

C-3-7 Conserve designated mineral resource lands of long-term commercial significance for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.

C-3.8 Restore mineral extraction sites as the site is being mined. The site should be restored for appropriate future use and it should blend with the adjacent landscape and contours.

Attachment B

Conservation Element – Goals, Policies, and Implementation Action Review

May 8, 2024

Overarching Environment Goals

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
C-1			**Use best available science when developing and implementing environmental management policies and regulations.**	**New goal.** **Refer to the PSRC Policy Strength Continuum to include conditions for success and specific examples.**	**C-1**			**Recognize the significant role played by natural features and systems in determining the overall environmental quality and livability of Tumwater.**	
	C-1.1		Wetlands, streams, shorelines of the state, fish and wildlife habitats, aquifers and critical aquifer recharge areas including wellhead protection areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas are designated as environmentally sensitive areas in accordance with the Growth Management Act to protect the functions and values of these critical areas as well as to protect against threats to health, safety, and property.	Updated current policy.	C-2			Designate and protect critical areas including wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas in accordance with the Growth Management Act to protect the functions and values of these areas as well as to protect against threats to health, safety, and property.	
	C-1.2		Base regulations on the best available science to protect and enhance the functions and values of environmentally sensitive areas.	Split original Policy C-2.1 into C-1.2 and C-4.2		C-2.1		Include best available science in developing policies and development regulations to protect the functions and values of critical areas and consider conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.	
		C-1.2.1	*Require and enforce mitigation to ensure no net loss of critical area functions.*	*Converted policy to implementation action.* *Primary responsibility: Staff* *Timeline: Ongoing*		*C-2.5*		*Require and enforce mitigation to ensure no net loss of critical area functions.*	
		C-1.2.2	*Use incentive programs, acquisition, appropriate regulations, and other techniques to preserve critical areas as permanent open space where development may pose hazards to health, property, or important ecological functions.*	*Converted policy to implementation action.* *Primary responsibility: Staff* *Timeline: Ongoing*		*C-2.2*		*Use incentive programs, acquisition, appropriate regulations, and other techniques to preserve critical areas as permanent open space where development may pose hazards to health, property, or important ecological functions.*	

Conservation Element – Goals, Policies, and Implementation Action Review
May 8, 2024

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-1.2.3	*In reviewing development proposals that may have an impact on any sensitive areas, consult with third party biologist and/or engineer to assess potential impacts and recommend development alternatives or mitigation.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-1.3		Protect the ecological integrity of the natural environment while allowing for compatible growth and development	How will we protect "ecological integrity of the natural environment"?		C-1.1		Protect the ecological integrity of the natural environment while allowing for compatible growth and development	
		C-1.3.1	*When updating development regulations review in conjunction with critical areas regulations to ensure compatibility.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-1.4		Make low impact development the preferred and commonly used approach to development.	New policy.					
		C-1.4.1	*Adopt current low impact development manuals, policies, development standards, regulations, and techniques.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-1.5		Use studies and plans such as the most recent version of the adopted *Natural Hazards Mitigation Plan for Thurston County*, the *Tumwater Urban Forestry Management Plan,* and *Thurston Climate Mitigation Plan* to inform policy and regulation development and implementation.	Updated and expanded current policy.		C-1.4		Implement the mitigation goals, objectives, and initiatives contained in the most recent version of the adopted *Natural Hazards Mitigation Plan for Thurston County*.	
C-2			**Promote conservation of natural resources and the protection of the environment in cooperation with residents, business owners, schools, affected jurisdictions, and tribes.**	**New goal.**		**C-1.2**		**Promote conservation of natural resources and the environment in cooperation with residents, business owners, schools, affected jurisdictions, and tribes.**	
	C-2.1		Support education programs in the community that outline the need for natural resource conservation and protection of critical areas and look to create opportunity for community action.	New policy to capture educational component of policies and regulations.		C-1.3		Encourage and support active measures to protect and enhance Tumwater's natural environment.	

Conservation Element – Goals, Policies, and Implementation Action Review
May 8, 2024

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-2.1.1	*Support the work of the Stream Team*	*New implementation action* *Primary responsibility: Water Resources & Sustainability Staff* *Timeline: Ongoing*					
		C-2.1.2	*Support the work for the City Tumwater Green Team*	*New implementation action* *Primary responsibility: Staff – Green Team* *Timeline: Ongoing*					
C-3			**Enhance water quality**	**New goal.**					
	C-3.1		Protect and enhance water quality by preserving the amenity and ecological functions of water features through land use plans, innovative land development, public education, and stormwater regulations.	New policy.					
		C-3.1.1	*Work with LOTT to enable sewer services for new development.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-3.1.2	*Provide adequate stormwater detention control for new development, including low impact development techniques.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-3.1.3	*Update development codes to require and implement low impact development provisions.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-3.1.4	*Work with the Tumwater and Olympia School Districts, LOTT, and other local entities to educate the public in how to maintain water quality within the natural drainage basins.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-3.2		Support restoration of river and stream channels and associated wetland and riparian areas to enhance water quality, improve fish and wildlife habitat, and mitigate flooding and erosion.	Current policy.		C-2.6		Support restoration of river and stream channels and associated wetland and riparian areas to enhance water quality, improve fish and wildlife habitat, and mitigate flooding and erosion	

Conservation Element – Goals, Policies, and Implementation Action Review
May 8, 2024

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-3.3		Allow public access to wetlands, streams, and lakes for scientific, educational, and recreational use, provided the public access is carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.	Current policy.		C-2.7		Allow public access to wetlands, streams, and lakes for scientific, educational, and recreational use, provided the public access is carefully sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.	
	C-3.4		Manage water resources to preserve ecosystem services, including recreation, fish and wildlife habitat, flood protection, water supply, and open space.	New policy.					
		C-3.4.1	*Enforce regulations that protect water resources while allowing recreational use of those resources.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-3.4.2	*Implement the Salmon Creek Basin Plan.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-3.4.3	*Monitor storm drain outfalls and adjust water quality maintenance, as necessary.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-3.5		Work with the City of Olympia, Thurston County, and other affected entities to enhance and protect water quality in the region.	New policy.					
		C-3.5.1	*Coordinate implementation strategies and regulations with the City of Olympia and Thurston County.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-4			**Enhance Natural Drainage Systems**	**New goal.**					
	C-4.1		Consider entire watersheds in surface water management plans, with responsibility shared between Tumwater, other cities, and the County.	New policy.					

Conservation Element – Goals, Policies, and Implementation Action Review
May 8, 2024

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-4.1.1	*Work with the City of Olympia and Thurston County to ensure that regulations regarding surface water management provide for consistent surface water management.*	*New implementation action* *Primary responsibility: City Council and Staff* *Timeline: Ongoing*					
		C-4.1.2	*Continue involvement with watershed planning efforts through participation in the Salmon Creek Basin and watershed planning efforts.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-4.2		Develop conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.	Split original Policy C-2.1 into C-1.2 and C-4.2		C-2.1		Include best available science in developing policies and development regulations to protect the functions and values of critical areas and consider conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.	
	C-4.3		Protect and enhance natural drainage systems to maintain and improve water quality, reduce public costs, and prevent environmental degradation by using best management construction practices and current stormwater treatment and flow control standards on new and redevelopment projects.	New policy.					
		C-4.3.1	*Enforce regulations that prohibit or minimize the degradation of the natural drainage systems.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-4.4		Use current stormwater treatment and flow control standards on new and redevelopment projects.	New policy.					
		C-4.4.1	*Enforce regulations and methods that would protect quality and quantity of stormwater runoff entering Tumwater's streams and wetlands.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-4.5		Require resource industries to use management practices that prevent erosion and sedimentation and pollutants from entering ground or surface waters.	New policy.					
		C-4.5.1	*Enforce regulations and methods that minimize the amount of erosion, sedimentation, and water pollutants created by resource industries.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-5			**Improve Air Quality**	**New goal.**					
	C-5.1		Continue to support and rely on the various State, federal, and local programs to protect and enhance air quality.	New policy.					
		C-5.1.1	*Work with the Olympic Region Clean Air Agency and with Federal and State agencies to ensure that air quality is protected within Tumwater.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-5.2		Require tree and vegetation retention and landscaping to provide filtering of suspended particulates.	New policy.					
		C-5.2.1	*Enforce tree and vegetation retention and landscape codes that allow the use of existing vegetation to be used for biofiltration.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-5.3		Support public transportation, non-motorized transportation, and transportation demand management programs to reduce vehicle miles traveled, greenhouse gas emissions, and other locally generated air pollutants.	New policy.					
		C-5.3.1	*Work with local employers to adopt transportation demand management programs to encourage their employees to use alternative forms of transportation to reduce vehicle trips and emissions.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-5.3.2	*Enforce regulations that require new development to adopt transportation demand management programs.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

Conservation Element – Goals, Policies, and Implementation Action Review

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Environmentally Sensitive Areas

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
C-6			**Protect Streams and Lakes**	**New goal.**					
	C-6.1		When impacts from new development are unavoidable, ensure that those impacts will not result in the loss of natural functions or wildlife habitat.	New policy.					
		C-6.1.1	*Enforce regulations that mandate a minimum buffer area around rivers, streams, lakes, and wetlands.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-6.2		Preserve, protect, enhance, and restore natural stream channels for their hydraulic, ecological, and aesthetic functions through development regulations, land dedications, easements, incentives, acquisition, and other means as adjacent development activities occur.	New policy to replace old.		C-2.20		Promote the enhancement or restoration of streams, rivers, lakes, and wetlands as adjacent development activities occur.	
		C-6.2.1	*Enforce regulations that protect natural stream channels.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-6.3		Use State standards and guidance for the selection of best management practices and techniques for in-channel and in-water construction to protect and restore fish passage and wildlife habitat in natural waterways.	New policy.					
		C-6.3.1	*Update regulations to reference State standards and guidance for in-channel and/ or in-water construction.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-6.4		Rehabilitate degraded stream channels and banks by using public programs and new development or redevelopment, where conditions permit. Require any necessary alteration of creeks to include mitigation and ongoing maintenance which at a minimum address water quality, floodplain protection, fish and wildlife habitat, channel stability, vegetative cover, maintenance of instream flows, and impacts to downstream property owners.	New policy.					
		C-6.4.1	*Work with the school district, nonprofit organizations, and other public agencies to implement programs to rehabilitate streams and creeks. Such programs could be implemented separately or combined and may include:* • *Establishing a school curriculum from K-12 that would adopt and rehabilitate a creek.* • *Working with public agencies or a nonprofit agency, such as the Adopt- A-Stream Foundation, in coordination with school programs.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-6.5		Require the use of stormwater infiltration techniques where feasible in private and public developments to maintain or restore natural flows in streams and protect fisheries and recreation resources.	New policy.					
		C-6.5.1	*Update development codes to encourage use of low impact development techniques.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-6.5.2	*Retain existing wetlands and creeks on the site of new development and require the maintenance of natural features.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-7			**Enhance Wetlands**	**New goal.**					
	C-7.1		Protect wetlands not as isolated units, but as ecosystems, and essential elements of watersheds.	Current policy.		C-2.8		Protect wetlands not as isolated units, but as ecosystems, and essential elements of watersheds.	
	C-7.2		Preserve and enhance unique, outstanding, peat, sphagnum, forested, or significant wetlands from adjacent new development by providing a buffer around the wetland adequate to protect its natural functions. Encroachments into significant wetlands may be allowed when no feasible alternative exists, and enhancements are provided to replace the lost wetland's functions and values.	New policy.					
		C-7.2.1	*Enforce development regulations for significant wetlands.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-7.3		Develop public access to wetlands for scientific and recreational use when sensitive habitats are protected.	New policy.					
		C-7.3.1	*Develop regulations that would allow public access to sensitive areas habitat; provided that such access does not impact such habitat areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-7.4		Allow reasonable use of property containing existing wetlands to avoid a regulatory taking following State guidance.	New policy.					
		C-7.4.1	*Enforce regulations that allow the reasonable use of a piece of property that is totally impacted by a sensitive area.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-7.5		Prohibit altering of wetlands for speculative purposes.	New policy.					
		C-7.5.1	*Enforce specific regulations to prohibit speculative landfills in wetland areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-7.6		In wetlands used as stormwater detention sites, maintain water level fluctuations like natural conditions, unless plants and animals in the wetland can adapt to new levels as documented by a wetland biologist.	New policy.					
		C-7.6.1	*Enforce regulations that would ensure the water level fluctuations within wetland areas are maintained similar to natural conditions as part of new development.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-8			**Protect Groundwater**	**New goal.**					
	C-8.1		Protect aquifers, aquifer recharge areas, and wellhead protection areas used for the public water supply from contamination.	Updated current policy.		C-2.9		Protect the quality and quantity of groundwater used for public water supplies.	
		C-8.1.1	*Work with the State Department of Ecology and others to delineate aquifer recharge areas and determine if additional regulations to protect these areas are needed.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-8.1.2	*Update regulations, as necessary.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-8.2		Protect streams, wetlands, and lakes that serve to recharge aquifers from contamination.	New policy.					
		C-8.2.1	*Enforce regulations to minimize impacts from new development.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
C-9			**Protect Geological Hazardous Areas, such as Steep Slope, Landslide, Erosion, and Seismic Hazard Areas**	**New goal.**					
	C-9.1		Regulate development intensity, site coverage, and vegetation removal in geologically hazardous areas to minimize drainage problems, soil erosion, siltation, and landslides.	Current policy.		C-2.13		Regulate development intensity, site coverage, and vegetation removal in geologically hazardous areas in order to minimize drainage problems, soil erosion, siltation, and landslides.	
	C-9.2		Minimize soil disturbance and maximize retention and replacement of native vegetative cover for any land uses permitted in erosion and landslide hazard areas.	Current policy.		C-2.14		Minimize soil disturbance and maximize retention and replacement of native vegetative cover for any land uses permitted in erosion and landslide hazard areas.	
	C-9.3		Design land use development to prevent property damage and environmental degradation and enhance greenbelt and wildlife habitat values.	New policy.					
		C-9.3.1	*Enforce regulations to minimize impacts from new development.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-9.4		Decrease development intensity as slopes increase to mitigate problems of drainage, erosion, siltation, and landslides. Retain slopes of 40 percent or more in a natural state, free of structures and roads. Ensure that developments that create slopes of 40 percent or more provide appropriate drainage, erosion, siltation, and landslide mitigation measures.	New policy.					
		C-9.4.1	*Enforce regulations that would limit or prohibit development on steep areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-9.5		Preserve severe landslide hazard areas from development.	New policy.					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-9.5.1	*Limit development within severe landslide areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-9.6		Require best erosion and sedimentation prevention practices be used on construction projects.	New policy.					
		C-9.6.1	*Enforce regulations that require special construction practices to reduce or prevent erosion and sedimentation in erosion hazard areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-9.7		Require appropriate engineering, building design, and construction measures to minimize the risk of structural damage and fire and injury to occupants, and to prevent post-seismic collapse in areas with severe seismic hazards.	New policy.					
		C-9.7.1	*Enforce building and fire codes that require construction to standards that account for the severity and frequency of seismic activity in the south Puget Sound area.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-9.8		Encourage special building design and construction measures in areas with severe seismic hazards to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.	Modify current version of policy.		C-2.15		Encourage special building design and construction measures in areas with severe seismic hazards to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.	
		C-9.8.1	*Enforce building and fire codes that require construction to standards that account for the severity and frequency of seismic activity in the south Puget Sound area.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-10			**Preserve Floodplains**	**New goal.**					

Conservation Element – Goals, Policies, and Implementation Action Review
May 8, 2024

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-10.1		Prevent land alterations that would increase potential flooding and minimize the alteration of natural surface water features that retain or carry floodwaters, such as wetlands, floodplains, rivers, streams, and lakes.	Current policy.		C-2.10		Prevent land alterations that would increase potential flooding and minimize the alteration of natural surface water features that retain or carry floodwaters, such as wetlands, floodplains, rivers, streams, and lakes.	
	C-10.2		Require mitigation for adverse environmental impacts from engineered flood control measures.	Current policy.		C-2.11		Require mitigation for adverse environmental impacts from engineered flood control measures.	
	C-10.3		Work cooperatively to meet regulatory standards for floodplain development as these standards are updated for consistency with relevant federal requirements including those related to the Endangered Species Act.	Current policy.		C-2.12		Work cooperatively to meet regulatory standards for floodplain development as these standards are updated for consistency with relevant federal requirements including those related to the Endangered Species Act.	
	C-10.4		Emphasize non-structural methods in planning for flood prevention and damage reduction. Design new developments or land modifications in the 100-year floodplains to maintain natural flood storage functions and minimize hazards.	New policy.					
	C-10.5		Protect 100-year floodplains by limiting development and encouraging low-impact uses such as open space, trails, and parks, locating roads and structures above the 100-year flood level, and requiring new development to replace existing flood storage capacity lost due to filling.	New policy.					
		C-10.5.1	*The Federal Emergency Management Agency designates floodplain areas. Enforce regulations that restrict development in such areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-10.6		Allow no permanent structures within the floodway due to risks associated with deep and fast-flowing waters unless appropriate flood control measures have been taken. Allow no land uses in a floodway that would divert water from the floodway, change flood elevation or obstruct natural flow, unless appropriate flood control measures have been taken such that there are no additional offsite impacts and no degradation of water quality. Allow no development in the floodway fringe that would reduce the existing level of flood storage.	New policy.					
		C-10.6.1	*The Federal Emergency Management Agency designates floodplain areas. Enforce regulations that restrict development in such areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
C-11			**Enhance Wildlife Habitat**	**New goal.**					
	C-11.1		Protect and enhance fish and wildlife habitat corridors to minimize habitat fragmentation, especially along existing linkages and in patches of native habitat by enhancing vegetation composition and structure and incorporating indigenous plant species compatible with the site.	Modify current version of policy.		C-2.21		Protect wildlife corridors to minimize habitat fragmentation, especially along existing linkages and in patches of native habitat by enhancing vegetation composition and structure, and incorporating indigenous plant species compatible with the site.	
		C-11.1.1	*Adopt regulations that protect wildlife habitat areas for endangered or threatened species.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-11.1.2	*Continue working with Thurston County to monitor the performance of the Salmon Creek Basin Plan.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
		C-11.1.3	*Adopt regulations that would require buffer areas adjacent to wetlands, streams and creeks, and steep slope areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-11.2		Protect and preserve habitats for species, which have been identified as endangered, threatened, or sensitive by the state or federal government, giving special consideration: to conservation or protection measures necessary to preserve or enhance anadromous fisheries.	Current policy		C-2.16		Protect and preserve habitats for species, which have been identified as endangered, threatened, or sensitive by the state or federal government, giving special consideration: to conservation or protection measures necessary to preserve or enhance anadromous fisheries.	
		C-11.2.1	*Implement salmon habitat protection and restoration priorities in approved Water Resource Inventory Area 13 and 23 plans.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*		*C-2.18*		*Implement salmon habitat protection and restoration priorities in approved Water Resource Inventory Area 13 and 23 plans.*	
	C-11.3		Maintain habitats that support the greatest diversity of fish and wildlife through conservation and enhancement of critical areas.	Current policy		C-2.17		Maintain habitats that support the greatest diversity of fish and wildlife through conservation and enhancement of critical areas.	
		C-11.3.1	*Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross-jurisdictional lines.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*		*C-2.19*		*Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross-jurisdictional lines.*	
	C-11.4		When developing on forested property adjacent to steep slopes, wetlands, stream ravines, or stream corridors, encourage development to provide additional buffer areas to provide wildlife and fisheries habitat.	New policy.					
		C-11.4.1	*Enforce regulations that allow the clustering of residential units to preserve as much open space area as possible.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-11.5		Foster native vegetation and control invasive species to preserve and enhance fish and wildlife habitat.	New policy.					
		C-11.5.1	*Develop regulations requiring all new development to establish native vegetation as the dominant plant species in buffers around wetlands, streams, creeks, and steep slope areas.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
		C-11.5.2	*Develop regulations allowing buffer width reductions for redevelopment situations as part of an approved vegetation management plan.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					

Conservation Element – Goals, Policies, and Implementation Action Review

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Natural Resource Areas

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
C-12			**Support Urban Agriculture**	**New goal.**					
	C-12.1		Recognize the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of Tumwater.	No change from current version of policy.		C-3.1		Recognize the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of Tumwater.	
	C-12.2		Work with community groups to support the continued viability of agriculture and encourage community support for it.	No change from current version of policy.		C-3.4		Work with community groups to support the continued viability of agriculture and encourage community support for it.	
		C-12.2.1	*Support the efforts of the Thurston Food System Council and similar organizations to develop a vibrant food system through access to healthy, local, affordable, culturally appropriate, sustainably produced food to assist the community in having reliable access to sufficient quantity of affordable nutritious food.*	*Existing implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*			*C-3.4.1*	*Support the efforts of the Thurston Food System Council to develop a vibrant food system through access to healthy, local, affordable, culturally appropriate, sustainably produced food to assist the community in having reliable access to sufficient quantity of affordable nutritious food.*	
C-13			**Support Urban Forestry**	**New goal.**					
	C-13.1		Maximize retention of a healthy tree cover and native vegetation and encourage restoration, replacement, and enhancement of unhealthy trees and disturbed vegetation as recommended in the adopted *Tumwater Urban Forestry Management Plan* consistent with the Growth Management Act and the requirements of protected habitat.	Modify current version of policy.		C-1.5		Maximize retention of a healthy tree cover and native vegetation and encourage restoration, replacement, and enhancement of unhealthy trees and disturbed vegetation.	
		C-13.1.1	*Implement the actions in the Tumwater Urban Forestry Management Plan.*	*New implementation action* *Primary responsibility: Staff* *Timeline: Ongoing*					
	C-13.2		Ensure that harvesting for conversion to other uses occurs in a manner compatible with land uses of the surrounding area and maintenance of water quality and environmentally critical areas.	Current policy.		C-3.5		Ensure that harvesting for conversion to other uses occurs in a manner compatible with land uses of the surrounding area and maintenance of water quality and environmentally critical areas.	
C-14			**Protect Mineral Resource Lands**	**New goal.**					

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New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
	C-14.1		Allow mineral extraction industries to locate where prime natural resource deposits exist.	Current policy.		C-3.6		Allow mineral extraction industries to locate where prime natural resource deposits exist.	
	C-14.2		Conserve designated mineral resource lands of long-term commercial significance for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.	Current policy.		C-3.7		Conserve designated mineral resource lands of long-term commercial significance for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.	
	C-14.3		Restore mineral extraction sites as the site is being mined. The site should be restored for appropriate future use, and it should blend with the adjacent landscape and contours.	Current policy.		C-3.8		Restore mineral extraction sites as the site is being mined. The site should be restored for appropriate future use and it should blend with the adjacent landscape and contours.	

Conservation Element – Goals, Policies, and Implementation Action Review

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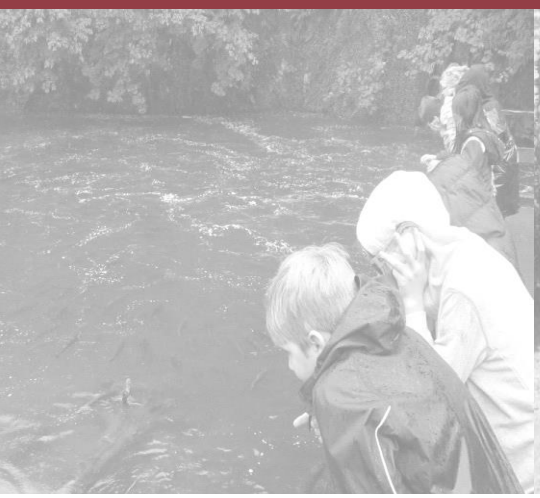
Goals, Policies, and Actions Moved to Other Elements or Deleted and Not Replaced

New Goal	New Policy	New Action	Initial Staff Proposed Language	Staff Notes	Old Goal	Old Policy	Old Action	Current Goal, Policy, or Action	Planning Commission Notes
			Moved to new Climate Element.	Moved to new Climate Element and update to reflect adoption of a net zero goal by 2050 per HB 1181.		C-1.6		Reduce communitywide greenhouse gas emissions 45 percent below 2015 levels by 2030 and 85 percent below 2015 levels by 2050 to ensure that local communities do their part to keep the global average temperature from rising more than 2°C.	
			Moved to new Climate Element.	Moved to new Climate Element.		C-1.7		Implement the strategies contained in the most recent version of the accepted Thurston Climate Mitigation Plan.	
			Proposed for deletion	Tumwater does not formally designate agricultural lands within the City.		C-3.2		Zone designated agricultural lands at very low densities to ensure the conservation of the resource for continued agricultural use.	
			Proposed for deletion	Tumwater does not formally designate agricultural lands within the City.		C-3.3		Limit non-agricultural development within designated agricultural areas to non-prime farmland soils where possible.	

Attachment C1

Tumwater City Plan 2036
Conservation Element



CITY OF TUMWATER

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1. INTRODUCTION

1.1 Background

The Conservation Element is part of Tumwater's Comprehensive Plan. It was created to meet the state Growth Management Act (Chapter 36.70A RCW) requirements to identify and protect critical environmental areas and valuable natural resources. The Conservation Element specifically addresses the above-mentioned topics in the following order:

Natural Resource Lands Conservation:

- Agricultural Lands
- Forest Lands
- Mineral Resource Lands

Critical Areas Protection:

- Wetland Areas
- Critical Aquifer Recharge Areas
- Frequently Flooded Areas
- Geologically Hazardous Areas
- Fish and Wildlife Habitat Conservation Areas

As drafted, the Growth Management Act provides the possibility of conflict between its two goals of protecting critical areas and effectively conserving while utilizing natural resources. The two goals are:

> *8. Natural resource industries. Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.*

10. Environment. Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.

In the event that conflict does occur in the implementation of planning and development regulations, the priority of protecting critical areas will be superior to conserving while utilizing natural resources.

This Element and implementing ordinances were developed with public input as described in the Public Outreach Plan required by the Growth Management Act. This chapter is also based on the updated list of additional supporting plans, documents, and best available science shown in Table 1.

In addition, this Element serves as the policy basis for enacting Goal #4 of the *City of Tumwater Strategic Plan* in future land development, which states:

Promote Development that is Environmentally Sustainable and Provides for a Healthy Community.

In concert with the *Natural Hazard Mitigation Plan for the Thurston Region* and the Land Use Element, this Element reviews drainage, flooding, and storm water run-off in the area and provides guidance for corrective actions to manage and cleanse those discharges that pollute waters of the state, including Puget Sound and waters entering Puget Sound.

Table 1. Foundational Plans, Documents, and Best Available Science (BAS)

Topic Index	Supporting Plans and Materials
General Policy	• Land Use Element (2015) • County-Wide Planning Policies, Thurston County (2015) • Sustainable Thurston, Thurston Regional Planning Council (2013)
Agricultural Lands	• Custom Soil Resource Report for Thurston County Area, Washington – 2016 Tumwater Soil Survey, U.S. Department of Agriculture (2016) • Handbook No. 210, U.S. Department of Agriculture (1961) • Soil Conservation Service Soil Survey of Thurston County, U.S. Department of Agriculture (1958)

Topic Index	Supporting Plans and Materials
Forest Lands	• Private Forest Land Grades (WAC 458-40-530), State Department of Revenue
Mineral Resource Lands	• Correspondence with the State Department of Natural Resources Staff (1992) • Geologic Map of the Centralia Quadrangle, Washington, State Department of Natural Resources (1987) • Inventory of Abandoned Coal Mines in the State of Washington, US Department of Interior / State Department of Natural Resources (1985) • Mineral Resource Land Classification System (WAC 365-190-070), State Department of Natural Resources • Tumwater Aerial Photographs (1989) • Tumwater Land Use Inventory (1991) • Washington State Coal Mine Map Collection, State Department of Natural Resources (1983)
Wetland Areas	• Best Available Science for Freshwater Wetlands, State Department of Fish and Wildlife and State Department of Ecology (2005, 2013) • Custom Soil Resource Report for Thurston County Area, Washington – 2016 Tumwater Soil Survey, U.S. Department of Agriculture (2016) • Priority Habitats and Species Data Base, State Department of Fish and Wildlife (Updated annually) • Priority Habitats and Species List, State Department of Fish and Wildlife (1999) • Shoreline Master Program (2014) • Soil Conservation Service Soil Survey of Thurston County, U.S. Department of Agriculture (1958) • Wetland Mapping for the Thurston Region, Thurston Regional Planning Council (2004)

Topic Index	Supporting Plans and Materials
Critical Aquifer Recharge Areas	• Lands for Public Purposes Element • Thurston County On-Site Sewage Management Plan (2014) • Wastewater Resource Management Plan, LOTT Clean Water Alliance (2015) • Water System Plan (2010-2015) • Wellhead Protection Plan (2010 informal update, 2016 update underway)
Frequently Flooded Areas	• Comprehensive Stormwater Implementation Plan (2002, 2016 Plan in development) • Flood Hazard Maps • Flood Insurance Studies and the Flood Insurance Rate Maps, Federal Emergency Management Agency (2012 – 2016) • Floodplain Overlay Ordinance (2016) • GIS Thurston County Floodplain Mapping • Littlerock-70th Avenue Annexation Area Drainage Study (Part of the Littlerock-70th Avenue Annexation in 2008) (2011) • Natural Hazards Mitigation Plan for the Thurston Region (2009) • Salmon Creek Comprehensive Drainage Basin Plan (2004)
Geologically Hazardous Areas	• Coastal Zone Atlas, State Department of Ecology (2014) • Custom Soil Resource Report for Thurston County Area, Washington – 2016 Tumwater Soil Survey, U.S. Department of Agriculture (2016) • Geologic Map of the Centralia Quadrangle, Washington, State Department of Natural Resources (1987) • Liquefaction Hazards Map, State Department of Natural Resources • Natural Hazards Mitigation Plan for the Thurston Region (2009) • Steep Slopes Map, State Department of Natural Resources

Topic Index	Supporting Plans and Materials
Fish and Wildlife Conservation Areas	• Habitat Conservation Plan (In development 2016-17) • Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas, State Department of Fish and Wildlife (2009) • Management Recommendations for Priority Habitat and Species (Multiple Documents), State Department of Fish and Wildlife (1991 – 2011) • Priority Habitats and Species Data Base, State Department of Fish and Wildlife (Updated annually) • Priority Habitats and Species List, State Department of Fish and Wildlife (1999) • Determination of Threatened Status for Bull Trout in the Coterminous United States, Federal Register (64):58910-58933, U.S. Fish and Wildlife Service (1999) • Endangered and Threatened Species: Regulations Consolidation, Final Rule, Code of Federal Regulations Volume 50 Part 223.102, National Oceanic and Atmospheric Administration (1999) (Chinook Salmon) • Endangered and Threatened Wildlife and Plants, Threatened Status for Oregon Spotted Frog, Final Rule, Federal Register Volume 79:51658, U.S. Fish and Wildlife Service (2014) • Threatened Species Status for the Olympia Pocket Gopher, Roy Prairie Pocket Gopher, Tenino Pocket Gopher, and Yelm Pocket Gopher, With Special Rule, Federal Register Volume 79:19759, U.S. Fish and Wildlife Service (2014) • Endangered and Threatened Wildlife and Plants, Endangered Status for Taylor's Checkerspot Butterfly and Threatened Status for the Streaked Horned Lark, Final Rule, Federal Register Volume 78:61452, U.S. Fish and Wildlife Service (2013) • Multiple Additional ESA Documents described in the Environmental Conservation Online System

1.2 Best Available Science

RCW 36.70A.172 and WAC 365-195-900 through WAC 365-195-925 require jurisdictions to use Best Available Science (BAS) in revising or adopting new policies and regulations related to critical areas. Utilization of BAS is particularly important to salmon recovery efforts required under the Endangered Species Act. BAS is essentially a process to assist jurisdictions in ascertaining what science is appropriate for use in basing policy and regulatory decision-making. Tumwater will use BAS in all revisions and additions to critical areas policies and regulations to protect the functions and values of critical areas.

1.3 Shorelines

Tumwater's shorelines of the state as identified by the Shoreline Management Act within City limits include the Deschutes River, and Black Lake Drainage area as well as lake shorelines including: Trosper Lake, Barnes Lake, Lake Susan, and Munn Lake. Shorelines of the state within Tumwater's potential annexation area include Black Lake. Shorelines of the state also include the upland or shorelands that generally extend 200-feet landward from the edge of these waters, and any wetlands, floodways, and/or floodplain areas associated with such waters.

The updated Shoreline Master Program was adopted in 2014 following review and approval from the State Department of Ecology. The regulations were incorporated into TMC 16.20 Geologically Hazardous Areas, TMC 16.28 Wetland Protection Standards, and TMC 16.32 Fish and Wildlife Habitat Protection. For shorelines of the state, the goals and policies of the Shoreline Management Act (RCW 90.58.020) were added as one of the goals of the Growth Management Act (RCW 36.70A.020) without creating an order of priority among the fourteen goals. The goals and policies of the City's Shoreline Master Program approved under RCW 90.58 shall be considered an element of the comprehensive plan.

1.4 County-Wide Planning Policies

The Growth Management Act requires that comprehensive plans be consistent with Thurston County's County-Wide Planning Policies, as amended in 2015. The following is a list of the relevant policies that apply to this Element of the Comprehensive Plan. All County-Wide Planning Policies are adopted as Appendix B to the Comprehensive Plan. The relevant sections of the County-Wide Planning Policies to this Element are cited below.

The Conservation Element contains goals, policies, and actions that address County-Wide Planning Policies 1.1 through 1.14. These goals, policies, and actions support

Tumwater and Thurston County's vision for compact, efficient urban development that phases outward from the urban core while preserving the natural and critical areas in and around Tumwater.

II. Urban Growth Areas

2.2 The boundaries of designated urban growth areas must meet the following criteria:

[…]

d. be compatible with the use of designated resource lands and critical areas.

Each resource land and critical area chapter in the Element describes what kinds of development are compatible with the resource or area that chapter covers.

III. Promotion of Contiguous and Orderly Development, Provision of Urban Services, and Protection of Rural Areas

3.4 Provide Capacity to accommodate planned growth by:

[…]

b. Protecting ground water supplies from contamination and maintaining groundwater in adequate supply by identifying and reserving future supplies well in advance of need.

The critical aquifer recharge area policies in Chapter 6 of the Element support this policy.

VII. Economic Development and Employment

7.2 Support the recruitment, retention, and expansion of environmentally sound and economically viable commercial, public sector, and industrial development and resource uses, including the provision of assistance in obtaining funding and/or technical assistance.

Resource uses and resource land protection are addressed in Chapters 2 through 4.

7.5 Build a vital, diverse, and strong local economy, including job opportunities that support community and household resilience, health, and well-being, by;

[…]

f. Nurturing urban and rural agricultural and food-oriented businesses.

g. Protecting resource lands.

h. Encouraging the utilization and development of areas designated for industrial use, consistent with the environmental policies in these countywide policies.

i. Connecting economic health with personal health and well-being and the advancement of environmental health.

j. Adding incentives for business to demonstrate their environmental sustainability including reduction in greenhouse gas emissions.

Urban and rural agriculture are discussed in Chapter 2. The critical areas chapters (Chapters 5 – 9) address the protection of crucial areas for both environmental and public health reasons. Action C-2.2 provides incentives for increased sustainability measures.

X. Environmental Quality

10.1 Recognize our dependence on natural systems and maintain a balance between human uses and the natural environment.

10.2 Establish a pattern and intensity of land and resource use that is in concert with the ability of land and resources to sustain such use, reduce the effects of the built environment on the natural environment, conserve natural resources, and enable continued resource use, through:

[…]

c. Planning for the amount of population that can be sustained

by our air, land and water resources without degrading livability and environmental quality.

[…]

10.3 Protect the soil, air, surface water, and groundwater quality, including through:

a. Reducing dependence on the use of chemicals and other products that pollute and, when their use is necessary, minimizing releases to the environment.

b. Ensuring adequate clean water is available to support household and commercial needs while sustaining ecological systems through conservation, balancing of uses, and reuse.

c. Protecting ground and surface water and the water of the Puget Sound from further degradation by adopting and participating in comprehensive, multi-jurisdictional programs to protect and monitor water resources for all uses.

10.5 Acknowledge that changing weather and climate patterns will impact the human, natural, and built environments and plan for impact such as increase wildfire, flooding, and sea-level rise.

10.6 Protect and restore natural ecosystems, such as, forests, prairies, wetlands, surface and groundwater resources, that provide habitat for aquatic and terrestrial plants and animals.

10.7 Provide for public access to natural resource lands, while ensuring that uses and economic activity, which are allowed within those lands, are sustainable.

10.8 Provide for parks and open space and maintain significant wildlife habitat and corridors.

The Conservation Element is based upon the theme of the importance of natural systems and resources to human uses. Chapters related to water resources (Chapters 5 - 7) cover the issues surrounding the balance between meeting future needs for water and protecting water resources. Groundwater is specially addressed in Chapter 6.

1.5 Sustainable Thurston Policies

Tumwater adopts the following Sustainable Thurston Goals as part of the Conservation Element:

1.2.1 Priority Goals

Priority Goal 2: Preserve environmentally sensitive lands, farmlands, forest lands, prairies, and rural lands and develop compact urban areas.

Priority Goal 4: Protect and improve water quality, including groundwater, rivers, streams, lakes, and the Puget Sound.

Priority Goal 7: Support local food systems to increase community resilience, health, and economic prosperity.

1.2.2 Leadership & Participation Goals

L-1: Become a model for sustainability and livability. Identify resources, organizational structure, and educational opportunities to achieve regional sustainability goals.

L-2: Develop regional plans and strategies essential to meeting sustainability priority goals and targets.

L-3: Increase regional, multi-regional, and state coordination and collaboration.

1.2.3 Environment Goals

E-4: Protect, preserve, and restore streams, wetlands, and shorelines to protect water quality.

2. AGRICULTURAL LANDS

2.1 Introduction

Access to healthy food choices is an important public health issue. Lack of healthy food choices contributes to obesity and other health problems such as diabetes, heart disease, and cancer. Access to healthy food and local food production are clearly part of planning for a vital, healthy community.

The *City of Tumwater Strategic Plan* has a number of goals and policies directly related to environmental sustainability and increasing the availability of healthy food. According to the Worldwatch Institute,[1] produce found in an average grocery store has traveled 1,500 miles. Long distance transportation consumes an enormous amount of fossil fuel and generates a great deal of greenhouse gases. Increased local food production has a direct beneficial effect on the environment by reducing greenhouse gas emissions. Transportation costs are much lower for local food producers. In addition, a direct benefit to the community is the provision of fresh, healthy, locally grown food. Decreasing regulatory barriers and encouraging a wide range of local food production options compatible in an urban environment are important policy decisions in furthering the sustainability goals of the City.

The conservation and protection of prime agricultural lands are essential to our economic and nutritional needs. Food, feed, forage, fiber, and oil seed crops are all best produced on prime farmland soils, which provide superior physical and chemical characteristics. Historically, valuable agricultural lands have been pushed out and eliminated by urbanization in the form of low-density suburban sprawl located outside cities and their urbanized environments.

2.2 Sustainable Urban Agriculture

Sustainable urban agriculture meeting the goals of the *City of Tumwater Strategic Plan* and the Conservation Element takes a variety of forms.

1. Urban Farm: An urban farm is where plants and/or some animals are grown for sale of the plants and animals or their products, and in which the plants and animals or their products are sold either on the lot where they are grown or off site, or both. Examples may include flower and vegetable raising, orchards and vineyards. Urban farms are small-scale agricultural uses and are listed in the Conservation Element for informational purposes in order to show a complete picture of food

[1] http://www.worldwatch.org/globetrotting-food-will-travel-farther-ever-thanksgiving

production options. It is not intended that urban farms be separated from "agriculture" in the zoning code.

2. Community Garden: A community garden means land managed by a public or nonprofit organization, or a group of individuals, that is used to grow plants and harvest food or ornamental crops from them for donation or use by those cultivating the land and their households.

3. Individual Home Garden: A home garden simply means a garden grown on a residential lot as an accessory use to the principal structure for the use of the occupants. Home Gardens are listed in the Conservation Element for informational purposes in order to show a complete picture of food production options. It is not intended that home gardens be treated any differently in the zoning code.

4. Farmers Market: A farmers market consists of a group of individual venders primarily selling locally grown produce and products. This use typically is seasonal and may be temporary. Some examples are set up on closed streets or on portions of sites used for other primary uses.

2.3 Agricultural Lands Classification

This plan's classification and identification of agricultural lands of long-term significance is based partially upon the land-capability classification system of the United States Department of Agriculture Handbook No. 210. The classes of agricultural lands are based upon consideration of growing capacity, productivity, and soil composition of the land.

In further defining categories of agricultural lands of long-term significance, the reference standard is the use of the classification of prime and unique farmland soils as mapped by the Soil Conservation Service. Lastly, the Conservation Element recognizes that prime agricultural lands in the City have been substantially overlaid by urban uses and zones. These circumstances do not allow for a classification of long-term significance to be applied.

2.4 Agricultural Lands Conservation

Of prime importance in defining the long-term significance of agricultural lands is taking into account the proximity to populated areas and the possibility of more intense uses of the land as indicated by:

- The availability of public facilities (available);

- Tax status (special tax status available);
- The availability of public services (available);
- Relationship or proximity to urban growth areas (within the Thurston UGA);
- Predominant parcel size (moderate);
- Land use settlement patterns and their compatibility with agricultural practices (surrounding land uses of urban/suburban densities);
- Intensity of nearby land uses (urban or soon-to-be urban density);
- History of land development permits issued nearby (an urbanizing area);
- Land values under alternative uses (urbanized and urbanizing based upon highest and best use market driver); and
- Proximity of markets (local and regional).

2.5 Agricultural Lands Identification

Within Tumwater, the soil types shown in Table 2 meet the definition of the Soil Conservation Service (SCS) as prime and unique farmland soils.

A review of the Soil Conservation Service Soil Survey Maps (13 and 18) covering Tumwater and its Urban Growth Area shows the prime and unique farmlands in Table 2 to be present. In many cases the soils are covered by urbanized, open space or agricultural land uses. The following chart is developed from the SCS Soil Survey of Thurston County. When soils are shown as prime/unique farmland, "where drained" does not imply that the Conservation Element encourages such action.

Table 2. Tumwater Farmlands Soil Composition

Map Unit	Prime/Unique Farmland Soil Description	In Tumwater?
41	Godfrey silty clay loam (where drained)	Yes
69	Mukilteo muck (where drained)	Yes
73	Nisqually loamy fine sand, 0 to 3 percent slopes where irrigated	Yes

Map Unit	Prime/Unique Farmland Soil Description	In Tumwater?
76	Norma silt loam (where drained)	Yes
88	Puget silt loam (where drained)	Yes
89	Puyallup silt loam	Yes
106	Shalcar Variant muck (where drained)	Yes
115	Sultan silt loam	Yes
126	Yelm fine sandy loam, 0 to 3 percent slopes	Yes

2.6 Agricultural Lands Protection

While an urban area is generally not conducive to large-scale farming, there is certainly a role for smaller scale urban farms and community gardens. Because of the importance of food access, food security, and overall environmental sustainability, there is a role for Tumwater in encouraging a wide range of farming and gardening within Tumwater. This role may evolve over time, but can begin with analyzing the existing regulatory barriers that do not foster the healthy food security and environmental goals of the City. TMC 16.12, Right-to-Farm protects legally established agricultural facilities.

2.7 Regulatory Barrier Assessment

The Growth Management Act requires a thorough review of the City's zoning and development codes every eight years. It may be appropriate to consider scheduling reviews more often to eliminate existing regulatory barriers to increasing the supply of healthy, locally grown food. The following Tumwater Municipal Code amendments support the goals of this plan should be evaluated and refined or implemented:

To implement:

- Consider allowing roadside stands as a part of an agricultural operation that would allow sales directly at or from the farm.

- Change the regulated amount of apiaries on a lot from a set number to a ratio based of lot size.

Implemented but open to refinement:

- Definitions for key terms such as "Community Garden" and "Farmers

Market."

- Community gardens as a permitted use in the Residential/Sensitive Resource, Single Family Low density, Single Family Medium density, Multi-Family Medium density, Multi-Family High density, Neighborhood Commercial, Community Service, Mixed Use, Capitol Boulevard Community, General Commercial, Town Center, Light Industrial, Heavy Industrial, Historic Commercial, Brewery District, Business Park, Open Space, and Airport Related Industrial zone districts.

- Farmers markets as a permitted use in the Neighborhood Commercial, Community Service, Mixed Use, Capitol Boulevard Community, General Commercial, Town Center, Light Industrial, Heavy Industrial, Historic Commercial, Brewery District, Business Park, Open Space, and Airport Related Industry zone districts.

Agriculture on lots 30 acres or less in size as a permitted use in Residential/Sensitive Resource, Single Family Low density, Single Family Medium density, and Multi-Family Medium density zone districts.

- Signage requirements regarding urban farms. Currently farms on lots smaller than one acre are allowed a single 12 ft^2 sign and farms on lots larger than one acre are allowed one 32 ft^2 sign on each street frontage.

- Requirements for permitted farms stated clearly in their own section.

- Agriculture uses exempt from standard fence requirements to protect crops better from wildlife. Currently agriculture uses are allowed to have taller fences given that they resemble common deer fences.

- Egg-laying fowl are permitted under certain restrictions such as lot size and compulsory sanitary enclosures. Loud fowl such as roosters, geese, and peacocks are prohibited.

3. FOREST LANDS

3.1 Introduction

Forest lands are a paramount economic raw resource for the state's economy. This valuable resource must be husbanded to insure that a continuous production of timber and forest products is assured for the future. It is the state's policy to encourage forestry and restocking and reforesting of forests (RCW 84.33.010). Proper management of forestry creates environmental benefits such as enhanced water and air quality, reduction of soil erosion, lessening of storm and flood damage, protection of valuable wildlife habitats, provision of scenic and recreational spaces, and providing a valuable buffer of a natural ecological equilibrium.

3.2 Forest Lands Identification

The Growth Management Act requires cities and counties to classify and conserve resource lands, including forest lands. The classification of the forest lands is to be based upon the private forest land grades of the State Department of Revenue (WAC 458-40-530).

This classification system incorporates consideration of growing capacity, productivity, and soil composition of the land. Forest lands of long-term commercial significance will generally have higher private forest land grades. However, the presence of lower private forest land grades within the areas of predominately higher grades need not preclude designation as forest land.

Worked into this plan's identification of forest lands are considerations of long-term commercial significance, proximity to urbanized areas and the possibility of more intense uses of land. Forest lands can most often be identified by reviewing the land parcel tax base to discover large tracts of land, which declare themselves "open space" or "designated forest land" thereby acquiring a reduced tax rate.

In defining what lands could be identified by the state classification system as forest lands, the beginning point of definition is a cross-reference of species, site index and land grades:

Table 3. State Private Forest Land Grades (WAC 458-40-530)

Washington State Species: Westside	Private Forest Site Index	Land Grade
Douglas Fir	136 ft. and over	1
	118-135 ft.	2
	99-117 ft.	3
	84-98 ft.	4
	Under 84 ft.	5
Western Hemlock	136 ft. and over	1
	116-135 ft.	2
	98-115 ft.	3
	83-97 ft.	4
	68-82 ft.	5
	Under 68 ft.	6
Red Alder	117 ft. and over	6
	Under 117 ft.	7
	Marginal forest productivity	7 or 8
	Noncommercial	8

Notes: Land Grade 1 = highest, Land Grade 8 = lowest
Marginal forest productivity in Tumwater is Land Grade 8

Forest lands are further defined by operability classes based upon characteristics of soils and geomorphic features. The criteria are applied as follows:

- **Class 1 - Favorable**. Stable soils that slope less than thirty percent. Forest operations do not significantly affect soil productivity and soil erosion. Forest operations, such as road building and logging, are carried out with minimal limitations.

- **Class 2 - Average.** Stable soils that slope less than thirty percent, but on which significant soil erosion, compaction, and displacement may occur

because of forest operations.

- **Class 3 - Difficult**. Soils with one or both of the following characteristics:

  a. Stable soils that slope between thirty and sixty-five percent; and

  b. Soils that slope between zero and sixty-five percent, but display evidence that rapid mass movement may occur as a direct result of forest operations.

- **Class 4 - Extreme**. All soils that slope more than sixty-five percent.

3.3 Forest Lands Conservation

When considering the effects of proximity of Tumwater's populated areas on the successful conservation of forest lands, the following items are considered. Comments in parentheses indicate the conditions found in Tumwater:

- The availability of public services and facilities conducive to the conversion of forest land (available);

- The proximity of forest land to urban and suburban areas and rural settlements: forest lands of long-term commercial significance are located outside the urban and suburban areas and rural settlements (located within an urban area);

- The size of the parcels: forest lands consist of predominantly large parcels (parcels identified are modest in size);

- The compatibility and intensity of adjacent and nearby land use and settlement patterns with forest lands of long-term commercial significance (adjacent land uses of urban land use intensity);

- Property tax classification: Property is assessed as open space or forest land pursuant to Chapter 84.33 RCW or Chapter 84.34 RCW (Two parcels identified);

- Local economic conditions which affect the ability to manage timberlands for long-term commercial production (judged not to be supportive in the long term); and

- History of land development permits issued nearby (other large tracts in

the City have been harvested under Class 4 DNR permits indicating land use conversions are to occur, which are processed by the City).

3.4 Forest Land Identification

Thurston County Assessor public records show that only one parcel within Tumwater and its Urban Growth Area is designated forest land. This parcel is 36.01 acres in size. The surrounding zoning/land uses adjacent to this parcel is shown in Table 4.

Table 4. Forest Lands Designation

Parcel #	Adjacent Zoning	Adjacent Land Use
Parcel Number 12829410000 Sec. 29, Township 18, Range 2W	North – GB, LI, and SFL	Gravel Pit Extraction
	South – LI and SFL	Low-density Residential
	East – GB and LI	Gravel Pit Extraction
	West – GB, LI, HI, and SFL	Open Space/Low-density Residential

Notes: GB – Greenbelt; HI – Heavy Industrial; LI – Light Industrial; and SFL – Single-Family Low Density Residential

While only one parcel was identified by the Assessor's office as having forest land tax status, this does not preclude the possibility of other parcels, not so identified, intended to be used as forest land.

3.5 Forest Lands - Long Term Urbanization

The Growth Management Act (WAC 365-190-060(2)) states that forests of long-term commercial significance are located outside the urban areas/suburban areas and rural settlements. Therefore, within Tumwater, the one identified parcel of forest land, as well as any others now or in the future, are not considered by the Conservation Element to be of long-term significance and it will not be designated protected resource lands. As future parcels of property are annexed or planned for within context of the Thurston County Urban Growth Management Agreement, this method of designating commercial forest lands of long-term significance will be pursued as a goal of this plan.

No subsequent implementing ordinance is needed to implement the Forest Land Resources chapter of this plan.

Given no incentive to continue forestry of the one designated forest land parcel within the City limits of Tumwater, it is highly likely that as urbanization trends continue,

this parcel ultimately will be logged and converted to the predominant adjacent land uses of Greenbelt, Industrial, or Low-Density Residential.

While no forest lands of long-term significance are currently identified, the parcels of land that are currently forested are encouraged to remain forested for their environmental and open space benefits, as long as possible, before converting to urbanized land uses.

4. MINERAL RESOURCE LANDS

4.1 Introduction

As with other types of resource lands discussed in this plan, the identification and conservation of mineral resource lands is a requirement placed upon Tumwater by the Growth Management Act. The Conservation Element will identify and classify mineral resource lands from which the extraction of minerals can be anticipated. In addition, a strategy to ensure a future supply of these minerals will be discussed. As a definition, minerals and the resource lands within which they are mined apply to resources including gravel, sand, and valuable metallic substances that have a known or potential long-term commercial significance.

4.2 Mineral Resource Lands Classification

In defining what lands qualify as "mineral resource lands," the Conservation Element bases its methodology upon the "Mineral Resource Land Classification System" developed by the State Department of Natural Resources with modification to include consideration of environmentally-sensitive areas, existing land use, and land ownership factors.

The Mineral Resource Lands Classification Criteria is as follows:

Marketability - Strategic (in short domestic supply) and non-strategic minerals that are minable, recoverable, and marketable in the present or foreseeable future (50 years).

Threshold Value – This is the gross selling price of the first marketable product from an individual mineral deposit. For those that meet the marketability criteria, only those that exceed the following threshold values in 1990 equivalent dollars should be considered significant:

- **Construction Materials** - Sand, gravel, or crushed rock that normally receive minimal processing (commonly washing and grading): **Minimum Value $5,000,000**

- **Industrial and Chemical Mineral Materials** – These are non-metallic mineral materials that normally receive extensive processing such as heat or chemical treatment or fine sizing. Examples include limestone, marble, specialty sands, clays, peat, coal, borates, gypsum, talc, feldspar, building and dimension stone, rock varieties produced into granules, rock floor, mineral wool and

similar commodities: **Minimum Value $1,000,000**

- **Metallic and Rare Minerals** - These are metallic elements, minerals, and gemstones that possess special properties valuable to science and industry. Examples include ores, deposits, or crystals of precious metals (such as gold), iron and ferro-alloy metals (such as tungsten), base metals, mercury, uranium, rare earths, minor metals (such as rubidium), gemstones: **Minimum Value $500,000**

- **Non-Fluid Mineral Fuels** - These are non-hydrothermal mineral fuels occurring in sedimentary rocks such as coal, coal bed methane, lignite, peat, organic shale, tar sand, uranium, and thorium: **Minimum Value $1,000,000**

- **Unique or Rare Occurrences** of rocks, minerals or fossils that are of outstanding scientific significance: **No Minimum Value**

4.3 Mineral Resource Lands Identification

The Conservation Element identifies lands with long-term commercial significance for extracting the mineral resources outlined in Section 4.2.

The following Mineral Resource Areas (MRA) and Scientific Resource Sites (SRS) categories are used in classifying lands:

- **MRA-1**: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that there is little likelihood for their presence. This area should be applied where well-developed lines of reasoning, based upon economic geological principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is nil or slight.

- **MRA-2**: Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence. This area should be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.

- **MRA-3**: Areas containing mineral deposits the significance of which cannot be evaluated from available data.

- **MRA-4**: Areas where available information is inadequate for assignment to any other MRA.

- **SRS**: Areas containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.

The sources of mineral resource distribution have identified the following sites, which now or in the future, will provide valuable mineral resources:

Table 5. Mineral Resource Designations

Mineral Resource	Section	Township	Range	Status	Land Use Designation and Zoning
Igneous Rock Quarry (Black Lake Boulevard)	29	18	2W	MRA-2	Heavy Industry
Sand/Gravel Pit (State Route 101)*	28	18	2W	MRA-2	Light Industry
Sand/Gravel Pit (R.W. Johnson)*	21	18	2W	MRA-2	Light Industry
Sand/Gravel Pit (26th Avenue)*	29	18	2W	MRA-2	Light Industry
All Mineral Resources	Locations City-Wide Unknown			MRA-4	Various

Notes: *These deposits have been mostly mined out and are now developed properties.

The Heavy Industry land use designation and associated zoning district was specifically created to support the existing rock quarry use on Black Lake Boulevard. New mineral extraction uses are not permitted in the Light Industry zoning district.

Mineral resource lands identified are subject to consideration of the effects of proximity to population areas and the possibility of more intense uses of land as indicated by:

- General land use patterns in the area (urban);

- Availability of utilities (available);

- Availability and adequacy of water supply (available);

- Surrounding parcel sizes and surrounding uses (small-medium sized parcels, land uses industrial and commercial in nature);
- Availability of public roads and other public services (yes);
- Division or zoning for urban or small lots (yes);
- Accessibility and/or distance from point of use (in close proximity);
- Physical and topographic characteristics of the mineral resource site (accommodating to low operating costs);
- Depth of the resource (exposed at surface);
- Depth of the overburden (exposed materials);
- Physical properties of the resource (high grade gravel, sand and rock);
- Life of the resource (10 to 100 years); and
- Resource availability in the region (good for sand/gravel, limited on rock).

4.4 Mineral Resource Lands Protection

There also exists the possibility that future discoveries of mineral resources, or market conditions that are conducive, may encourage the opening of new mineral resource extraction operations. What or where these facilities would locate cannot be accurately gauged. The Conservation Element proposes to treat existing and future emerging mineral resource extraction sites in the following manner:

1. A newly established mineral resource extraction facility must be a land use identified within the zone(s) applying to the site.
2. TMC 16.16 Right-to-Mine protects legally established mineral resource extraction facilities.

5. WETLAND AREAS

5.1 Introduction

Wetlands serve many important ecological functions. Tumwater's wetlands act as natural reservoirs for flooding and stormwater runoff; protect water quality by filtering out pollutants; help stabilize shorelines with their root systems; provide areas for groundwater recharge; provide habitat areas for fish, wildlife, and vegetation; provide open space and recreation opportunities; and provide areas for scientific study and natural resource education.

Wetlands preservation can significantly reduce public and private costs associated with downstream flooding, poor water quality, and diminishing wildlife habitat.

Tumwater intends to do the following:

- Preserve, protect, manage, and regulate wetlands for the purpose of promoting public health, safety and general welfare while conserving fish, wildlife and other natural resources;
- Protect the ecological and economic benefits to the public of wetlands functions and values;
- Regulate property use and development to maintain the natural and economic benefits provided by wetlands;
- Protect private property rights consistent with the public interest; and
- Provide for protection against direct and indirect wetlands impacts by providing regulatory authority for management of wetland buffers.

It is the short-term goal of this policy to achieve no net loss of the remaining wetlands in Tumwater, defined by acreage and function. It is the long-term goal to create wetlands, where feasible, to increase the quantity and quality of wetlands in Tumwater.

5.2 Existing Wetland Policies, Regulations, and Inventories

A number of federal, state, and local wetland policies, regulations, and inventories currently form a patchwork for wetlands protection.

5.2.1 Federal Clean Water Act

This is broad-based law covering water pollution control in general. Section 404 of the Act requires the Army Corp of Engineers to regulate the dredging and filling of waters of the United States, including the tributaries and wetlands. However, the dredging, draining or land clearing of wetlands without a nexus to waters of the United States, including their tributaries and wetlands, is not addressed by the Act.

5.2.2 Washington State Shoreline Management Act

Regulates activities in shorelines of the state, which include lakes over 20 acres in size, rivers and streams with flows in excess of 20 cubic feet per second (c.f.s.), and all lands within 200 feet of the ordinary high water mark and any wetlands, floodways, and/or floodplain areas associated with such waters.

The Act excludes wetlands not "associated" with waters of the state, including isolated wetlands and riparian wetlands associated with lakes less than 20 acres and streams with flows less than 20 c.f.s. It also exempts most agricultural and forest practices from permit requirements.

5.2.3 Washington State Hydraulics Code

Any work that uses, diverts, obstructs, or changes the natural flow or bed of any salt or freshwaters of the state requires a Hydraulics Project Approval. The State Department of Fish and Wildlife administers the State Hydraulics Code through Hydraulic Project Approval process. The intent of the Code is to protect fish and fish habitat.

Wetlands outside the Ordinary High Water Mark and isolated wetlands without fish life are excluded. A Hydraulic Project Approval does not address impacts to wetland functions and values other than fish and fish habitat.

5.2.4 Washington State Wetland Rating System for Western Washington

This manual is currently the definitive methodology for determining when a wetland is present and where a wetland boundary is located. It is based on the functional values present in the wetland, sensitivity to disturbance, significance, rarity, and ability to replace.

5.2.5 National Wetlands Inventory

Conducted on a national level using aerial photographs, the National Wetlands Inventory depicts wetland locations, approximate boundaries, and includes classification by wetland type. The inventory is available for Tumwater but it should not be presumed to locate every wetland area in Tumwater. Often the only reliable

method for wetland identification is a site visit by a qualified wetland biologist. This is typically done in conjunction with a development proposal.

5.2.6 Wetland Mapping for the Thurston Region

The Thurston Regional Planning Council has identified wetlands in Thurston County based on color infrared aerial photographs. In many cases, the results of the aerial photography have been verified by field surveys. The result is digitized maps showing wetlands boundaries and types. This inventory must be supplemented with site specific field surveys to verify wetland boundaries at the time of development permit review.

5.2.7 Tumwater Environmental Policy

Chapter 16.04 of the Tumwater Municipal Code adopts the State Environmental Policy Act by reference. The intent of this code is to identify and if necessary, mitigate the environmental impacts associated with a variety of actions.

5.2.8 Tumwater Wetlands Protection Standards

Chapter 16.28 of the Tumwater Municipal Code establishes standards for the protection of wetlands. Most wetlands are regulated under this Chapter. Exemptions include intentionally created wetlands, such as stormwater treatment ponds, and certain unintentionally created wetlands.

5.2.9 Tumwater Protection of Trees and Vegetation

Chapter 16.08 of the Tumwater Municipal Code regulates the clearing of land in Tumwater, including tress and vegetation located in wetlands.

5.2.10 Tumwater Shoreline Master Program

Tumwater's Shoreline Master Program requires that wetland buffers are determined by the category and function level of the wetland as stated in the Tumwater Municipal Code. The buffer widths range from 25 feet to 300 feet depending on the wetland's rarity, sensitivity to disturbance, and ecological importance. See TMC 16.28.170 for detail on wetland buffer requirements.

5.2.11 Tumwater Floodplain Regulations

The Floodplain Zone Overlay District in the Tumwater Zoning Code prohibits or strictly limits filling and development in designated floodplains, including wetlands located

within these areas. This reduces the height and velocity of floods and lessens bank erosion.

5.3 Wetland Values and Benefits

Wetlands serve many important ecological and social functions. In the past, wetlands were regarded as a nuisance to be drained and filled to accommodate development. As wetlands have disappeared, we have come to realize that the loss of wetlands comes at a severe cost; therefore, public policy has begun to change to reflect an appreciation of wetlands and their functions. A summary of wetland benefits follows:

- Wetlands are very important for slowing and storing floodwaters. Riverine wetlands and floodplains provide flat areas where floodwaters can spread out and slow down, reducing the height and velocity of floods. Flood waters trapped in wetlands may then slowly drain, reducing stream bank erosion and downstream peaks;

- Wetlands provide erosion control for shorelines by dissipating the water's energy and stabilizing shorelines with the root systems of plants commonly found in wetlands;

- Wetlands improve water quality by their ability to filter out sediments, nutrients, and toxic chemicals. Moving water carries suspended sediments and other materials. As the water enters a wetland and slows down, these sediments tend to settle down. The sediments are then trapped by the wetland vegetation, which in turn reduces the amount of siltation deposited in lakes and reservoirs;

- Wetlands allow water to soak into the underlying soil, which adds to the supply of groundwater;

- Wetlands provide essential areas for waterfowl and migratory shorebirds to rest and feed;

- Wetlands provide essential escape cover and feeding, nesting, and breeding habitat for many species of fish and wildlife. Wetland plants help protect juvenile fish, thereby serving to increase the anadromous fish population;
- Wetlands furnish areas for education and research of a variety of flora and fauna that cannot be found in other environments;

- Wetlands provide open space and recreation opportunities, including

fishing, hiking, boating, and bird watching.

5.4 Wetland Protection Areas Classification

The Growth Management Act requires cities and counties to classify wetlands according their sensitivity to disturbance, rarity, functions, and irreplaceability. Tumwater will use the *Washington State Wetland Rating System for Western Washington* for classifying wetlands as outlined below, which is further identified in TMC 16.28 Wetland Protection Standards.

5.4.1 Category I Wetlands

Those regulated wetlands that are unique or rare, are more sensitive to disturbance than most wetlands, are relatively undisturbed, and contain ecological attributes that are impossible to replace within a human lifetime, and/or provide a high level of functions. Degradation of these wetlands should be avoided due to their functions and values being too difficult to replace.

5.4.2 Category II Wetlands

Those regulated wetlands that are difficult but not impossible to replace and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection.

5.4.3 Category III Wetlands

Those regulated wetlands that provide a moderate level of functions, can often be adequately replaced with a well-planned mitigation project. These wetlands generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than category II wetlands.

5.4.4 Category IV Wetlands

Those regulated wetlands that have the lowest levels of functions and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and they should be protected to some degree.

5.5 Wetlands Identification

Identification of wetlands will be undertaken primarily on a case-by-case basis at the time an application for development is made, using the *Washington State Wetland Rating System for Western Washington* in their current form and as hereafter amended.

The development applicant should employ a qualified wetland biologist, at their cost, to identify wetland areas and delineate wetland boundaries. A list of qualified wetland biologists is available for use by applicants. Use of a qualified wetland biologist not on the list is subject to review and approval by the Community Development Director, or designee.

5.6 Wetland Protection Techniques

Techniques that can be used to protect wetland areas include:

- Using the *Washington State Wetland Rating System for Western Washington* for wetland classification based on function and value;
- Requiring a qualified wetland biologist to determine wetland type and boundary for development sites containing wetlands;
- Establishing wetland buffers based on the relative value of the wetland in which no development or disturbance should occur;
- Striving to achieve no net loss of wetland areas and functions;
- Striving to create wetlands in the long term, where feasible, to increase the quantity and quality of wetlands.
- Attempting to avoid impacts to wetlands altogether if practicable;
- If impact avoidance is impossible, attempting to reduce wetland impacts through mitigation;
- If impact avoidance and reduction is impossible, accomplishing wetland compensation
- Preliminary wetland mapping has been completed by the Thurston Geodata Center and is available online. This mapping does not negate the requirement for on-site wetland identification by a qualified wetland biologist in conjunction with development proposals. It does, however, provide a starting point for wetland identification; and

- Providing education on the value of wetlands to developers and homeowners;

5.7 Wetlands Protection

WAC 365-190-040(1) states that when critical areas, including wetland areas, cannot be readily identified, these areas should be designated by performance standards or definitions. In this way, such areas can be specifically identified during the processing of a site-specific permit or development authorization.

The adoption of a "performance standards"-based identification and regulatory process, by its nature, closes out such options as the creation of overlay zones. For the purposes of wetland protection, a "performance standards"-based process will be followed.

TMC 16.28 Wetland Protection Standards was developed to classify, designate, and protect wetlands and their associated buffers from on-site and off-site activities impacts. These regulations have provisions for reasonable wetland buffer areas and the means for avoidance and reduction of wetland impacts. Attributes of TMC 16.28 Wetland Protection Standards include:

5.7.1 Wetland Buffer Areas

Wetland buffer areas should be required adjacent to regulated wetlands in order to protect wetland functions and values. All wetland buffer widths should be measured from the wetland boundary as established by a field survey conducted by a qualified wetland biologist. Wetland buffers are the primary means by which wetland functions and values are protected. For detailed buffer width requirements, please refer to TMC 16.28.170

Wetland buffer widths may be increased, reduced, or averaged on a case-by-case basis in accordance with best available science when an altered buffer is necessary to protect wetland functions and values in accordance with TMC 16.28 Wetland Protection Standards.

5.7.2 Wetland and Wetland Buffer Areas - Allowed Activities

Certain limited low-intensity activities may be permitted in wetland buffer areas without a wetlands permit provided that these activities are not prohibited by any other chapter or law and they are conducted using best management practices.

- Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife that does not entail changing the structure or functions of the existing wetland;
- Outdoor recreational activities, including fishing, bird watching, hiking, boating, horseback riding, swimming, canoeing, and bicycling;
- The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, or alteration of the wetland by changing existing topography, water conditions, or water sources;
- The maintenance of drainage ditches;
- Education, scientific research, and use of nature trails;
- Navigation aids and boundary markers;
- Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, wetland impacts should be minimized and disturbed areas should be immediately restored;
- Normal maintenance, repair, or operation of existing serviceable structures, facilities, or improved areas. Maintenance and repair does not include any modification that changes the character, scope, or size of the original structure, facility, or improved area and does not include construction of a maintenance road; and
- Minor modification of existing serviceable structures within a buffer zone where modification does not adversely impact wetland functions.

5.7.3 Reasonable Use of Wetlands and Wetland Buffers

If an applicant for a proposed development demonstrates that application of these policies and associated regulations would deny all reasonable use of the property,

conditioned development may be allowed if the applicant demonstrates that the criteria in TMC 16.28.190 are met.

5.7.4 Wetland Replacement Ratios

As a condition of any permit allowing alteration of wetlands and/or wetland buffers, the applicant should engage in the restoration, creation, or enhancement of wetlands and their buffers to offset loss of wetland function and value. It is recognized that the alteration of wetlands and/or wetland buffers is not desirable. Creation, restoration and enhancement of wetlands and/or wetland buffers is extremely difficult to achieve. Wetland alteration should only occur when impact avoidance and reduction is impossible.

Wetland restoration, creation and enhancement acreage replacement ratios are identified in TMC 16.28.280 Compensating for Wetland Impacts.

5.8 Wetland Tracking

As summarized in this Chapter, federal, state, and City of Tumwater regulations provide a strong set of requirements for protection of wetlands. No additional policies or regulations are needed at this time. However, to ensure continued compliance with the goal of no net loss of wetlands, it is recommended that the City maintain a catalogue of the following items:

1. All projects where wetlands have been filled and the acres of wetland filled.

2. All projects where filling or other impacts to wetlands have been mitigated through the creation of new wetlands, the protection and enhancement of existing wetlands, or other methods.

6. CRITICAL AQUIFER RECHARGE AREAS

6.1 Introduction

Potable water is a basic life-sustaining element to be conservatively used and liberally protected. All of Tumwater's drinking water supply comes from underground aquifer areas delivered through such means as the famous artesian wells of the area.

Tumwater and the Thurston region have had extensive study and work done on identification and protection of underground aquifers through coordinated efforts with Thurston County and as a participating member of the Northern Thurston County Groundwater Advisory Committee during the 1990s.

Starting in the late 1990s, Tumwater has continued coordination with the Thurston County Environmental Health to monitor groundwater and report on conditions, including notification of any identified hazards. Periodic inspections have also been completed every few years of businesses that use hazardous materials onsite to ensure they are handled, stored, and disposed of properly.

6.2 Critical Aquifer Recharge Areas Classification

The Growth Management Act requires cities and counties to classify recharge areas for aquifers according to the vulnerability of the aquifer and to include provisions for the protection of the quality and quantity of groundwater used for public water supplies as required by RCW 36.70A.070(1). Vulnerability is the combined effect of hydrogeological susceptibility to contamination and the contamination loading potential. In addition, Chapter 246-290 WAC: Group A Public Water Supplies requires source water protections, such as Tumwater's Wellhead Protection Program that address vulnerable sources of drinking water.

Vulnerability is the combined effect of hydrogeological susceptibility to contamination and the contamination loading potential. High vulnerability is indicated by land uses that contribute contamination that may degrade groundwater and hydrogeologic conditions that facilitate degradation. Low vulnerability is indicated by land uses that do not contribute contaminants that will degrade ground water, and by hydrogeologic conditions that do not facilitate degradation.

Thurston County has completed a regional analysis to characterize hydrogeologic susceptibility of the recharge areas to Tumwater should consider adoption of Thurston County's Critical Aquifer Recharge Areas analysis, which uses the following physical characteristics influencing groundwater recharge, to ensure the highest protections of Tumwater's drinking water are employed:

- Depth to groundwater;
- Aquifer properties such as hydraulic conductivity and gradients;
- Soil (texture, permeability, and contaminant attenuation properties);
- Characteristics of the Vadose Zone including permeability and attenuation properties; and
- Other relevant factors.

The following have been considered to evaluate the contaminant loading potential:

- General land use;
- Waste disposal sites;
- Agriculture activities;
- Well logs and water quality test results; and
- Other information found about the potential for contamination (see Section 6.5 of this Element for further discussion).

The goals of Tumwater's classification strategy for recharge areas and wellhead protection will be to maintain the quality of the groundwater effectively by prevention of contamination, with particular attention to recharge areas of high susceptibility and mobility. Classification of these areas will include:

- Consideration of the degree to which the aquifer is used, now or in the future, as a potable (drinking) water source;
- Protective measures to preclude further degradation;
- Practicability of treatment measures to maintain potability;
- Availability of alternative potable water sources; and
- The degree of sensitivity of contaminants entering the aquifer.

Areas that require a groundwater recharge protection overlay on aquifers used for potable (drinking) water. Examples include:

- Sole source aquifer recharge areas designated pursuant to the federal Safe Drinking Water Act; (There are none in Tumwater)

- Areas established for special protection pursuant to a groundwater management program, Chapter 90.44 RCW, Chapter 90.54 RCW, and Chapter 173-100 RCW; (There are none in Tumwater)

- Areas designated for wellhead protection pursuant to the federal Safe Drinking Water Act.

6.3 Critical Aquifer Protection Concerns

Concerns about ground water in Tumwater and the Thurston region, in general, include:

- Few alternative sources of drinking water exist;

- Geologic conditions in the region leave aquifers unprotected and ground water extremely vulnerable to pollution;

- Septic systems, stormwater runoff, chemical spills, pesticides, and fertilizers can add contaminants to ground water;

- Though the region's ground water is generally of good quality, it is showing increasing effects of human activities; and

- Urbanization and population growth are placing increased demands on limited ground water resources.

Potential sources of ground water (aquifer) pollution include pesticides and fertilizers, septic systems, hazardous materials, contaminated storm water and leaking underground storage tanks.

Recent examples of what happens when pollutants are discharged into the ground include:

- The City's main wellfield, the Palermo well, was shut down site in the 1990s because a drycleaner at Southgate generated hazardous waste and improperly disposed of them down a hole in the floor.

- The State Department of Transportation materials testing labs, the old site at the Albertsons location and the newer one on 2nd Avenue, have

chemicals leaching through the ground that are showing up at the Palermo well.

- The homeowners in Palermo have reported chemicals in their crawlspaces and in some instances inside their houses.

Gas stations and other land uses that utilize hazardous chemicals are now prohibited within the one year and six month wellhead protection areas. The types of hazardous chemicals that need to be addressed are defined in TMC 16.24 Aquifer Recharge Standards and TMC 16.26 Wellhead Protection Standards and are updated based on adopted federal and state standards, whichever is more stringent. Wellhead protection areas are the surface or subsurface area surrounding municipal water wells or well fields through which contaminants are reasonably likely to move toward and reach such water well or well field within six months, one year, five years, and ten years.

6.4 Critical Aquifer Protection Techniques

Protection of groundwater quantity and quality can best be accomplished by controlling potential contaminant sources and by managing land uses in prime recharge areas. Techniques that can be used to protect geologically sensitive aquifers include:

- Adopting special protection measures to protect drinking water supplies;
- Create water system interties between purveyors to augment supply during emergencies;
- Continue coordination with Thurston County to ensure onsite septic systems are properly sited, operated, and maintained;
- Limit installation of new septic systems when connection to sewer is feasible;
- Continue development of an urban sewer extension and septic conversion program to further protect groundwater supplies from high density septic systems within urban areas;
- Implement a sewer system leak evaluation program to identify leaks within wellhead protection areas, illegal cross connections, and illicit discharges to the stormwater system;
- Review and update zoning so that industry cannot locate storage of significant amounts of hazardous chemicals within the wellhead

protection areas of city wells;

- Continue implementation of stormwater maintenance and inspection program for all stormwater management facilities to ensure effective operation, maintenance, and reduce contaminant loads;

- Require industries that use hazardous chemicals to have containment facilities to capture chemicals that might spill;

- Restrict the use of pesticides and certain fertilizers in aquifer sensitive through coordination between federal, state, and local governments;

- Provide education and technical assistance on pesticides and fertilizers to homeowners and farmers;

- Implement an outdoor water conservation education program to reduce excessive irrigation and fertilization practices to reduce nutrient loading to the aquifer;

- Establish a business and homeowner education program for environmental best management practices, focused on areas of know groundwater sensitivity; and

- Establishing an annual permit and inspection program for all commercial and industrial establishments utilizing underground storage tanks, aboveground bulk plants, and underground vaults.

6.5 Critical Aquifer Vulnerability and Protection

The stratigraphy or layers of aquifers – the water producing geological units – are typically classified as follows:

1. Surficial alluvial sediments (Qal(c)) – Aquifer

2. Vashon glacial sequence:

    a. Recessional outwash (Qgo) – Aquifer

    b. Till (Qgt) – Aquitard[2]

[2] Low potential to supply usable quantities of water.

c. Advance outwash (Qga) – Aquifer

3. Continental fine sediments (historically called the Kitsap Formation (Qpf) – Aquitard

4. An older glacial sequence(s) (locally referred to as the "Sea Level Aquifer") (Qpg) – Aquifer

5. Older undifferentiated sediments (TQu) – Aquifer

6. Bedrock of primarily basaltic or andesitic volcanics, with minor marine sedimentary rocks (Tb) – Aquitard

6.5.1 Surficial Alluvial Sediments

Of primary importance to Tumwater are the surficial alluvial sediments. Surficial alluvial sediments located in the northeast portion of the Tumwater area are interpreted to fill a deep erosional trough roughly paralleling the present day Deschutes River. This trough appears to be as deep as 500 feet below sea level and it extends approximately from the confluence of Spurgeon Creek with the Deschutes River to Budd Inlet of Puget Sound. The erosional trough is believed to have formed because of lowered sea levels during past glaciations.

The Deschutes Valley may have been eroded and infilled several times, to varying degrees, following the past glacial retreats. The sediments infilling the Deschutes Valley are generally coarse reworked alluvial sediments near the surface, underlain by finer-grained sand. Deeper portions of the valley sediment are generally coarser-grained sand. The full sequence varies in grain size distribution and silts and coarse sand pockets are present throughout.

The Palermo Wellfield and many of the productive wells of the former Olympia Brewery are completed in the Surficial Valley Aquifer at approximately 100 feet below ground surface (bgs). These coarse sediments are interlayered with discontinuous lenses of silty sand, silt, and clay.

6.5.2 Vashon Recessional Outwash (Qgo and Qgos)

Surficial deposits overlying much of the upland prairie between the Deschutes and Black Rivers generally consist of loose, fine to coarse-grained sediments of Vashon recessional outwash (Qgo and Qgos). These sediments were deposited by meltwater streams discharging from the Vashon glacial front as it retreated northward at the end of the last ice age. The Qgos sediments are typically finer than the Qgo sediments as they are composed primarily of sand and silt with minor interbeds of gravel.

The Qgo and Qgos units are relatively thin over most of the area, typically about 20 feet thick, with a maximum thickness of approximately 60 feet near the Port Wellfield. The Qgo and Qgos are not significantly used for groundwater supply, with most wells in the area completed in the deeper and more transmissive Qga and Qpg aquifers.

Both of these aquifer groupings exhibit moderate to high rates of water transmission to the aquifer. Of main concern with excessively drained soils are problems on sites used for septic systems, particularly legacy systems at densities higher than current regulations permit, stormwater discharges, or hazardous substance storage. Introduction of contaminants to the soils results in ground water contamination due to the accelerated downward movement of contaminants and lack of aquitard. Discovery of the chlorinated solvents at the Palermo Wellfield in 1993 illustrates the susceptibility of these aquifers.

Additional information on the aquifer system in Tumwater can be found in the 2016 update of the Tumwater's *Wellhead Protection Plan*.

6.6 Critical Aquifer Protection

Wellhead protection is a high priority. Tumwater has worked with the other northern Thurston County jurisdictions to develop regional wellhead protection policies to insure the protection and continued preservation of ground water, which is the source of drinking water to over ninety percent of Thurston County residents. The regional wellhead protection policies were based on recommendations in the *Northern Thurston County Ground Water Management Plan* (1992) and the wellhead protection plans of the individual jurisdictions.

The goal of the regional protection policies is to prevent contamination from occurring and to manage the resource in a cooperative manner. The policies are applicable to water systems with over 1,000 service connections. The following regional policies continue to be implemented by Tumwater:

1. Encourage and allow reuse techniques and reclamation of wastewater where water quality can be protected.

2. Provide technical assistance and education, to the extent resources allow, in designated wellhead protection areas to small businesses, industries, and residents regarding proper storage, handling, and disposal of hazardous materials. Prioritize sites identified within the six-month time of travel.

3. Encourage through education and technical assistance the use of safer, less hazardous products and the reduction of hazardous materials.

4. Participate, as resources allow, in planning and collaborative training and the implementation of regional spill response in designated wellhead protection areas.

5. Consider methods to mitigate the risk from commercial hazardous materials transportation through designated wellhead protection areas when doing transportation planning for new transportation corridors.

6. Consult with the appropriate regional transportation planning agencies and neighboring jurisdictions prior to establishing prohibitions of transportation corridors for commercial hazardous materials transport.

7. Provide, as resources allow, local information to the existing data management program within the State Department of Ecology to develop and maintain an underground storage tank database for commercial underground storage tanks.

8. Incorporate requirements for enhanced protection of wellhead areas when stormwater drainage manuals and ordinances are revised.

9. Encourage the Thurston Conservation District Board and others to continue their voluntary efforts on education, conservation planning, and installation of best management practices on existing farms, golf courses, parks, schools and other facilities, which use pesticides and fertilizers in designated wellhead protection areas.

10. Promote the use of integrated pest management, reduction of pesticide use, and reduction of fertilizer use by residents, businesses, and other governmental agencies in designated wellhead protection areas.

11. Encourage the Solid Waste Advisory Committee to discuss and coordinate activities and programs related to ground water protection and local hazardous waste management with water resource protection staff.

Consider the following recommendations for implementation by Tumwater to protect regional and local groundwater supplies:

1. Regional Policy and Program Recommendations:

    a. Promote revival of an intergovernmental regional groundwater program with agencies, such as Lacey, Olympia, and Thurston County.

    b. Participate in the Water/Wastewater Agency Response Network (ww.wawarn.org), an organization of water and wastewater systems and utilities providing mutual support, aid, and assistance in an emergency.

    c. Participate in regional collection and management of data through the Thurston County Regional Ground Water Program.

    d. Develop procedures to coordinate the environmental review with other jurisdictions when a development proposal is within a designated wellhead protection area.

    e. Work with other jurisdictions to coordinate educational programs to provide a basic wellhead protection message and work with community groups and private parties to incorporate this message whenever possible.

    f. Participate in regional planning to address loss of domestic drinking water supply.

    g. Work with other jurisdictions to maintain and support financially, as resources allow, a coordinated water quality and water quantity-monitoring program through the Thurston County Regional Ground Water Program.

    h. Encourage interjurisdictional water resource management committees to consider wellhead protection during the development of their annual work programs.

2. Local Policy and Program Recommendations:

   a. Adopt updated wellhead protection area boundaries to ensure most protective regulatory boundary around municipal drinking water sources.

   b. Prepare revisions to the Tumwater's *Drainage Design and Erosion Control Manual* to include updated sections related to minimum requirements and best management practices for infiltration that are protective of groundwater.

   c. Prepare revisions to TMC 16.26 Wellhead Protection Standards to reflect updates identified in the *2016 Wellhead Protection Plan* update.

   d. Expand Tumwater's monitoring well network to fully span all identified wellhead protection areas, using public monitoring wells in the City right-of-way to avoid impacts to private property.

   e. Encourage neighborhoods and planning groups to recognize the value of groundwater and promote self-regulation of activities that could potentially contaminate groundwater.

   f. Provide retailers access to educational and promotional materials related to pesticides, herbicides, and fertilizers and Tumwater's Aquifer Protection (AQP) overlay district

   g. Promote, support, and provide guidance to businesses that develop a spill prevention and response plan. A spill response plan prepares owners and employees to deal with small spills and leaks during business operations. A spill plan can also provide a strategy for catastrophic, unexpected spills.

   h. Research programs to assist with the decommissioning of home heating oil tanks within one-year wellhead protection zone areas.

   i. Strengthen code enforcement to eliminate accumulation of garbage, hazardous materials, and unsanitary conditions within the wellhead protection areas for the City of Tumwater's supply wells.

The Conservation Element also recommends that the City Council continue development of a regional program to prioritize potential impacts from urban-density

septic systems, implement a publicly supported septic-to-sewer conversion program, and consider mandatory septic tank maintenance as aquifer protection techniques. It is further recommended that the City explore the implementation of a groundwater discharge permit system with the Thurston County Health Department as lead agency.

The Tumwater aquifer protection classification regime measures susceptibility to pollution in terms of vulnerability. TMC 16.24 Aquifer Recharge Standards and TMC 16.26 Wellhead Protection Standards protect areas of high vulnerability through an overlay zone called "Critical Areas - Aquifer Protection District." This zone is geographically applied Citywide. In addition, these chapters maintain specific standards applied Citywide.

7. FREQUENTLY FLOODED AREAS

7.1 Introduction

Protection of life and property during floods is a vital part of Tumwater's responsibility to public safety. Many of Tumwater's rivers, streams, and lakes are subject to flooding during periods of heavy rainfall.

Tumwater has had extensive research and study completed regarding frequently flooded areas within the City. Since August of 1980, Tumwater has participated in the National Flood Insurance Program, as authorized by the National Flood Insurance Act of 1968 and has recently adopted the Endangered Species Act version of the FEMA Floodplain Model Ordinance instituting best practices.

7.2 Frequently Flooded Areas Classification

The Growth Management Act requires cities and counties to classify frequently flooded areas based on the 1% flood (100-year floodplain) designations of the Federal Emergency Management Agency and the National Flood Insurance Program and to flooding in the area and nearby jurisdictions. In addition, it requires the City to provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state.

Tumwater will consider the following when designating and classifying frequently flooded areas:

1. Effects of flooding on human health and safety, and to public facilities and services;

2. Available documentation, including federal, state, and local laws, regulations, and programs, local studies and maps, and federal flood insurance programs;

3. Future flow floodplain, defined as the channel of the stream and that portion of the adjoining floodplain that is necessary to contain and discharge the base flood flow at buildout without measurable increase in flood heights;

4. The potential effects of tsunami, high tides with strong winds, sea level rise resulting from global climate change; and

5. Greater surface runoff caused by increasing impervious surfaces.

7.3 Frequently Flooded Areas Concerns

Concerns about frequently flooded areas in Tumwater include:

1. Heavy seasonal rains generally from November through March can cause sudden river and stream rises and out-of-bank flows;

2. Out-of-bank flows can cause damage to life, dwellings, and industrial, commercial, agricultural, and recreational facilities; and

3. Groundwater flooding of low-lying areas when there are two or more years of higher than normal precipitation.

7.4 Frequently Flooded Areas Protection Techniques

Techniques that can be used to protect life and property in frequently flooded areas include use of a zoning overlay district(s) to do the following:

1. Limit or prohibit, as appropriate, encroachment in floodplains and high groundwater areas that could endanger life and property during periods of flooding; and

2. Preserve the natural functions of floodplains and wetlands to store, carry, and control floodwaters.

7.5 Frequently Flooded Areas Protection

Flood Insurance Rate Maps from the Federal Emergency Management Agency clearly delineate frequently flooded areas. These maps are used to designate the Floodplain Overlay Zone.

The Floodplain Overlay Zone identifies and defines the special flood hazard area within the city. The special flood hazard area is the area subject to flooding by the base flood and subject to the provisions of TMC 18.38. It is identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "Flood Insurance Study for Thurston County, Washington and Incorporated Areas," dated October 16, 2012, and any revisions thereto, with an accompanying Flood Insurance Rate Map for Thurston County, Washington and Incorporated Areas, dated October 16, 2012, and any subsequent revisions.

The methodology and detail of these studies is accepted as the best available. The Floodplain Overlay Zone has served Tumwater well in minimizing the undesirable

impacts of flooding.

TMC 16.28 Wetland Protection Standards and TMC 18.38 FP Floodplain Overlay are in place and serve to designate frequently flooded areas. If allowed, any structures permitted in the designated flood areas are subject to strict development regulations. The existing regulations were put in place after careful study and they fulfill the requirements of the Growth Management Act regarding designation, classification, and protection of frequently flooded areas.

7.6 Salmon Creek Groundwater Flooding

Above average rainfall caused localized flooding in Salmon Creek Basin in the rainy seasons of 1996-97 and 1998-99. Property owners experienced a range of inconveniences from high water around and under homes to failed septic systems, contaminated drinking water, and restricted access to property. A comprehensive study of the area was completed in late 1999. As a result, the City of Tumwater and several other jurisdictions in Thurston County completed and adopted the *Salmon Creek Comprehensive Drainage Basin Plan*.

The development review process within the *Salmon Creek Comprehensive Drainage Basin Plan* was adopted by resolution but the City of Tumwater should consider incorporating the process into the Tumwater Municipal Code.

8. GEOLOGICALLY HAZARDOUS AREAS

8.1 Introduction

The Conservation Element defines geologically hazardous areas as those areas susceptible to erosion, landslides, earthquakes, and other geological events, which pose a threat to public safety. This chapter discusses the proper design and location of commercial, residential, and industrial development to remove or reduce incompatibility with underlying geology. Appropriate engineering, design, or construction can be used to achieve this goal of land use and geological harmony.

It must also be recognized that even the best of efforts in proper design and application of technology, at times, will not adequately reduce the risks of geological damage. In these instances, building in such extreme geologically hazardous areas is should be avoided.

8.2 Geologically Hazardous Areas Classification

Areas in Tumwater that are prone to one or more of the following hazards are defined as geologically hazardous:

1. Erosion
2. Landslides
3. Earthquakes
4. Volcanic hazards (slight risk)
5. Tsunami Hazard (slight risk)
6. Other geologic events, including mass wasting, debris flows, rock falls, and differential settlement

The Conservation Element identifies areas with the above-described hazards and subsequently classifies areas within Tumwater in one of three categories:

1. Known or suspected risk
2. No risk
3. Risk unknown (because of lack of information)

8.3 Geologically Hazardous Areas Identification

The identification methodology upon which this Element relies to define geologically hazardous areas is as follows:

8.3.1 Erosion

Identified by the United States Department of Agriculture Soil Conservation Service (USDA-SCS) as those areas having a "moderate to severe," "severe," and "very severe" rill, and inter-rill erosion hazard.

8.3.2 Landslides

Identified as those areas susceptible due to combinations of bedrock, soil, slope gradient, slope aspect, hydrology, and other identified factors. Examples of these areas are:

1. Areas of historic failures:
    a. USDA-SCS classified as "severe" limitation for building development;
    b. Areas mapped as unstable (u), unstable old slides (uos), unstable recent slides (urs), by the State Department of Ecology coastal zone atlas; and
    c. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geological Survey or State Department of Natural Resources.
2. Areas with all three of the following characteristics:
    a. Slopes steeper than 15%;
    b. Hillsides intersecting geologic contacts of relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
    c. Springs or groundwater seepage.
3. Areas which have shown movement over the last 10,000 years or which are underlain or covered by mass wastage debris from this time.
4. Slopes parallel to planes of weakness in sub-surface materials such as:

a. Bedding planes; and

b. Fault planes.

5. Slopes with 80% or steeper gradients subject to rock fall during earthquakes.

6. Areas unstable because of stream incision, stream bank erosion, and undercutting by wave action.

7. Areas at risk from snow avalanches.

8. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris or catastrophic flooding.

9. Slopes of 40% or steeper with a vertical relief of ten or more feet except areas composed of consolidated rock.

8.3.3 Earthquakes

Earthquake hazard areas are those, which are subject to severe risk of damage because of shaking, slope failure, settlement, soil liquefaction, or surface faulting. Within the state, the historic damage inducement has been ground shaking which results in settlement and soil liquefaction. The amount of ground shaking is affected by earthquake magnitude, distance from the earthquake epicenter, type and thickness of surface geologic materials, and sub-surface geologic structure.

8.4 Geologically Hazardous Areas in Tumwater

8.4.1 Erosion (Known or Suspected Risk Category)

The two major soil groupings within Tumwater are the Alderwood-Everett and Spanaway-Nisqually series. None of these soil types is identified as having severe erosion hazard characteristics when undisturbed.

8.4.2 Landslides (Known or Suspected Risk Category)

Known risk factors measuring probability of landslides are as follows:

- No areas within Tumwater are identified in the State Department of Ecology Coastal Zone Atlas as landslide areas influenced by marine action.

- The major soil groupings for Tumwater (Alderwood-Everett, Spanaway-Nisqually) are identified by the Soil Conservation Service as having limitations for building development in the following table.

Table 6: Landslide and Slope Stability

Soil Name	Dwelling without Basements	Dwellings with Basements	Small Commercial
Alderwood	Severe Limitation	Severe Limitation	Severe Limitation
Everett	Severe Limitation	Severe Limitation	Severe Limitation
Spanaway	No Limitation	No Limitation	Severe Limitation
Nisqually	No Limitation	No Limitation	Severe Limitation

- Areas of slope over 15% and groundwater seepage exist on Tumwater Hill, the Deschutes River valley slopes, and Bush Mountain.

8.4.3 Earthquakes (Known or Suspected Risk Category)

Tumwater is identified in the International Building Code (IBC) as being located within the Zone D (Zone A - lowest, Zone E - highest) seismic zone map of the United States. This is a high-risk area for earthquakes and IBC standards for building construction set out stringent structural performance standards.

8.4.4 Volcanic Hazards (No Risk Category)

Discussions with the State Geologist indicate that Tumwater is not in a Volcanic Hazard zone, and only ash fall could be expected to visit the area.

8.5 Development within Geologically Hazardous Areas

Based upon the previous review of geologically hazardous areas existing within Tumwater, the development regulations are appropriate to safeguard future construction in earthquake and landslide prone areas. TMC 16.20 Geologically Hazardous Areas sets forth standards for construction in areas identified as susceptible to earthquake and landslide conditions.

9. FISH AND WILDLIFE HABITAT CONSERVATION AREAS

9.1 Introduction

Preservation of fish and wildlife habitat is critical to the protection of suitable environments for animal species and in providing a natural beauty and healthy quality of life for Tumwater and its citizens. The conservation of habitat means active land management for maintaining species within their preferred habitats and accustomed geographic distribution. In this way, isolated sub-populations are not created which are more susceptible to predation, dislocation, and inadequate food supplies. Habitat protection does not require that all individuals of all species are protected, but does demand that land use planning be sensitive to the priority of saving and protecting animal-rich environments.

9.2 Fish and Wildlife Habitat Classification

The Growth Management Act requires cities and counties to classify seasonal ranges and habitats that are critical to the survival of endangered, threatened, and sensitive species. Within Tumwater, habitats and species are identified which are of local importance.

A listing of the types of fish and wildlife habitat areas to be protected by state-mandate is:

- Areas with which endangered, threatened and sensitive species have a primary association;
- Habitats and species of local importance;
- Commercial and recreational shellfish areas;
- Kelp and eelgrass beds; herring and smelt spawning areas;
- Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat;
- Waters of the state (WAC Title 222);
- Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

- State natural area preserves and natural resource conservation areas; and

- Areas of rare plant species and high quality ecosystems as identified by the State Department of Natural Resources through the Natural Heritage Program.

All areas within Tumwater meeting one or more of the criteria in this section, regardless of any formal identification, are subject to the provisions of TMC 16.32 Fish and Wildlife Habitat Protection and should be managed consistent with the best available science, such as the State Department of Fish and Wildlife's Management Recommendations for Priority Habitat and Species.

9.3 Fish and Wildlife Habitat Protection Techniques

After classifying and designating fish and wildlife areas in Tumwater, the following protection techniques will be pursued when appropriate:

- Creating a system of fish and wildlife habitat with connections between larger habitat blocks and open spaces;

- Limiting the level of human activity in such areas including presence of roads and level of recreation type (after site specific analysis and planning passive or active recreation may be appropriate for certain areas and habitats);

- Protecting riparian ecosystems;

- Evaluating land uses surrounding ponds and fish and wildlife habitat areas that may negatively impact these areas;

- Establishing buffer zones around these areas to separate incompatible uses from habitat areas; and

- Restoration of lost salmonid habitat.

9.4 Fish and Wildlife Habitat Identification in Tumwater

A review of state and local records and studies on habitats and species indicates that the following habitat categories exist within Tumwater:

1. Areas with which endangered, threatened and sensitive species have a primary association;

2. Naturally occurring ponds under twenty acres with submerged aquatic beds that provide general fish and wildlife habitat;

3. Waters of the state (WAC Title 222); and

4. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity.

These four habitat categories are further defined as follows:

1. Seasonal ranges and habitats with which federal and state- listed endangered, threatened, and sensitive species have a primary association and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.

2. Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat.

   Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds (of less than three years duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.

3. Waters of the state. Waters of the state are defined in WAC Title 222; the forest practices rules and regulations. Tumwater will use the water typing system established in WAC 222-16-030 to classify waters of the state.

   The following factors are considered when classifying waters of the state as fish and wildlife habitats:

   a. Species present that are endangered, threatened, or sensitive, and other species of concern;

   b. Species present which are sensitive to habitat manipulation;

   c. Historic presence of priority species;

d. Existing surrounding land uses that are incompatible with salmonid habitat;

e. Presence and size of riparian ecosystems;

f. Existing water rights; and

g. The intermittent nature of some of the higher classes of waters of the state.

4. Lakes, ponds, streams, and rivers planted with game fish. This includes game fish planted in these water bodies under the auspices of a federal, state, local, or tribal program or which supports priority fish species as identified by the State Department of Fish and Wildlife.

9.5 Sensitive Species Identification in Tumwater

The State Department of Fish and Wildlife maintains a listing of the priority habitats and species (PHS) for Tumwater. This database is the reference document to be used by the City in the protection of habitats and species identified within the City.

9.6 Fish and Wildlife Habitat Protection in Tumwater

Given Tumwater's diversity of fish and wildlife habitats in terms of geographic location, biological sensitivity, species hierarchy, and current/future adjacent land uses, the Conservation Element proposes a regulation and protection process based upon performance standards to be applied to site-specific development.

These performance standards are to be implemented on site-specific projects through TMC 16.32 and associated development permits. If there are any conflicts between the Shoreline Master Program and the standards in TMC 16.32, which apply in shoreline jurisdiction, the requirements of the Shoreline Master Program apply.

In addition, Tumwater's Flood Ordinance incorporates federal recommendations for protection of aquatic species. The City has also upgraded the fish capture facility at the head of Tumwater Falls and is planning a new hatchery with the Department of Fish and Wildlife to help stabilize South Sound salmon populations.

9.7 Threatened and Endangered Species.

Tumwater has critical habitat for several federally designated, threatened, or endangered species including:

- Bull Trout (threatened)
- Chinook Salmon (threatened)
- Oregon Spotted Frog (threatened)
- Mazama Pocket Gopher – Olympia Subspecies (threatened)
- Streaked Horned Lark (threatened)
- Taylor's Checkerspot Butterfly (endangered)

As of 2016, the City of Tumwater is preparing a Habitat Conservation Plan for prairie species. When that plan is completed, the Tumwater Municipal Code will need to be updated.

10. CONSERVATION GOALS, POLICIES, AND ACTIONS

10.1 Introduction

This Chapter of the Conservation Element specifies goals, policies, and actions meant to set forth a direction to identify, protect, and conserve critical environmental areas and valuable natural resources in Tumwater. The goals, policies, and actions also serve to ensure coordination with separate Comprehensive Plan Elements, regional plans, Sustainable Thurston Policies, and County-Wide Planning Policies. Additionally, they serve as an action plan for implementing certain recommendations within the Conservation Element.

10.2 Conservation Goals, Policies, and Actions

Goal C-1: Recognize the significant role played by natural features and systems in determining the overall environmental quality and livability of Tumwater.

Policy	Action
C-1.1	Protect the ecological integrity of the natural environment while allowing for compatible growth and development.
C-1.2	Promote conservation of natural resources and the environment in cooperation with residents, business owners, schools, affected jurisdictions, and tribes.
C-1.3	Encourage and support active measures to protect and enhance Tumwater's natural environment.
C-1.4	Implement the mitigation goals, objectives, and initiatives contained in the most recent version of the adopted *Natural Hazards Mitigation Plan for Thurston County*.
C-1.5	Maximize retention of a healthy tree cover and native vegetation and encourage restoration, replacement, and enhancement of unhealthy trees and disturbed vegetation.
C-1.6	Reduce communitywide greenhouse gas emissions 45 percent below 2015 levels by 2030 and 85 percent below 2015 levels by 2050 to ensure that local communities do their part to keep the global average temperature from rising more than 2°C.

C-1.7 Implement the strategies contained in the most recent version of the accepted *Thurston Climate Mitigation Plan*.

Goal C-2: Designate and protect critical areas including wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas in accordance with the Growth Management Act to protect the functions and values of these areas as well as to protect against threats to health, safety, and property.

Policy	Action
C-2.1	Include best available science in developing policies and development regulations to protect the functions and values of critical areas and consider conservation or protection measures necessary to preserve or enhance anadromous fisheries, consistent with the Growth Management Act.
C-2.2	Use incentive programs, acquisition, appropriate regulations, and other techniques to preserve critical areas as permanent open space where development may pose hazards to health, property, or important ecological functions.
C-2.3	Require that prior to any development, critical areas are identified and protected.
C-2.4	Ensure the effectiveness of critical area mitigation by requiring adequate critical area studies and mitigation plans, the application of mitigation sequencing, financial assurances from developers to ensure mitigation success, and by improving City oversight of maintenance and monitoring of mitigation sites.
C-2.5	Require and enforce mitigation to ensure no net loss of critical area functions.
C-2.6	Support restoration of river and stream channels and associated wetland and riparian areas to enhance water quality, improve fish and wildlife habitat, and mitigate flooding and erosion.
C-2.7	Allow public access to wetlands, streams, and lakes for scientific, educational, and recreational use, provided the public access is carefully

sited, sensitive habitats and species are protected, and hydrologic continuity is maintained.

C-2.8 Protect wetlands not as isolated units, but as ecosystems, and essential elements of watersheds.

C-2.9 Protect the quality and quantity of groundwater used for public water supplies.

C-2.10 Prevent land alterations that would increase potential flooding and minimize the alteration of natural surface water features that retain or carry floodwaters, such as wetlands, floodplains, rivers, streams, and lakes.

C-2.11 Require mitigation for adverse environmental impacts from engineered flood control measures.

C-2.12 Work cooperatively to meet regulatory standards for floodplain development as these standards are updated for consistency with relevant federal requirements including those related to the Endangered Species Act.

C-2.13 Regulate development intensity, site coverage, and vegetation removal in geologically hazardous areas in order to minimize drainage problems, soil erosion, siltation, and landslides.

C-2.14 Minimize soil disturbance and maximize retention and replacement of native vegetative cover for any land uses permitted in erosion and landslide hazard areas.

C-2.15 Encourage special building design and construction measures in areas with severe seismic hazards to minimize the risk of structural damage, fire, and injury to occupants during a seismic event and to prevent post-seismic collapse.

C-2.16 Protect and preserve habitats for species, which have been identified as endangered, threatened, or sensitive by the state or federal government, giving “special consideration: to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

C-2.17 Maintain habitats that support the greatest diversity of fish and wildlife through conservation and enhancement of critical areas.

C-2.18 Implement salmon habitat protection and restoration priorities in approved Water Resource Inventory Area 13 and 23 plans.

C-2.19 Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross-jurisdictional lines.

C-2.20 Promote the enhancement or restoration of streams, rivers, lakes, and wetlands as adjacent development activities occur.

C-2.21 Protect wildlife corridors to minimize habitat fragmentation, especially along existing linkages and in patches of native habitat by enhancing vegetation composition and structure, and incorporating indigenous plant species compatible with the site.

Goal C-3: In accordance with the Growth Management Act, designate and protect natural resource lands including agricultural, forest, and mineral lands that have long-term significance to conserve and protect these areas.

Policy **Action**

C-3.1 Recognize the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of Tumwater.

C-3.2 Zone designated agricultural lands at very low densities to ensure the conservation of the resource for continued agricultural use.

C-3.3 Limit non-agricultural development within designated agricultural areas to non-prime farmland soils where possible.

C-3.4 Work with community groups to support the continued viability of agriculture and encourage community support for it.

C-3.4.1 Support the efforts of the Thurston Food System Council to develop a vibrant food system through access to healthy, local, affordable, culturally appropriate, sustainably produced food to assist the community in having reliable access to sufficient quantity of affordable nutritious food.

C-3.5 Ensure that harvesting for conversion to other uses occurs in a manner compatible with land uses of the surrounding area and maintenance of water quality and environmentally critical areas.

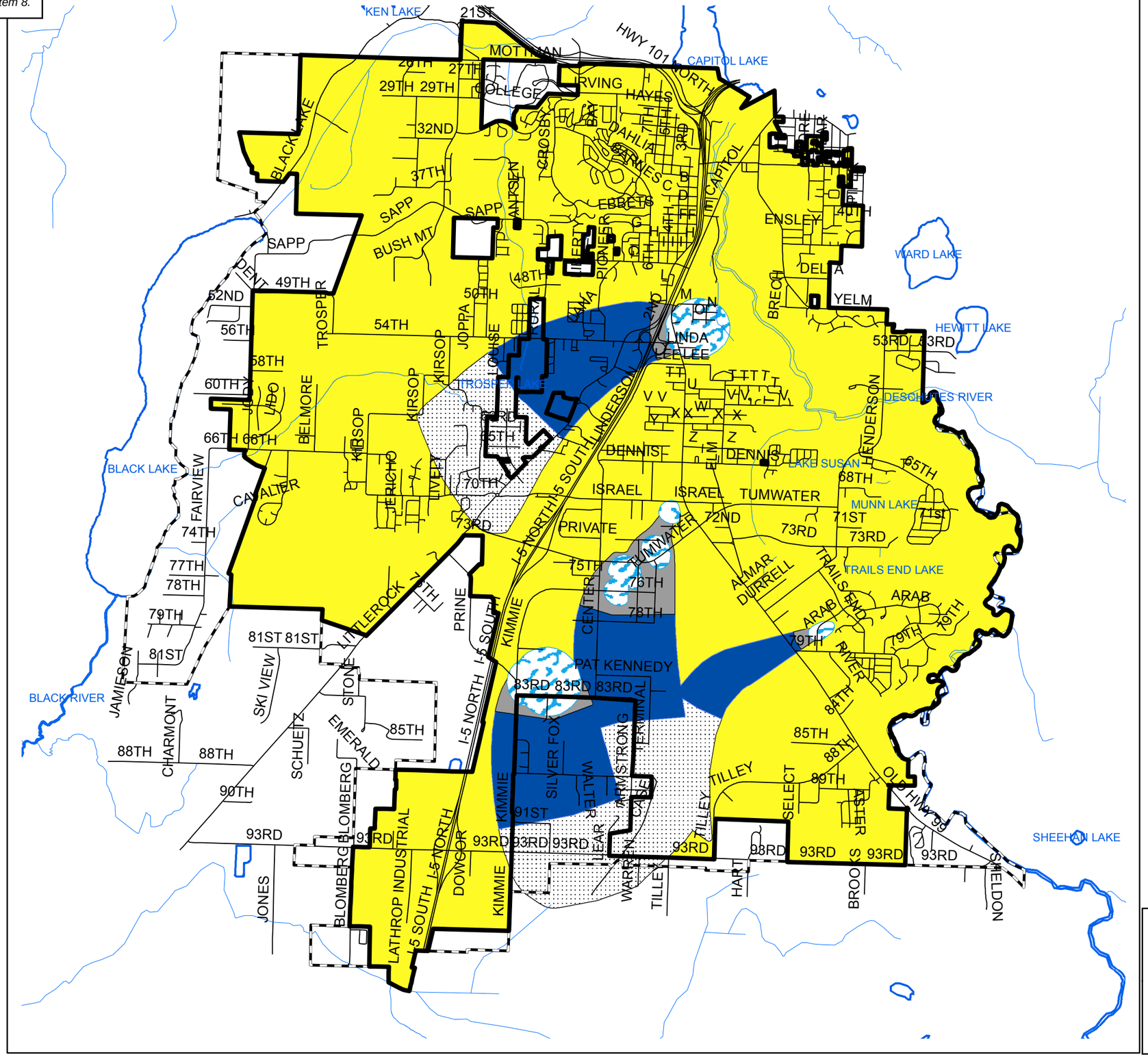
C-3.6 Allow mineral extraction industries to locate where prime natural resource deposits exist.

C-3-7 Conserve designated mineral resource lands of long-term commercial significance for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.

C-3.8 Restore mineral extraction sites as the site is being mined. The site should be restored for appropriate future use and it should blend with the adjacent landscape and contours.

Attachment C2

Critical Aquifer Recharge Areas for the City of Tumwater



Legend

- Tumwater City Limits
- Urban Growth Boundary
- 6 Month Wellhead Protection Area
- 1 Year Wellhead Protection Area
- 5 Year Wellhead Protection Area
- 10 Year Wellhead Protection Area
- Critical Aquifer Recharge Area

0 0.5 1 2 Miles

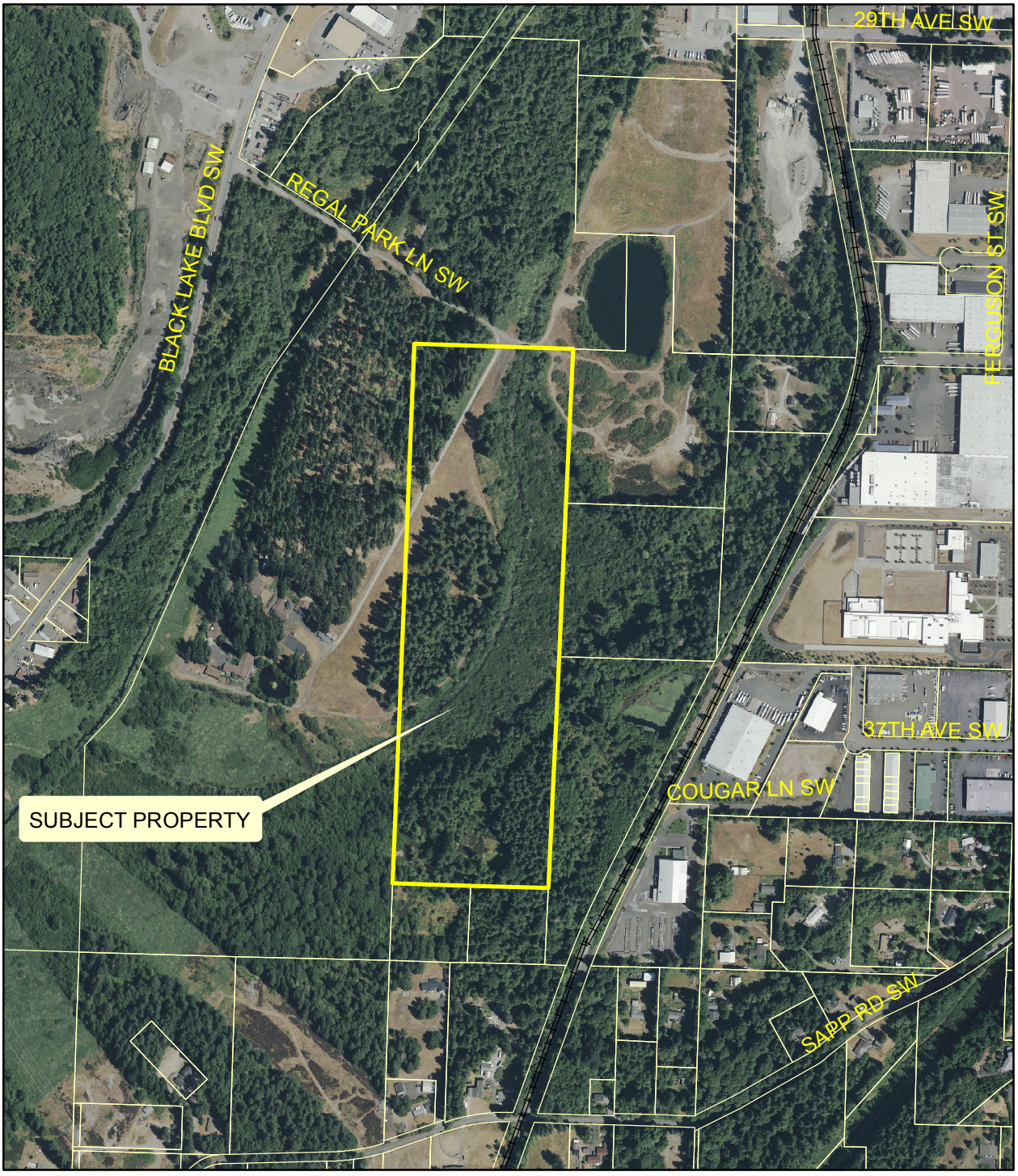
Critical Aquifer Recharge Areas cover all properties within the City.
A wellhead protection area study is underway for the 93rd Ave SW vicinity.

Tumwater Community Development Department
September 2016
Critical Aquifer Recharge Areas 9-6-2016.mxd

DISCLAIMER: The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made therefrom.

Attachment C3

Forestry Lands Designation
Vicinity Map for Parcel#12829410000



N

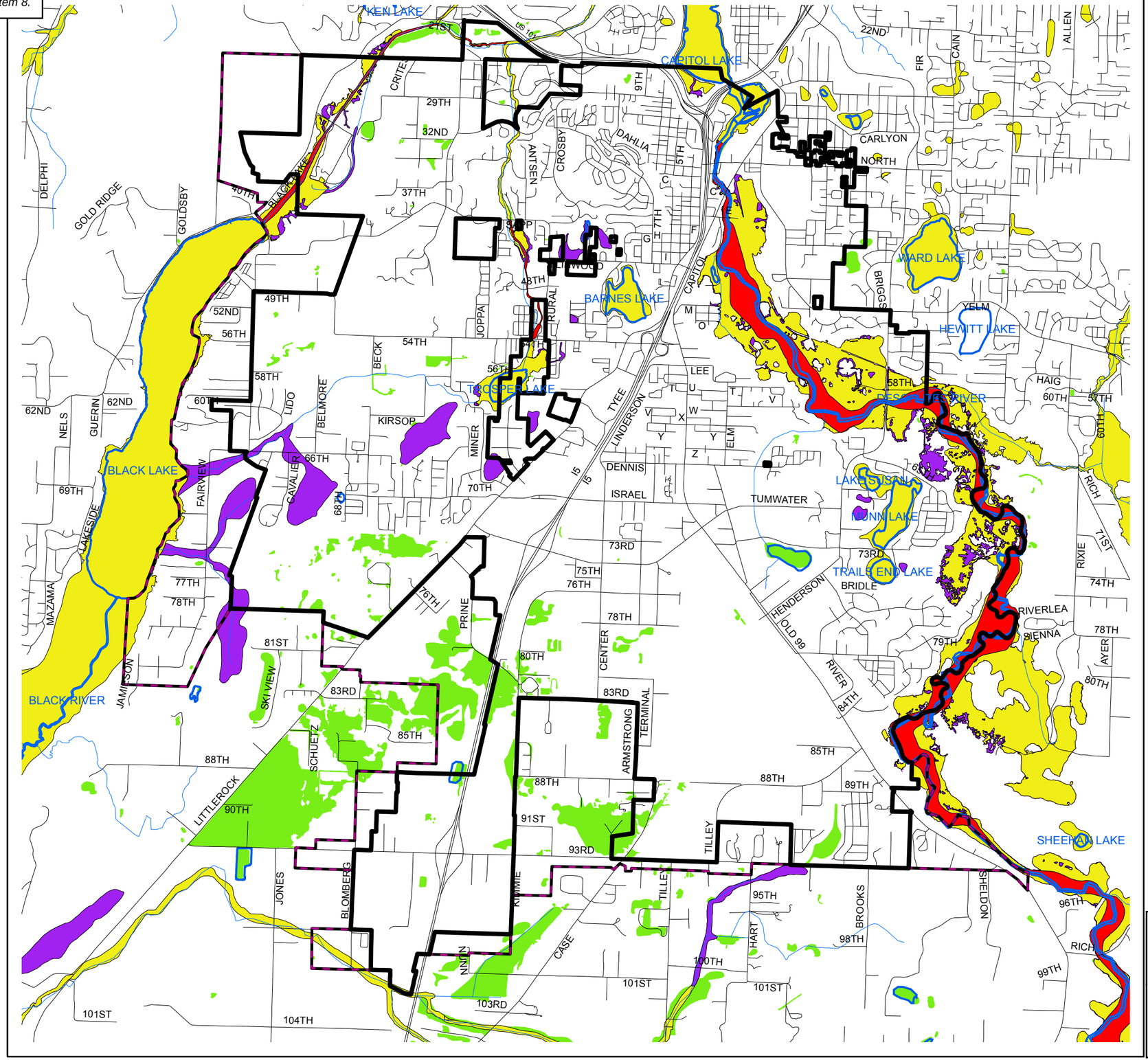
1 inch = 667 feet

August 25, 2016

Forestry Lands - Tumwater 8-24-2016.mxd

Attachment C4

Frequently Flooded Areas for the City of Tumwater



Legend

- Tumwater City Limits
- Urban Growth Boundary
- 0.2% (500yr) Floodplain
- 1% (100yr) Floodplain
- Floodway
- Floodway
- 1% (100yr) Floodplain
- 0.2% (500yr) Floodplain
- High Groundwater Areas

0 0.5 1 2 Miles

Data sourced from Thurston County and FEMA

Tumwater Community Development Department
September 2016
Frequently Flooded Areas 9-6-2016.mxd

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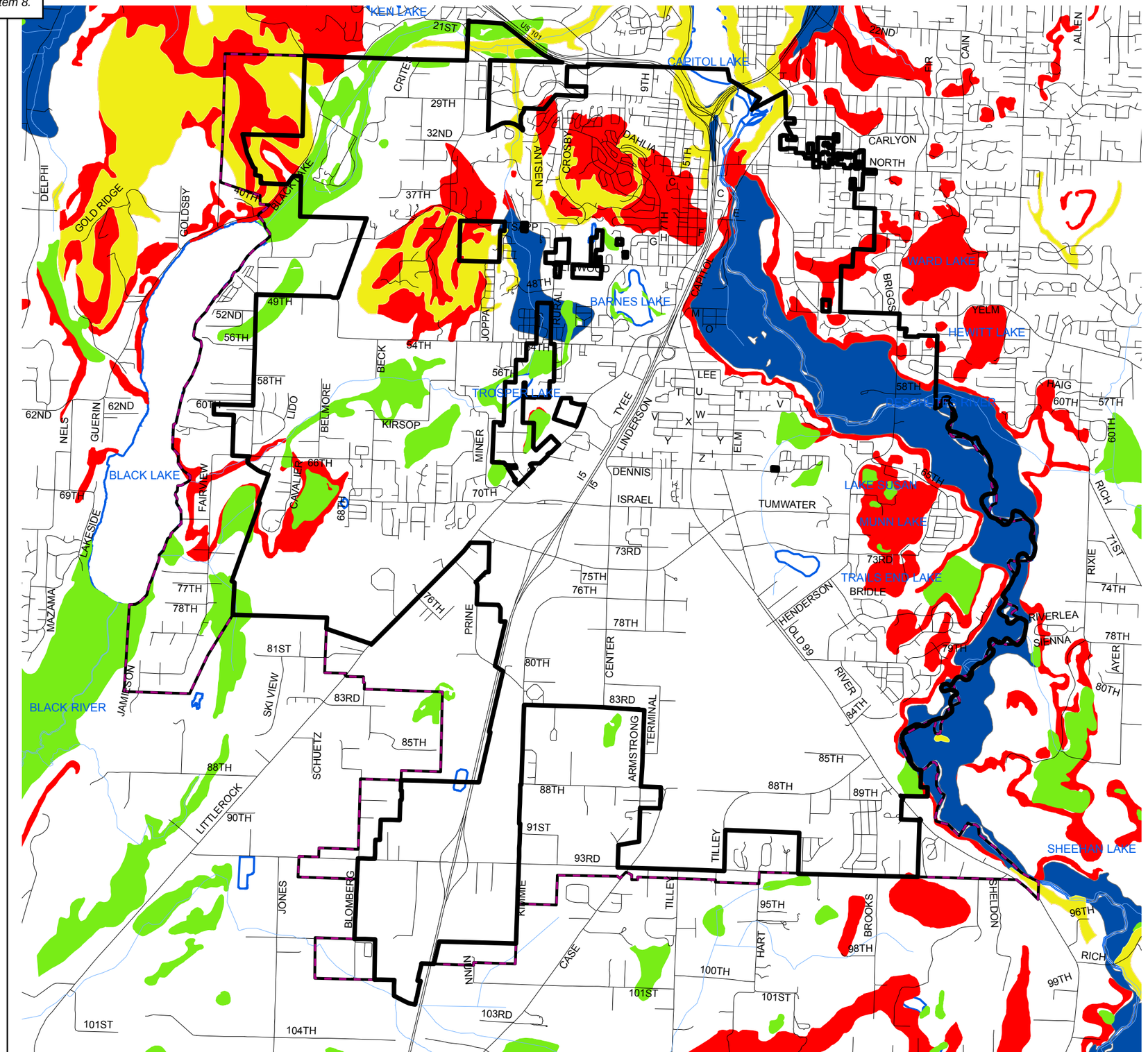
Attachment C5

Geologically Hazardous Areas for the City of Tumwater



Legend

- Tumwater City Limits
- Urban Growth Boundary
- Landslide Hazard Areas
- High Liquefaction
- Peat
- Steep Slopes

0 0.5 1 2 Miles

Data sourced from Thurston County.

Tumwater Community Development Department
September 2016
Geologically Hazardous Areas 9-6-2016.mxd

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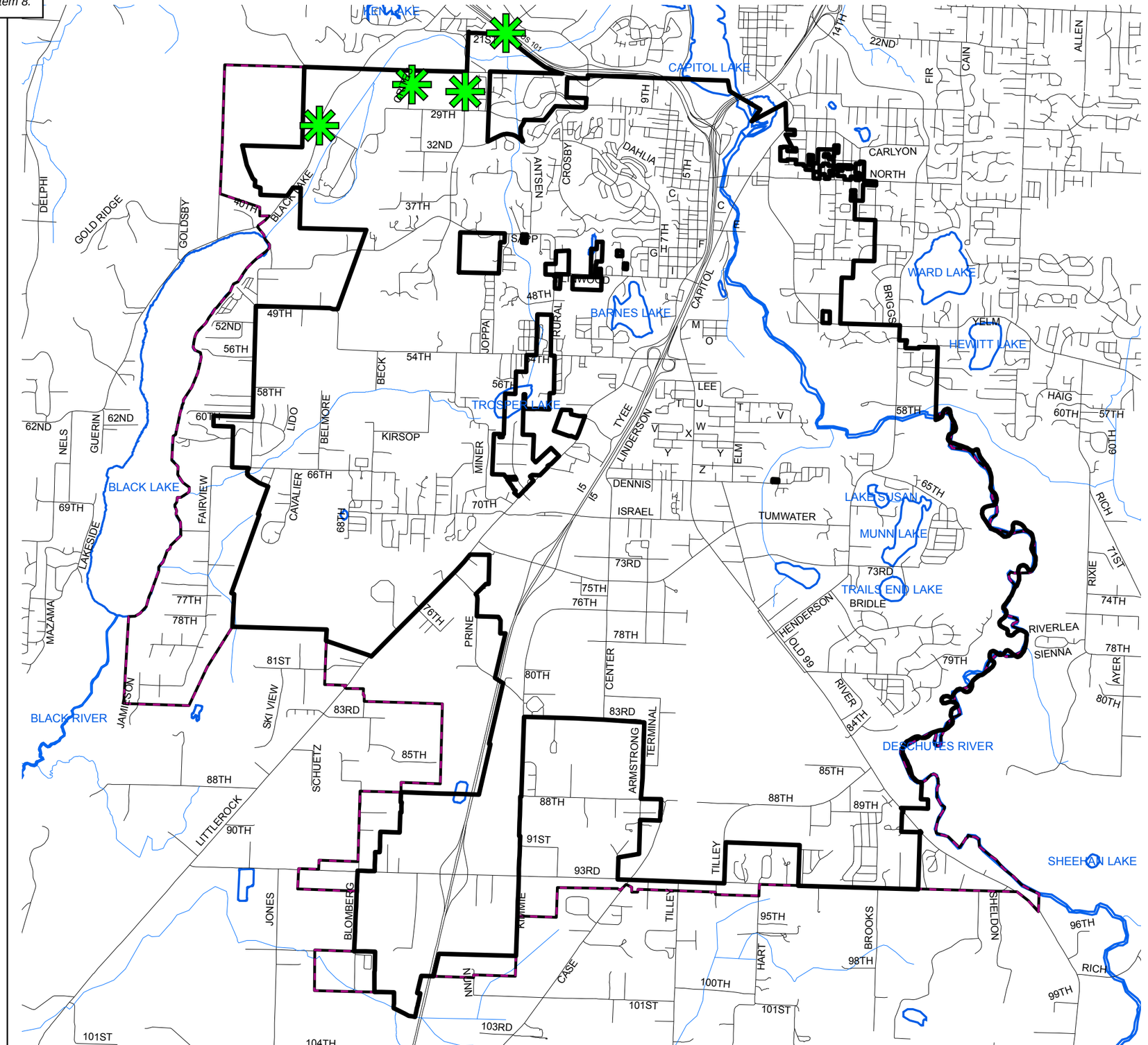
Attachment C6

Mineral Resource Lands for the City of Tumwater



Legend

- Mineral Resource Lands
- Tumwater City Limits
- Urban Growth Boundary

0 0.5 1 2 Miles

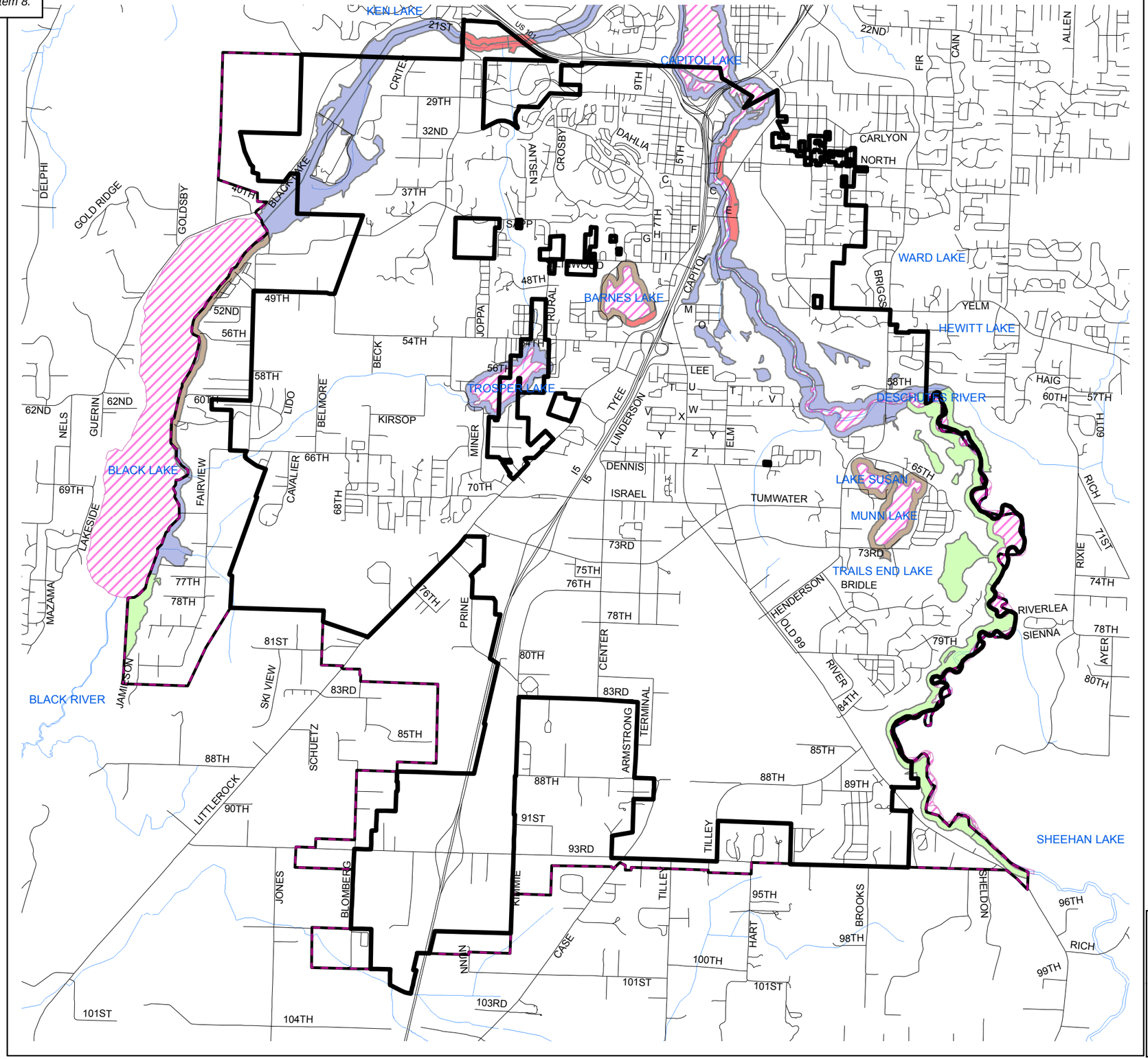
Locations are approximate.

Tumwater Community Development Department
September 2016
Mineral Resouce Lands 9-6-2016.mxd

DISCLAIMER: The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made therefrom.

Attachment C7

Shorelines of the State for the City of Tumwater



Legend

- Tumwater City Limits
- Urban Growth Boundary

Shorelines of the State

SHORELINE DESIGNATIONS

- AQUATIC
- NATURAL
- URBAN CONSERVANCY
- SHORELINE RESIDENTIAL
- URBAN INTENSITY

0 0.5 1 2 Miles

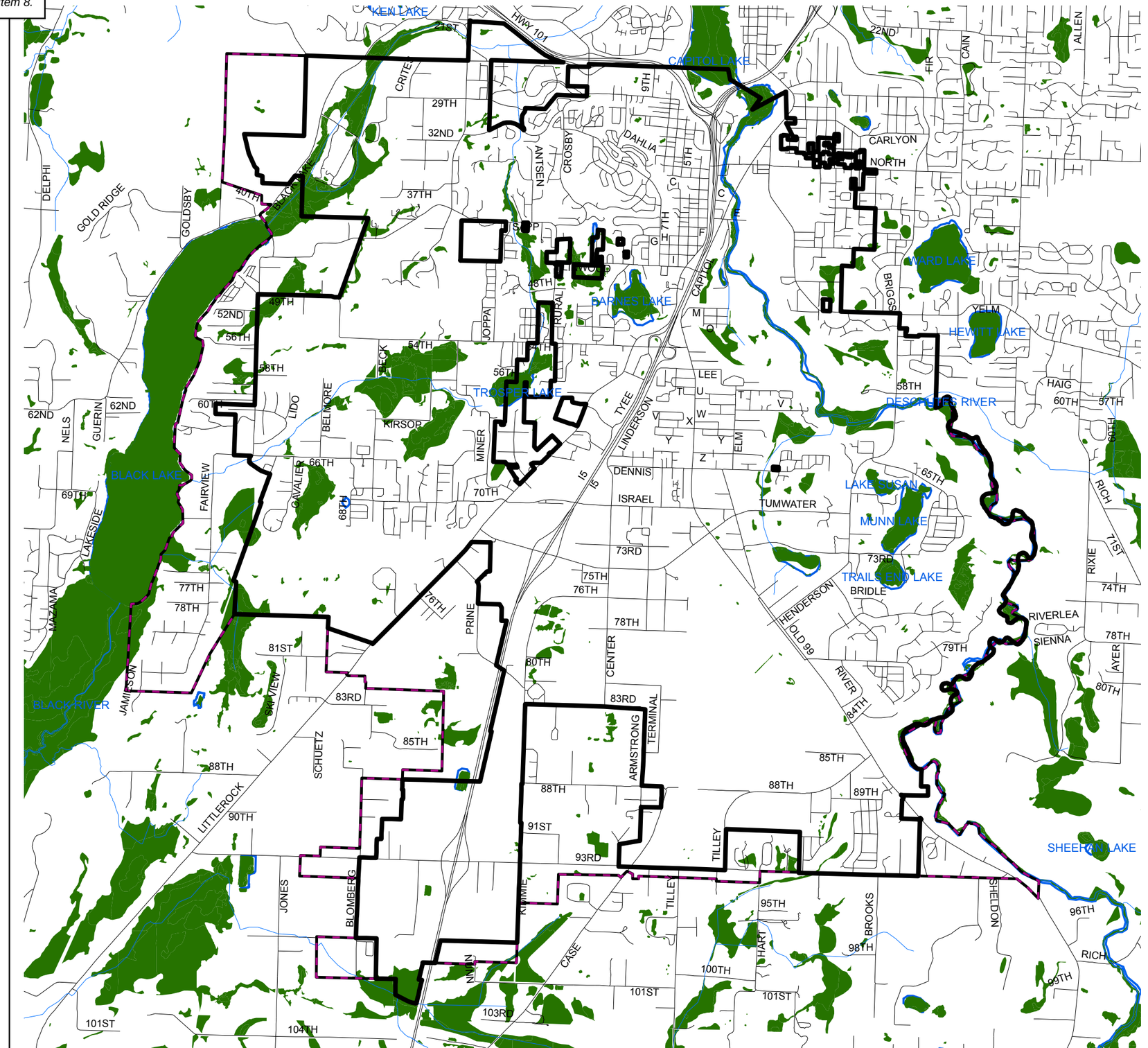
Data sourced from Thurston County and Tumwater SMP

Tumwater Community Development Department
September 2016
Shorelines of the state 9-6-2016.mxd

DISCLAIMER: The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made therefrom.

Attachment C8

Wetlands Map for the City of Tumwater



Legend

- Tumwater City Limits
- Urban Growth Boundary
- Wetlands

0 0.5 1 2 Miles

Data sourced from Thurston County

Tumwater Community Development Department
September 2016
Wetlands Map 9-6-2016.mxd

DISCLAIMER: The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made therefrom.

ENVIRONMENT ELEMENT

CHAPTER 9

SeaTac 2035

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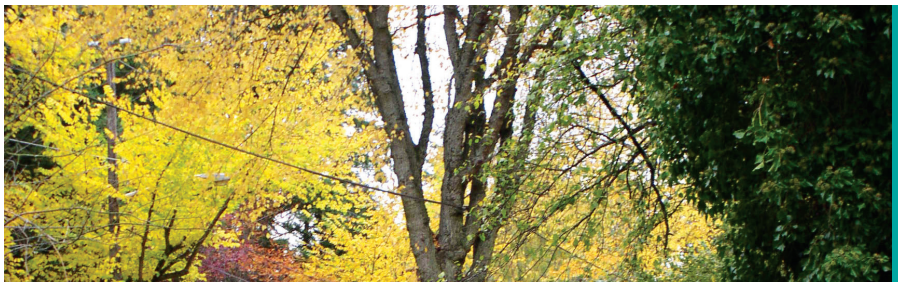
Maps



INTRODUCTION

This Element addresses the stewardship of SeaTac's environmental assets, and guides the development and implementation of environmental policies and regulations. It is coordinated with the Land Use, Transportation, Utilities, Economic Vitality and Parks, Recreation, and Open Space Elements.

MAJOR CONDITIONS

Major environmental conditions in SeaTac include:

1. Curbing the growth of CO2 and other greenhouse gases is a global challenge. Former Governor Christine Gregoire issued Executive Order 07-02 which established a series of greenhouse gas reduction and clean energy economy goals for the state. The state can only meet these goals if local actions are taken to reduce greenhouse gas emissions and move toward more efficient energy use.

2. Due to the urbanized nature of the city, few wetlands remain in SeaTac. The City needs to preserve these dwindling resources.

3. SeaTac's location in an air quality non-attainment area for carbon monoxide emissions has been upgraded to a "maintenance" area. The City still needs to work with its residents, businesses, and the Port of Seattle to maintain or improve this level of air quality.

4. The Department of Ecology estimates that millions of pounds of pollutants flow into the Puget Sound each year. Stormwater carries pollutants left in yards, parks, streets, and parking lots into SeaTac's stormwater drainage system which flows into local waterways and the Puget Sound. Pollutants carried by stormwater include soaps, fertilizers, pesticides, automotive oil, and other toxins.

In 1996, after several years of meeting the standards for CO2 levels, the Puget Sound region was designated by the EPA as a maintenance area.

GOALS AND POLICIES

This section contains SeaTac's environment goals and policies. Goals represent the City's general objectives, while policies provide more detail about the steps needed to achieve each goal's intent.

Overarching Environment Goals

GOAL 9.1

Ensure that environmental management policies and regulations are based on the most current scientific information.

The City of SeaTac manages its sensitive areas, including streams and wetlands, based on the most current, reliable, and accurate scientific information available. To keep pace with the best available science, the City periodically reviews its goals, policies and regulations and makes amendments as necessary.

Policy 9.1A
Wetlands, streams, shorelines of the state, fish and wildlife habitats, aquifers and aquifer recharge areas (including wellhead protection areas), landslide, erosion and seismic hazard areas, are all hereby designated as environmentally sensitive areas.

Policy 9.1B
Base regulations on the best available science to protect the functions and values of environmentally sensitive areas.

Best practices for designating and protecting environmentally sensitive areas can change over time based on field and academic research. During the last periodic Plan review and update in 2004, the literature on best practices for setting wetland and stream buffers, including guidance documents from the Washington Department of Commerce Growth Management Services (previously named Department of Community Trade and Economic Development), were focused on these features in a natural setting. Because SeaTac is an urbanized setting largely disturbed by development activity for many years, the "best available science" was not relevant to most of the wetlands and streams in SeaTac.

To supplement the BAS, staff reviewed existing and proposed sensitive area regulations in seven local cities and SeaTac's existing sensitive areas regulations, endeavoring to balance the natural functions and environmental considerations with existing conditions and community values.

LID techniques mimic natural stormwater drainage and infiltration to remove pollutants and reduce piped stormwater infrastructure.

Policy 9.1C
Make Low Impact Development the preferred and commonly used approach to development.

The Department of Ecology's 2013-2018 Western Washington Phase II Municipal Stormwater Permit requires jurisdictions to update their codes, policies and standards to make Low Impact Development (LID) the preferred and commonly used approach to development by January 1, 2017. LID is a stormwater management strategy that more closely mimics natural hydrologic patterns and emphasizes open space preservation and stormwater infiltration. However, the science is still developing for some aspects of LID and additional guidance for the use of these techniques is pending. The City plans to adapt to the changes in best available science for these techniques as new guidance becomes available.

GOAL 9.2
Preserve and enhance the quality of water resources.

See 9.2 for reasons to protect water quality and 9.3 for related LID policies.

Policy 9.2A
Protect and enhance water quality. Preserve the amenity and ecological functions of water features through land use plans, innovative land development, public education, and stormwater regulations.

Clean water in streams, lakes, and wetlands is an amenity within a city. It provides opportunities for water activities (e.g., swimming, fishing, kayaking, etc.) without fear of infections from waterborne bacteria or parasites. Clean water also enhances the image of a city for its livability and its concern for the natural environment. Techniques for protecting and improving water quality include:

1. Provision of sewers for new development and redevelopment.
2. Adequate stormwater flow control and treatment, including LID (low impact development) principles and LID BMPs (low impact development best management practices), for new development and redevelopment.
3. Public education about how to maintain and improve water quality within natural drainage basins.

Policy 9.2B
Manage water resources to preserve ecosystem services, including recreation, fish and wildlife habitat, flood protection, water supply, and open space.

Clean water in streams and lakes allows for preservation of urban wildlife and healthy ecosystems, which provide useful benefits to the City. This increases the overall livability of SeaTac.

Policy 9.2C
Work with adjacent jurisdictions and other affected entities to enhance and protect water quality in the region.

Enhancing and protecting clean water throughout a stream watershed often requires that many jurisdictions work together to preserve water quality. Miller and Des Moines Creeks both cross City limits. Many entities have interests in SeaTac's water quality issues, include fisheries industries for SeaTac's salmonid-bearing waterbodies, the Muckleshoot Indian Tribe, and Des Moines and Normandy Park as downstream cities. Affected jurisdictions and entities must coordinate to preserve water quality.

GOAL 9.3
Protect, preserve, and enhance natural drainage systems.

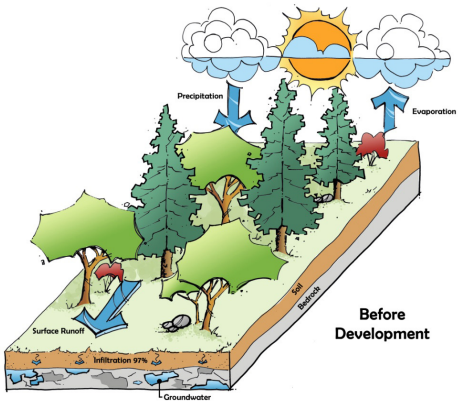
Under predevelopment conditions, rainwater infiltrates into the soil and then flows slowly into the stream or receiving water. Infiltration allows soil and plants to break down and remove many pollutants and regulates peak storm flows, summer low flows, and stream temperatures. When an area is developed, the amount of rainwater that can infiltrate into the soil is often significantly reduced (see Figure 9.1 below). The majority of the remaining stormwater flows over impervious surfaces (e.g., parking lots, sidewalks, street, and buildings). This causes problems such as:

1. High peak storm flows that can scour a stream bed or destabilize stream banks.
2. In some cases, the summer low flow can be depleted or the stream dries up so that the stream cannot support aquatic life (because there is not enough groundwater flow to maintain stream flow).
3. On hot summer days, parking lots and rooftops build up heat. Stormwater runoff from these surfaces is likewise heated up and subsequently raises stream temperatures. Stream temperatures greater than 68 degrees Fahrenheit can lower a salmonid's resistance to disease or kill fish resources.

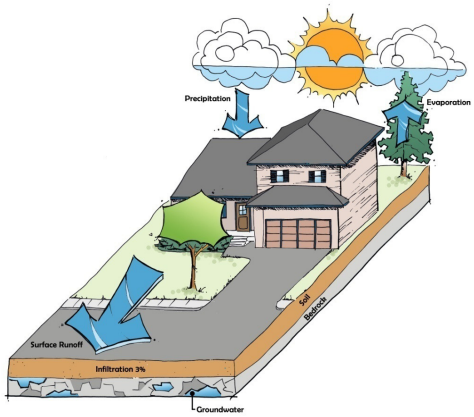
The use of green roofs, pervious pavement, and other LID techniques can mitigate the temperature impacts of roofs and paved areas by allowing rainwater to infiltrate into the cool soils. Providing tree canopy to shade parking lots can lower temperatures and mitigate impacts to streams and lakes. Infiltration techniques can minimize impacts on aquatic resources while allowing development.

Why care about natural drainage?

Stormwater runoff impacts water quality. In developed areas, runoff can carry oil, fertilizers, or a number of other pollutants into the stream channel. Fertilizers provide nutrients for excessive algae growth that can sap the drainage system of oxygen and asphyxiate fisheries resources. Soaps, oils, and other hydrocarbons from streets, parking lots, and driveways are toxic to fish. Controlling the water quality within a drainage basin can preserve fisheries and other resources.



In predevelopment conditions 20-70% of rainwater infiltrates into groundwater.



In post-development conditions only 10-50% of rainwater infiltrates into groundwater.

Figure 9.1 *Pre- and post-development hydrologic conditions.*

See Policy 9.2C above regarding interjurisdictional water quality work.

See related Policies 9.1C on LID best practices and 9.6E on LID techniques.

See Goal 9.9 regarding areas sensitive to erosion and landslides.

Policy 9.3A

Consider entire watersheds in surface water management plans, with responsibility shared between SeaTac, other cities, and the County.

Watersheds often exceed jurisdictional boundaries. Surrounding jurisdictions should coordinate surface water management plans for consistency.

Policy 9.3B

Protect and enhance natural drainage systems to maintain and improve water quality, reduce public costs, and prevent environmental degradation by using best management construction practices and current stormwater treatment and flow control standards on new and redevelopment projects.

Unmitigated peak storm flows can scour streambeds, destabilize stream banks, impact spawning areas, and significantly degrade habitat. Quality site planning, construction practices, and stormwater management can minimize erosion, sedimentation, and landslides.

Policy 9.3C

Require resource industries to use management practices that prevent erosion and sedimentation and pollutants from entering ground or surface waters.

Resource industries, such as gravel mining operations, can heavily impact water resources. Proper erosion and sedimentation control practices and pollutant removal should be used to prevent impacts on water resources.

GOAL 9.4

Improve air quality.

Policy 9.4A

Continue to support and rely on the various State, federal, and local programs to protect and enhance air quality.

Regional air quality programs are already in place (Puget Sound Clean Air Agency). Local jurisdictions should continue to support these programs.

Policy 9.4B

Require vegetation retention and landscaping to provide filtering of suspended particulates.

Trees and other vegetation convert carbon dioxide into oxygen, filter out air pollutants, and trap other particulates such as dust.

Policy 9.4C

Support public transportation, non-motorized transportation, and Transportation Demand Management (TDM) programs to reduce Vehicle Miles Traveled (VMT), greenhouse gas emissions, and other locally generated air pollutants.

Reducing VMT and greenhouse gas emissions helps to meet State air quality goals.

GOAL 9.5

Reduce greenhouse gas emissions as a means of addressing the potential adverse impacts of climate change.

SeaTac's existing land use strategy to reduce automobile dependency and VMT by developing dense nodes of jobs and housing around light rail transit stations also supports greenhouse gas reduction efforts. The City Center Plan (1999), S. 154th Street Station Area (2006), and the Angle Lake Station District (2015) Plans, and the accompanying development regulations for each of these subarea plans, help to implement that strategy.

Policy 9.5A
Support efforts to achieve State of Washington and King County greenhouse gas emissions reduction targets.

Washington established a series of greenhouse gas reduction and clean energy economy goals for the state. The state greenhouse gas reduction goal is to reach 50% below 1990 levels by 2050.

See Goal 9.5's greenhouse gas emissions reduction implementation strategies.

The King County Growth Management Planning Council (GMPC) adopted the following greenhouse gas reduction targets in July, 2014:

- 25% below 2007 levels by 2020
- 50% below 2007 levels by 2030
- 80% below 2007 levels by 2050

Policy 9.5B
Reduce vehicle greenhouse gas emissions by increasing use of electric vehicles and developing more robust bicycle and pedestrian infrastructure.

See the Land Use Element's Healthy, Equitable, and Connected Communities section.

Policy 9.5C
Reduce energy use in existing buildings, and limit emissions growth in new buildings.

Policy 9.5D
Foster community-wide renewable energy use.

Policy 9.5E
Increase natural carbon storage by increasing tree canopy on city streets and properties and protecting green belts.

See Utilities Goal 6.6 for examples of the City leading the way in electrical vehicle usage.

See Transportation Element for pedestrian and bicycle strategies.

See Utilities Element for goals related to efficient resource use.

Policy 9.5F

Develop and implement actions to reduce greenhouse gas emissions in City operations.

Climate change has the potential to affect nearly all issues identified in this Plan. Though a global issue, local governments can play an important role in reducing its impacts. For every gallon of gasoline used, automobiles release roughly 20 pounds of carbon dioxide, a primary greenhouse gas contributing to climate change (Puget Sound Clean Air Agency). In the central Puget Sound region, cars and trucks contribute more greenhouse gas emissions than any other source. The other major source is from the heating and cooling of buildings, both residential and commercial. Choosing cleaner fuel alternatives and retrofitting older machinery and buildings to be less polluting are affordable ways to protect our air.

Policy 9.5G

Increase the recycling rate citywide.

Minimizing the waste of resources that have reuse, resale, and recycling value economically benefits the City and its residents, as well as reduces the City's carbon footprint by reducing the need to manufacture or produce the goods being reused or recycled.

Policy 9.5H

Develop plans to adapt to the potential effects of climate change.

Current scientific opinion is that the effects of human-induced global warming cannot be eliminated because of the volume of greenhouse gases already emitted into the atmosphere. Humans can reduce the worst future impacts and slow the pace of change. The Pacific Northwest will see:

1. Higher levels of population growth resulting from in-migration from parts of the country made inhospitable due to the effects of climate change (i.e., "climate refugees"),
2. Declining snowpack negatively affecting regional water supplies,
3. Higher temperatures increasing risks to forestry from wildfires and insect pests,
4. Negative impacts on coastal areas resulting from sea level rise, and
5. Decreasing habitat for cold water fish such as salmon.

Environmentally Sensitive Areas

GOAL 9.6

Protect the water quality, natural drainage, fish and wildlife habitat, aesthetic values, and recreational functions of streams and lakes.

Policy 9.6A

Preserve an undisturbed corridor wide enough to maintain natural functions and wildlife habitat between new development and streams and lakes. When impacts from new development are unavoidable, ensure that those impacts will not result in the loss of natural functions or wildlife habitat between the new development and streams and lakes.

To preserve the amenities and their water quality and wildlife functions, buffer corridors need to be provided. These corridors filter pollutants, serve as wildlife habitat buffered from adjacent development, and perform an aesthetic function. This policy requires that, as part of the mitigation for any proposed development, stream and creek corridors are buffered to provide long-term water quality, habitat, and recreational benefits.

Policy 9.6B

Preserve, protect, enhance, and restore natural stream channels for their hydraulic, ecological, and aesthetic functions through development regulations, land dedications, easements, incentives, acquisition, and other means.

The natural functions of stream channels can be preserved through several methods, including:

1. Acquisition of stream channels.
2. Buffering of streams.
3. Clustering of development away from stream channels.
4. Control of peak storm flows into streams.
5. Control of everyday runoff through permanent stormwater management plans and construction site mitigation strategies.
6. Public education and involvement.

Policy 9.6C

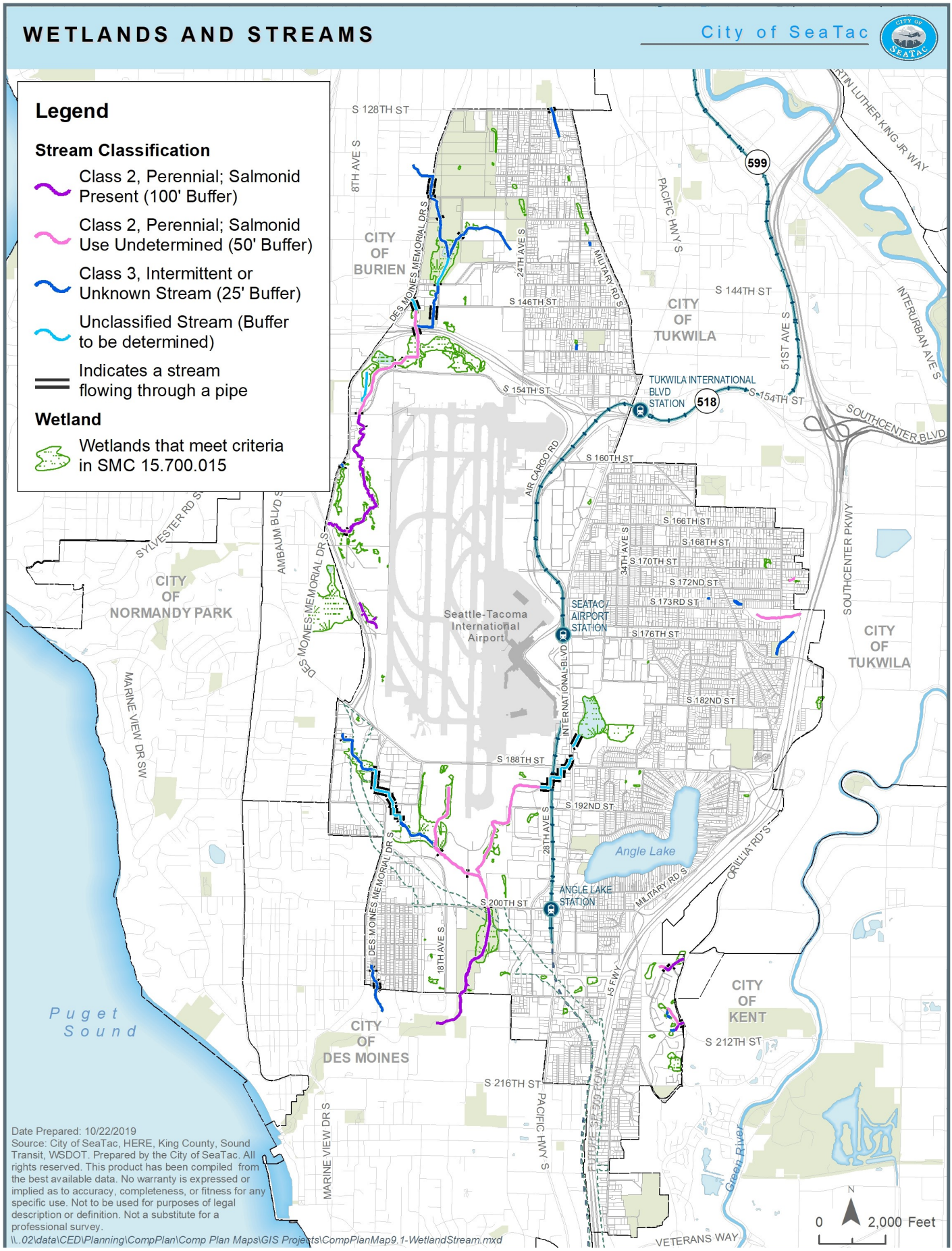
Use State standards and guidance for the selection of best management practices and techniques for in-channel and in-water construction to protect and restore fish passage and wildlife habitat in natural waterways.

Washington State Department of Fish and Wildlife is the state agency responsible for setting standards and guidelines in stream channels. Their standards and guidance for instream construction are designed to preserve wildlife habitat and protect and restore fish passage.

Environmental goals are integrally related. Natural drainage systems (described in Goal 9.3) are imperative for protecting water quality (discussed in Goal 9.2), which affects water bodies (addressed here), wildlife habitat (Goal 9.11), and entire ecosystem health.

See LID (i.e., natural drainage) policies above in Goal 9.3.

See Goal 9.11 for additional policies regarding wildlife habitat.



Map 9.1. Wetlands and Streams

Policy 9.6D

Rehabilitate degraded stream channels and banks by using public programs and new development or redevelopment, where conditions permit. Require any necessary alteration of creeks to include mitigation and ongoing maintenance which at a minimum address water quality, floodplain protection, fish and wildlife habitat, channel stability, vegetative cover, maintenance of instream flows, and impacts to downstream property owners.

Miller and Des Moines Creeks, plus the smaller unnamed creeks in SeaTac, have been degraded by past development and its resulting uneven urban stormwater flow. Rehabilitating stream channels increases their fisheries values while enhancing the amenity of the stream. Where riparian vegetation has been removed, new development or redevelopment can mitigate their impacts by planting new native vegetation to provide shading for the stream and enhancing the biologic integrity of streams.

Policy 9.6E

Require the use of stormwater infiltration techniques where feasible in private and public developments in order to maintain or restore natural flows in streams and protect fisheries and recreation resources.

GOAL 9.7

Preserve or enhance wetlands important for flood control, drainage, water quality, aquifer recharge, habitat functions, or visual or cultural values.

Policy 9.7A

Preserve and enhance unique, outstanding, peat, sphagnum, forested, or significant wetlands from adjacent new development by providing a buffer around the wetland adequate to protect its natural functions. Encroachments into significant wetlands may be allowed when no feasible alternative exists and enhancements are provided to replace the lost wetland's functions and values.

Wetlands provide valuable habitat functions. As encroachment on these areas increase, their value decreases. Species, such as blue herons, marsh hawks, and green herons are easily disturbed by human intrusion. Adequate buffers from development need to be provided to protect these species and many others.

Policy 9.7B

Develop public access to wetlands for scientific and recreational use when sensitive habitats are protected.

Access to wetlands increases their value as a community educational and recreational resource. Careful trail and viewing area planning allows public enjoyment of wetlands while assuring safety and preventing environmental problems.

In determining the boundary of a wetland, the City of SeaTac Zoning Code specifies use of the U.S. Army Corps of Engineers Wetlands Delineation Manual in conjunction with the Washington Regional Guidance on the 1987 Wetland Delineation Manual dated May 23, 1994.

SeaTac encourages school classrooms to visit wetlands to study wetland biology and ecology.

Policy 9.7C
Allow reasonable use of property containing existing wetlands to avoid a "regulatory taking" when the following criteria can be met:

- **If existing sensitive area regulations prohibit any use on the property;**
- **Either due to a court decision or by provision of the codes, a reasonable use of the property is required;**
- **The development of the wetland and/or its buffer is limited to only that portion of the property to allow a reasonable use, and;**
- **A soil analysis shows that construction measures can successfully mitigate potential hazards of unstable soil and drainage problems.**

In some cases, the application of "Sensitive Areas" regulations regarding wetlands would preclude the possibility to develop a property. Based on court cases, if a reasonable use of the property is not allowed, a "regulatory taking" occurs, and the local government must pay for the property. However, if a reasonable use is proposed (such as a single family residence), it would be allowed provided it minimizes and mitigates impacts to the wetland. Mitigation could entail special studies.

Wetlands are difficult building foundations

Avoiding building in wetlands is good not only for the environment but also typically for building structural stability. Soil in many wetlands is highly unstable or subject to liquefaction. Many wetlands have underlying layers of peat. During earthquakes, if proper construction practices (such as pilings to load bearing soils) are not used, buildings on top of the peat will be subject to greater ground movement causing extensive damage. Seattle Muck is another type of soil found in the wetlands of SeaTac. These soils are subject to liquefaction during earthquakes. Subsequently, buildings on these soils may suffer extensive damage.

Policy 9.7D
Prohibit altering of wetlands for speculative purposes.

Where a wetland is altered or filled in relation to a development proposal, the development proposal can address mitigating measures to decrease impacts to the wetland. If wetlands are filled speculatively, the site's value is entirely lost until development mitigates the fill.

Policy 9.7E
In wetlands used as stormwater detention sites, maintain water level fluctuations similar to natural conditions, unless plants and animals in the wetland can adapt to new levels as documented by a wetland biologist.

Wetland vegetation and species are adapted to the localized drainage conditions. Changing water levels upsets the balance between the different plants and animals within the wetland, degrading the wetland's value.

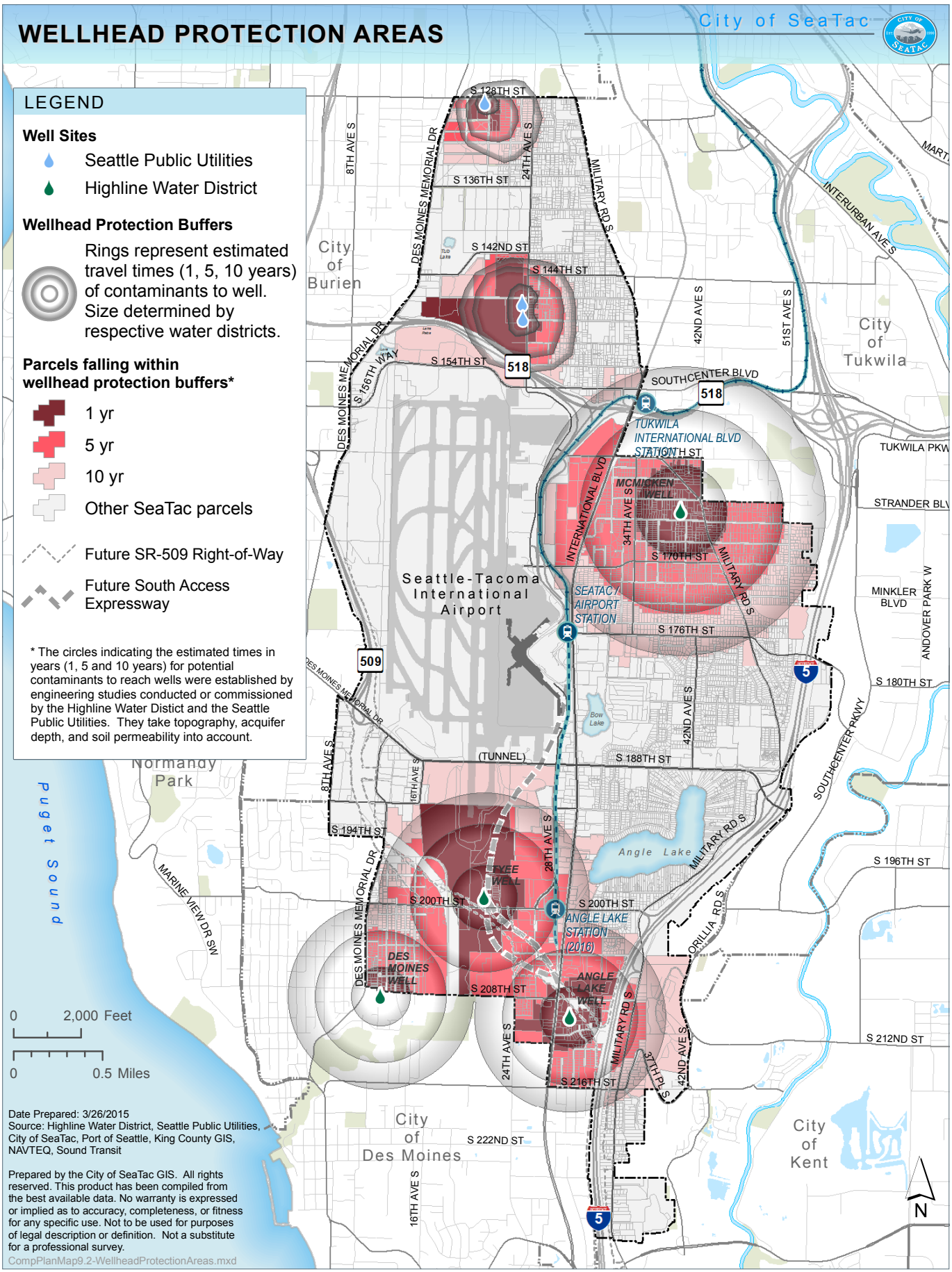
GOAL 9.8

Protect the quality and quantity of groundwater used for public water supplies.

Aquifers supply domestic water.

Policy 9.8A
Protect aquifers, aquifer recharge areas, and wellhead protection areas used for domestic water supply from contamination.

The City of Seattle and the Highline Water District draw water from aquifers within the City to supplement their domestic water supply. Aquifers also provide a valuable function in helping to maintain stream flows and water levels in lakes and wetlands in the summer months.



Map 9.2. Wellhead Protection Areas

Policy 9.8B
Protect streams, wetlands, and lakes that serve to recharge aquifers from contamination.

Contamination of aquifers can have serious consequences for humans and wildlife. For example, high concentrations of nitrates in the water supply from fertilizers could cause health problems in infants and children. Toxic compounds in the water deny its ability to be used as domestic water. Contaminated groundwater from aquifers could reach wetlands, streams, and lakes, which could cause health problems for wildlife and the public. Identifying and protecting aquifers, aquifer recharge areas, and wellhead protection areas helps minimize contamination risks.

GOAL 9.9

Protect, preserve, and enhance steep slope, landslide, erosion, and seismic hazard areas due to their sensitivity to human activities, and provide adequate mitigation of adverse environmental impacts.

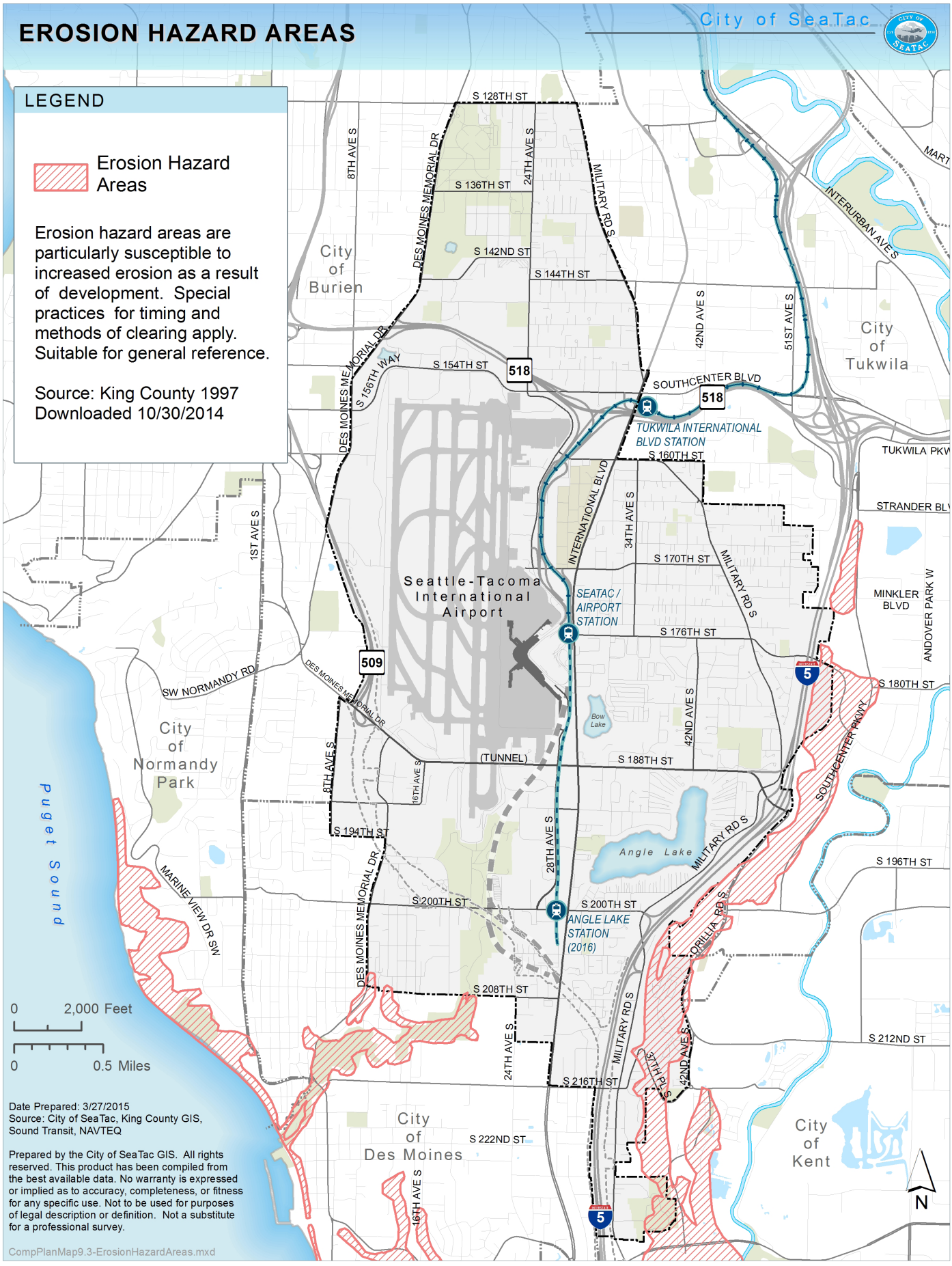
Policy 9.9A
Design land use development to prevent property damage and environmental degradation, and enhance greenbelt and wildlife habitat values.

Improperly designed land use development impacts steep slopes, landslide, erosion, and seismic hazard areas. Improper or inadequate stormwater runoff drainage systems can lead to large scale erosion or landslides in steep slope areas. Development that does not take topography and natural features into account may increase erosion or landslides and destroy valuable habitat. Sedimentation due to erosion can destroy fisheries habitat. Development that recognizes natural features can preserve valuable habitat (possibly through clustering) while minimizing impacts on sensitive areas.

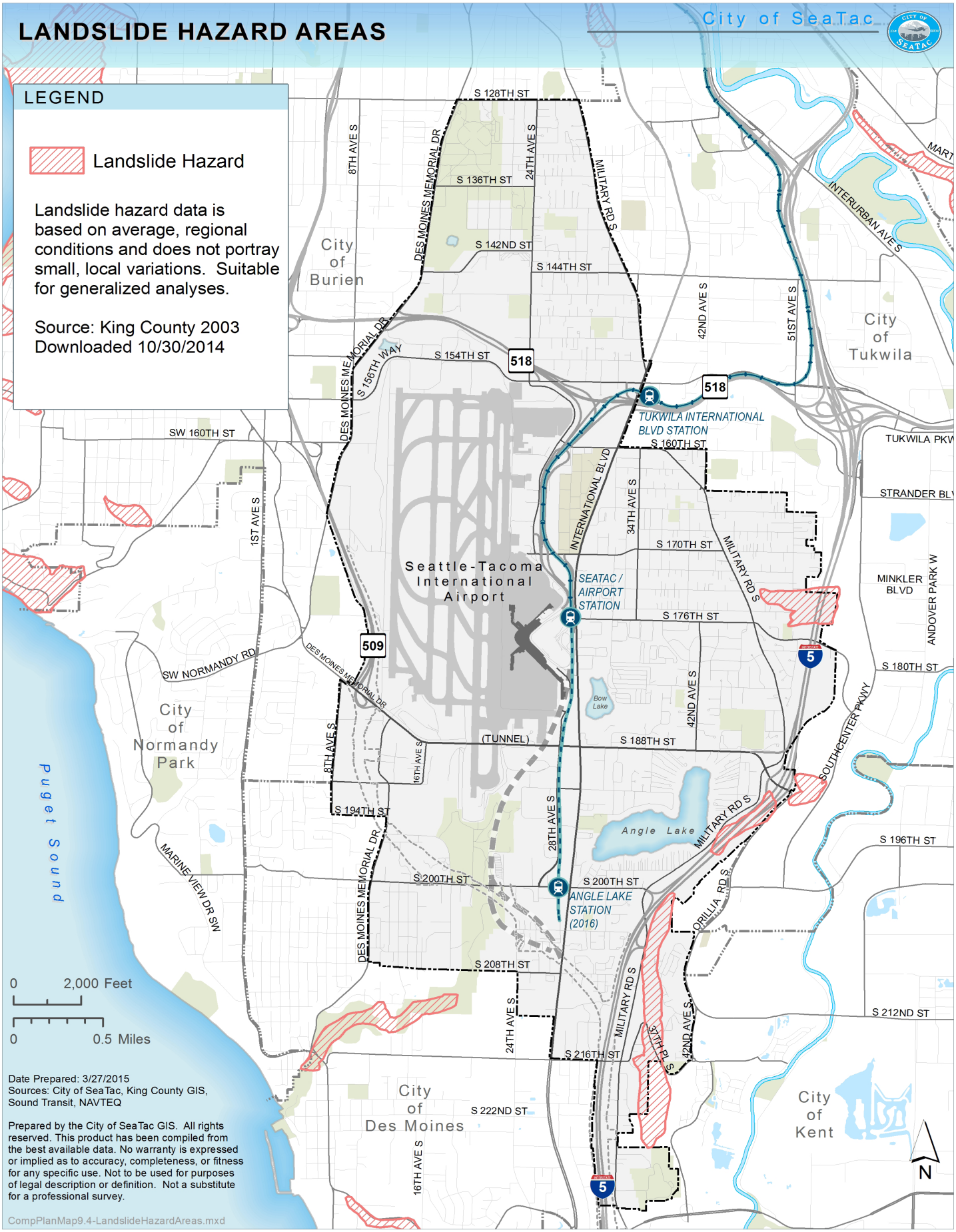
Policy 9.9B
Decrease development intensity as slopes increase to mitigate problems of drainage, erosion, siltation, and landslides. Retain slopes of 40 percent or more in a natural state, free of structures and roads. Ensure that developments that create slopes of 40 percent or more provide appropriate drainage, erosion, siltation, and landslide mitigation measures.

As slopes increase, there is an increased likelihood of problems due to drainage, erosion, siltation, and landslides. On slopes of 40 percent or greater, these problems may happen even without development. Generally, the greater the intensity of development in a steep slope area, the greater the impacts.

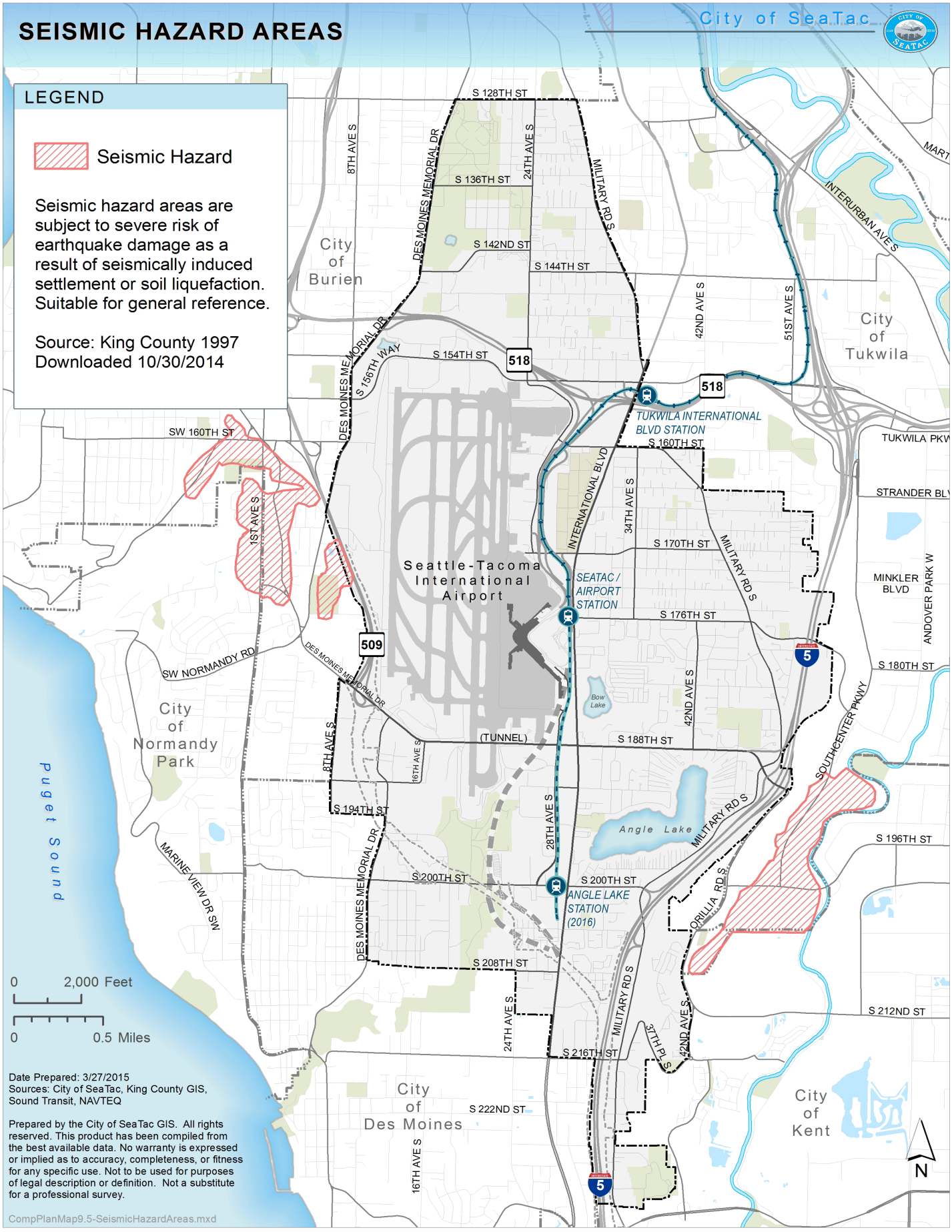
Policy 9.9C
Preserve severe landslide hazard areas from development.



Map 9.3. Erosion Hazard Areas



Map 9.4. Landslide Hazard Areas



Map 9.5. Seismic Hazard Areas

Policy 9.9D
Require best erosion and sedimentation prevention practices be used on construction projects. These may include:

1. **Retain or replace native ground cover immediately after the disturbance has ended in development areas subject to erosion hazards;**
2. **Reduce the site coverage of the development; and**
3. **Consider limiting construction work to dryer seasons to reduce erosion and sedimentation.**

Where development occurs in steep slope, landslide, or erosion areas, revegetation of the site should take place immediately after site disturbance has ended. Bare slopes easily erode and are less stable without vegetation. Other mitigation methods include tight-lining storm drainage from the slopes and limiting construction in these areas to the dry period of the year.

Also see Goal 9.1 encouraging regulations to be based on best available science.

Policy 9.9E
Require appropriate engineering, building design, and construction measures to minimize the risk of structural damage and fire and injury to occupants, and to prevent post-seismic collapse in areas with severe seismic hazards.

Seismic hazard areas are found in areas where ground movement is great (such as steep slope areas or wetlands). When earthquake resilient building and construction measures are used, such as pilings to good load bearing soils, earthquake-related structural damage and injuries are minimized.

Policy 9.9F
Require special studies to evaluate seismic risks to reduce the risks to buildings prior to development in severe seismic hazard areas.

In seismic hazard areas, additional studies are necessary to ensure that soils can adequately support the proposed development's type of construction.

Policy 9.9G
Work with adjacent jurisdictions and other affected entities to protect steep slopes, landslide, erosion, and seismic hazard areas.

Most of the steep slopes, landslide, erosion and seismic hazard areas are located on the City's borders, adjoining other jurisdictions. Working together will likely provide more protection for these areas and result in fewer problems.

GOAL 9.10

Preserve and protect the natural flood storage function of floodplains.

Policy 9.10A

Emphasize non-structural methods in planning for flood prevention and damage reduction. Design new developments or land modifications in the 100-year floodplains to maintain natural flood storage functions and minimize hazards.

New development should be designed to maintain natural flood water storage functions. Failing to do so causes nearby properties to flood.

Policy 9.10B

Protect 100-year floodplains by limiting development and encouraging low-impact uses such as open space, trails, and parks, locating roads and structures above the 100-year flood level, and requiring new development to replace existing flood storage capacity lost due to filling.

Increasing the building density in a floodplain decreases the storage capacity of the floodplain.

Policy 9.10C

Allow no permanent structures within the floodway due to risks associated with deep and fast-flowing waters, unless appropriate flood control measures have been taken. Allow no land uses in a floodway that would divert water from the floodway, change flood elevation or obstruct natural flow, unless appropriate flood control measures have been taken such that there are no additional offsite impacts and no degradation of water quality. Allow no development in the floodway fringe that would reduce the existing level of flood storage.

No structures should be allowed in the stream channel (i.e., floodway). Within the floodway fringe, any new development should be allowed only if the existing level of flood storage capacity is maintained.

Policy 9.10D

Permit no permanent structures, and allow no grading or filling along small streams for which the floodway has not been identified. In such a case, treat the entire floodplain as a floodway.

There are small streams in SeaTac for which no floodway has been defined. To minimize damage to property, no building should be constructed in the entire potential floodway until the floodway is identified.

Why care about structures in floodplains?

Any new structure that is constructed within the floodplain decreases the flood storage capacity within the floodplain. This is similar to placing a number of bricks into a bucket full of water. The volume of the bricks displaces a like volume of water thereby decreasing the carrying capacity of the water bucket.

GOAL 9.11

Maintain wildlife through the preservation and enhancement of fish and wildlife habitat through acquisition, incentives, and other techniques with particular attention to habitat for species that have been identified as endangered or threatened.

The Puget Sound Chinook salmon is listed as a threatened species by the US Fish and Wildlife Service. This requires state and local governments to protect and enhance habitat for salmon, which also benefits other anadromous fish.

Policy 9.11A

Protect and enhance fish and wildlife habitat corridors where steep slopes, wetlands, stream ravines, or stream corridors provide a continuous corridor that provides food, shelter, and water and where there are minimal impacts due to human intrusion.

Continuous undisturbed areas with a water source (wetland), food source (wetlands, forests), and areas of shelter (forested areas) that have minimal intrusion by people provide the best wildlife habitat functions. In SeaTac, these corridors are located along the steep slopes and stream canyons on Des Moines Creek and Miller Creek. Lower development densities are generally recommended in these areas.

Policy 9.11B

When developing on forested property adjacent to steep slopes, wetlands, stream ravines, or stream corridors, encourage development to provide additional buffer areas to provide wildlife and fisheries habitat. Incentives for additional buffers may include:

1. **Density Bonuses.**
2. **Lot Clustering.**

In areas adjacent to wetlands, stream ravines, or streams, clustering of development should be encouraged to allow greater buffers between the development and the sensitive area. This increases the functional and biological value of the sensitive area, provides a greater wildlife habitat area, and provides an amenity for the residents or users of the development.

Policy 9.11C

Foster native vegetation and control invasive species to preserve and enhance fish and wildlife habitat.

Very little habitat in SeaTac remains in an undisturbed, natural state. Exotic, invasive plant species have replaced native vegetation in most areas, providing poor habitat for fish and wildlife. Revegetating with native species improves the ecological value of habitat and provides a public benefit to SeaTac residents.

Shorelines

In 2010, the City's updated Shoreline Master Program (SMP) was approved by the State. Only one water body in the City is subject to the Shoreline Management Act: Angle Lake. The City's SMP is a stand-alone document with an adoption by reference to applicable portions of the City's Environmentally Sensitive Areas Ordinance. Pursuant to RCW 36.70A.480, the goals and policies of the City's Shoreline Master Program are considered an element of the City's Comprehensive Plan. The major goals and policies are contained in this sub-element for topic areas in the Shoreline Master Program that are overarching and comprehensive in nature. For specific policies refer to Chapters 4, 6, and 7 of the Master Program.

Only one water body in the City is subject to the Shoreline Management Act: Angle Lake.

As required by the Shoreline Management Act in RCW 90.58.100, the following elements have been considered in the preparation of the Master Program for the City of SeaTac: Economic Development, Public Access, Recreational, Circulation, Shoreline Use, Conservation, and Historic, Cultural, Scientific, and Educational. The goals and policies established for these elements are the basis for policies and regulations included under the general and specific use requirements of the Master Program.

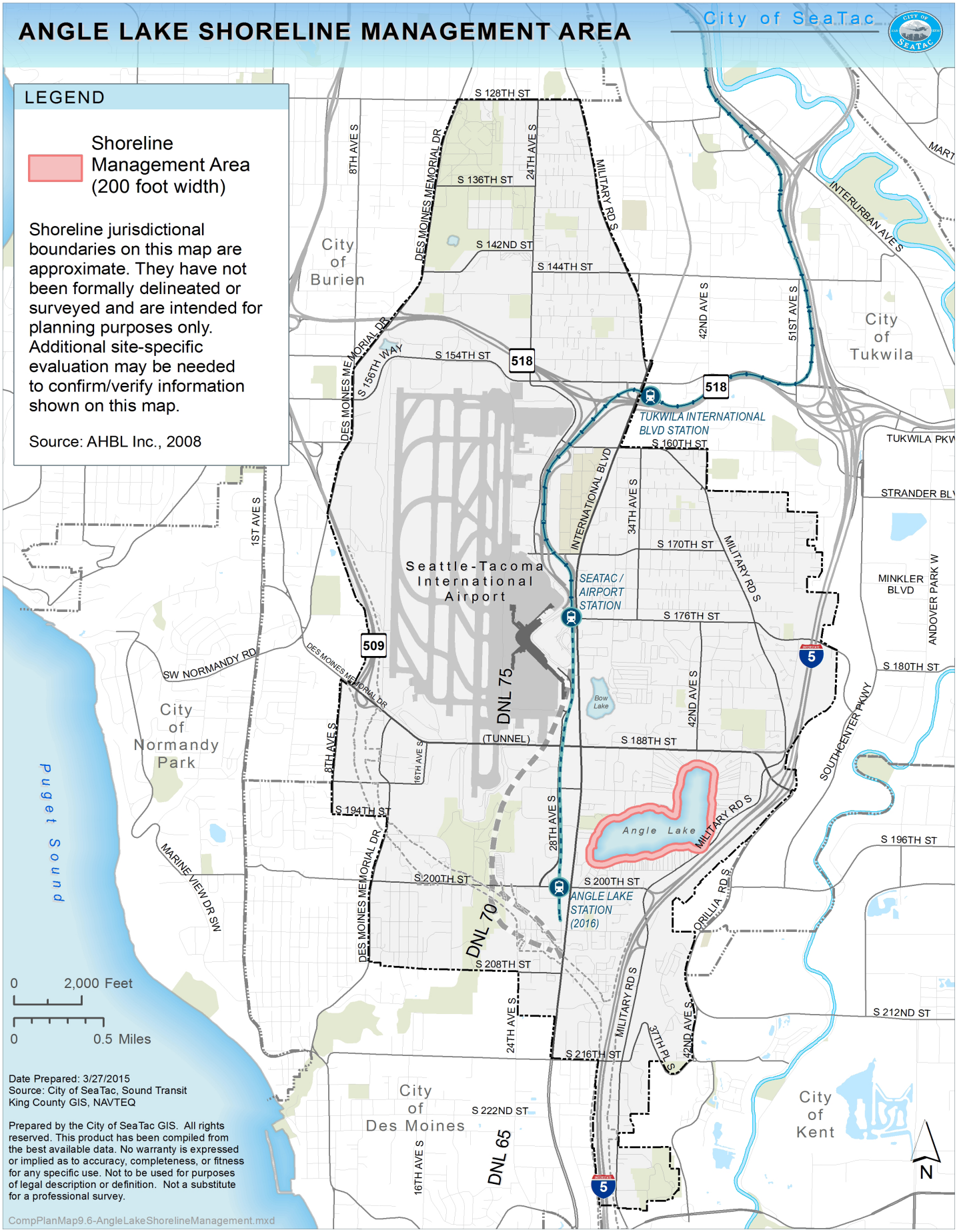
GOAL 9.12

Ensure that any economic activity taking place along the shoreline operates without harming the site's environmental quality or adjacent shorelands and that new non-residential development provides public access to the shoreline for water-enjoyment activities.

Policy 9.12A

Require proposed economic use of the shoreline to be consistent with SeaTac's Comprehensive Plan. Require upland uses on adjacent lands outside of immediate SMA jurisdiction (in accordance with RCW 90.58.340) to be consistent with the purpose and intent of the Master Program as they affect the shoreline.

There are limited opportunities available for residential and commercial development on Angle Lake. Development should continue to be allowed within the shoreline environment consistent with the underlying zoning and the current nature of development around the lake. Preference should be given to water-dependent and water-related uses in the shoreline management area.



Map 9.6. Angle Lake Shoreline Management Area

GOAL 9.13

Increase the amount and diversity of public access to the shoreline, including trails, viewing platforms, and improved piers, and preserve and enhance views of the shoreline, consistent with the natural shoreline character, private rights, and public safety.

Policy 9.13A

Provide and enhance shoreline access to Angle Lake through purchase or retention of access easements, signage of public access points, and designation and design of specific shoreline access areas for wildlife viewing. Integrate public access to shorelines as a part of the City's public trail system; priorities for public access trails include connecting the Hughes Property with Angle Lake Park.

A component of the Shoreline Management Act is to encourage more public access to the water. The greatest opportunity for access to the water is Angle Lake Park, the only public park on Angle Lake. The City owns the Hughes Property; future development of that parcel should allow for passive or active recreational uses on the waterfront. Any new commercial or multifamily residential development along Angle Lake should, where feasible, allow for public access to the waterfront.

Policy 9.13B

Ensure new public access does not adversely affect the integrity and character of the shoreline, or threaten fragile shoreline ecosystems by locating new access points on the least sensitive portion of the site.

One of the principles of the SMA is protection of natural shoreline functions; therefore, it is important that thoughtful site planning and placement of public access points balances public/private enjoyment of the waterfront and environmental considerations.

Policy 9.13C

Ensure the development of upland areas such as parking facilities and play areas, as well as the development of in-water and near shore structures, such as docks and swimming areas, are located and designed in ways that result in no net loss of ecological function.

There are limited areas around Angle Lake left for either commercial or residential development. On the upland portions of sites adjacent to Angle Lake, outside the shoreline management areas should be designed using the most current stormwater manual such that impacts from upland development will not have an adverse affect on Angle Lake.

Policy 9.13D

Access should be provided for a range of users including pedestrians, bicyclists, boaters and people with disabilities to the greatest extent feasible.

Angle Lake Park accommodates a wide range of users and passive and active recreational opportunities. Future improvements to the park and

potential public access from the Hughes Property should be designed to continue to accommodate a wide range of users and activities.

Policy 9.13E

Development, uses, and activities on or near the shoreline should not impair or detract from the public's visual or physical access to the water.

The intent of this policy is to design future public access points to maximize waterfront enjoyment, while minimizing visual impacts to the waterfront.

GOAL 9.14

Encourage diverse, water-oriented recreational opportunities in those shoreline areas that can reasonably tolerate such uses without destroying the integrity and character of the shoreline.

See the Parks, Recreation, and Open Space Element for more about Angle Lake.

Policy 9.14A

Maintain and enhance existing shoreline recreation assets at Angle Lake Park, including the existing pier and boat launch.

This policy pertains to future improvements to Angle Lake Park, such as repair or replacement of the existing dock and boat launch, and the addition of a small covered stage for plays and performances in conjunction with ongoing Parks and Recreation programs. The purpose of these improvements is to enhance the enjoyment and use of the park for the citizens of SeaTac. This policy also addresses maintenance of existing facilities to ensure the continued enjoyment of the park by the public.

What is active and passive recreation?

As examples, active recreation might include swimming, boating, and fishing. Passive recreation might include bird watching or simply viewing the lake at sunset.

Policy 9.14B

Pursue additional public access to the shoreline for recreational uses, particularly for trails and passive recreation. Explore opportunities to develop trail links within and between public properties.

Shorelines are a valuable resource in the community. Accessing this resource is necessary for the public to enjoy the resources. During the development of the Shoreline Master Program there was much discussion on having the flexibility to somehow connect Angle Lake Park to the Hughes Property by way of easements for a trail on adjacent properties or combination of easements and floating trail. The intent was limited to that type of a connection and not a trail around the lake.

Policy 9.14C

Ensure existing and proposed recreational uses are of a safe and healthy nature and do not adversely affect the integrity and character of the shoreline or threaten fragile shoreline ecosystems.

Recreational areas on shorelines should provide the maximum benefit to the greatest number of users. Use of these areas should be accessible to all people and be compatible with each other and not conflict with other uses of the shoreline.

Angle Lake Park and potentially the waterfront portion of the Hughes property are a valuable resource both from a recreation standpoint and, in the case of the Hughes Property, also a habitat standpoint. Future improvements should focus on preserving these resources.

Policy 9.14D
Consider active and passive recreational needs in development of public shoreline access areas.

GOAL 9.15

Maintain safe, reasonable, and adequate vehicular, bicycle, and pedestrian circulation systems to shorelines and ensure that these routes have the least possible adverse effect on unique or fragile shoreline features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

See the Transportation Element for strategies to connect to Angle Lake.

Policy 9.15A
Locate land circulation systems as far from the land-water interface as feasible to reduce interference with either natural shoreline resources or other appropriate shoreline uses, except when necessary to provide for appropriate public access to the shoreline. Where possible avoid creating barriers between adjacent uplands and the shoreline.

Policy 9.15B
Improve access to Angle Lake through expanded non-motorized connections and transit service.

Transit service connections would be to Angle Lake Park or adjacent properties per se. Expanded non-motorized connections might include sidewalks and bike trails or lanes on local streets that connect to the park.

GOAL 9.16

Preserve, protect, and restore to the greatest extent feasible the natural resources of the shoreline, including but not limited to scenic vistas, aesthetics, and vital riparian areas for wildlife protection.

Policy 9.16A

Protect shoreline processes and ecological functions through regulatory and non-regulatory means that may include acquisition of key properties, conservation easements, regulation of development within the shoreline jurisdiction, and incentives to encourage ecologically sound design.

New development within the shoreline impacts the shoreline environment to varying degrees. By adhering to accepted design standards, such as storm drainage standards, and best management practices (BMPs), these impacts should be minimized.

Policy 9.16B

Reclaim and restore areas which are biologically and aesthetically degraded to the greatest extent feasible while maintaining appropriate use of the shoreline.

Few remaining shoreline areas on Angle Lake retain their natural native vegetation buffer areas. Such areas, where feasible, should be reclaimed and restored, as they provide natural habitat and shoreline protection.

Policy 9.16C

Preserve the scenic aesthetic quality of shoreline areas and vistas to the greatest extent feasible.

Scenic vantage points can be found around the lake, both from private property adjacent to the lake and from public property points such as Angle Lake Park and to a lesser extent the Hughes Property. As properties within all the shoreline designations change or redevelop over time careful consideration should be given to the scenic quality of the lake. In some cases, such as commercial development or multi-family residential development, view corridor implementation studies may be necessary.

Policy 9.16D

Preserve and restore native vegetation along the shoreline to the greatest extent feasible.

Little natural vegetation remains around Angle Lake since the lake is currently heavily urbanized. Where natural vegetation remains, it should be preserved as part of any new development of the adjacent upland properties. Residential properties should be encouraged to remove non-native species and replace them with native plant materials.

Policy 9.16E

Target Angle Lake Park for restoration of shoreline natural resources and functions while ensuring continued public access to the shoreline.

Where feasible, as Angle Lake Park is improved, opportunities to restore the natural shoreline should be considered as part of any redevelopment of the park. Such restoration work should not conflict with the public's ability to access the shoreline and enjoy the park.

GOAL 9.17

Ensure that the land use patterns within shoreline areas are compatible with shoreline environment designations and will be sensitive to and not degrade habitat and ecological systems and other shoreline resources.

Like or compatible shoreline uses should be clustered or distributed in a rational manner to promote the best possible pattern of land and water use consistent with the Shoreline Master Program.

Policy 9.17A

When determining allowable uses and resolving use conflicts within the City's shoreline jurisdiction, apply the following preferences and priorities in the order listed below:

1. Reserve appropriate areas for protecting and restoring ecological functions to control pollution and prevent damage to the natural environment and public health.
2. Reserve shoreline areas for water-dependent and associated water-related uses.
3. Reserve shoreline areas for other water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives.
4. Locate single family residential uses where they are appropriate and can be developed without significant impact to ecological functions or displacement of water-dependent uses.
5. Limit non-water-oriented uses to those locations where the above described uses are inappropriate or where non-water-oriented uses demonstrably contribute to the objectives of the Shoreline Management Act, including opportunities for ecological enhancements and public access improvements.

This policy addresses the distribution, location, and extent of uses within the shoreline management area. Angle Lake's shorelines are substantially developed. Development is mostly residential, with a few pockets of commercial and multifamily.

Also see Policy 9.1C regarding LID best practices, Policy 9.3E on stormwater infiltration techniques, and Goal 9.7 on enhancing natural drainage systems.

Policy 9.17B

New residential development should be designed to protect existing shoreline water views.

The original lots between Angle Lake and adjacent roads are long and narrow. Many original lots remain while several have been split into smaller lots. This has created a situation where the construction (or reconstruction) of a house on the frontage lot on Angle Lake could potentially block views of the houses further inland from the lake. In the construction of a residence on these lots, the impacts to views of the shoreline to upland properties should be taken into account.

Policy 9.17C

Only allow development and redevelopment activities within the City's shoreline jurisdiction that is designed to ensure public safety, enhance public access, protect existing shoreline and water views, and achieve no net loss of shoreline ecological functions.

Because Angle Lake is heavily developed, new development and redevelopment should strive to balance public safety, public access, and shoreline and water views with preserving ecological functions.

Policy 9.17D

Encourage and in some cases require the use of low impact development (LID) and green building practices, such as those promulgated under the Leadership in Energy and Environmental Design (LEED) and Green Built programs, for new development within the shoreline jurisdiction.

The shoreline area around the lake is unique. As part of any new development or redevelopment within the shoreline management area, development activities should take into account and consider design standards and building techniques, where feasible, that create low impact green buildings.

Policy 9.17E

Do not allow proposed shoreline uses to infringe upon the rights of others or upon the rights of private ownership.

Policy 9.17F

Encourage shoreline uses which enhance their specific areas or employ innovative features for purposes consistent with the Shoreline Master Program.

Development should continue around the lake consistent with the existing development pattern. Residential and commercial development could include green building techniques and materials during construction to produce structures that are more self-sufficient and reduce their impact on Angle Lake.

Policy 9.17G

Encourage restoration of shoreline areas that have been degraded or diminished in ecological value and function as a result of past activities or catastrophic events.

New development or redevelopment should consider restoration efforts that include the removal of non-native plant materials and replace them with native plant materials along the shoreline. Native plant materials are more drought-tolerant, requiring less water to thrive, and they can enhance the natural beauty of the beachfront. Restoration efforts may include the removal and replacement of traditional bulkheads with softer, more natural materials.

GOAL 9.18

Identify, protect, preserve and restore important archeological, historic, and cultural sites located in the shoreline jurisdiction of SeaTac for their educational and scientific value, as well as for the recreational enjoyment of the general public.

Policy 9.18A

Prevent the destruction of or damage to any site having historic, cultural, scientific, or educational value.

Although there are no known archeological or historical sites within the shoreline management area, should development activity unearth important material, it should be preserved and documented according to State law.

Policy 9.18B

Ensure that new development is compatible with existing historic structures and cultural areas.

No historic structures currently exist within the shoreline management area. If during construction of a site along Angle Lake within the shoreline management area a cultural site be discovered, it should be excavated and documented per State law.

RECOMMENDED IMPLEMENTATION STRATEGIES

This section identifies the specific steps, or **implementation strategies**, that achieve this Element's policies. It also identifies the group(s) with **primary responsibility** for carrying out each strategy and the expected **time frame** within which the strategy should be addressed. Policy summaries are included in the table for reference.

Not all policies require an implementation strategy. In those cases those policies are not reflected in the tables that follow.

As the Primary Responsibility column indicates, many of the implementation strategies will be initially undertaken by a specified board or commission. In most cases, the City Council will analyze the specific board/commission recommendation and make the final decision about how to proceed.

The time frame categories are defined as follows:

- Short-Term ..... one to five years
- Medium-Term .... six to 10 years
- Long-Term ..... 11 to 20 years
- Ongoing ..... the strategy will be implemented on a continual basis

The time frames are target dates set annually when the City Council adopts amendments to the Comprehensive Plan. Strategies that have been implemented are noted in brackets, along with the relevant completion date.

The list of proposed implementation strategies is a minimum set of action steps and is not intended to limit the City from undertaking other strategies not included in this list.

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.1 BASE REGULATIONS ON CURRENT SCIENCE			
9.1B Base regulations on Best Available Science (BAS).	In reviewing development proposals that may have an impact on any sensitive areas, consult with third party biologist and/or engineer to assess potential impacts and recommend development alternatives or mitigation.	Staff	Ongoing
9.1C Make Low Impact Development (LID) techniques the preferred development approach.	Adopt current LID manuals, policies, development standards, regulations and techniques by January 1, 2017.	City Council	Short-Term
9.2 ENHANCE WATER QUALITY			
9.2A Preserve water feature functions through land use plans and development and stormwater regulations.	Work with providers to enable sewer services for new development.	Staff	Ongoing
	Provide adequate stormwater detention control for new development, including LID techniques.	Staff	Short-Term
	Update development codes to require and implement low impact development (LID) provisions.	Staff, City Council	Short Term
	Work with school districts to educate the public in how to maintain water quality within the natural drainage basins.	Staff	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
	Enforce regulations that protect water resources while allowing recreational use of those resources.	Staff	Ongoing
9.2B Manage water resources to preserve ecosystem services.	Revisit and update the June 2000 Bow Lake Joint-Use Facilities Study before proceding with implementations actions: • Develop and carry out a public input process • Conduct an agency outreach process • Further characterize economic impacts and benefits • Identify a preferred alternative • Prioritize development of publicly owned properties • Environmental review	Planning Commission, City Council	Long-Term
	Monitor storm drain outfalls and adjust water quality maintenance as necessary.	Staff	Ongoing
9.2C Work with adjacent entities to enhance water quality.	Coordinate implementation strategies (such as regulations) with adjacent jurisdictions. See 9.3A below.	Staff	Ongoing
9.3 ENHANCE NATURAL DRAINAGE SYSTEMS			
9.3A Consider entire watersheds and plan interjurisdictionally.	Work with Burien, Des Moines, Tukwila, and King County to ensure that regulations regarding surface water management are consistent between the cities and County for consistent surface water management.	City Council, Planning Commission	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.3A Continued	Continue involvement with watershed planning efforts through participation in the Des Moines Creek Basin Planning Committee, the Miller and Walker Creek Basin Planning Committee, and the Watershed Resource Inventory Area 9 (WRIA 9) Green/ Duwamish River Watershed planning and habitat recovery efforts.	City of SeaTac Planning Commission, Staff	Short-Term
9.3B Maintain and enhance natural drainage systems.	Enforce regulations that prohibit or minimize the degradation of the natural drainage systems.	City Council, Planning Commission	Ongoing
9.3C Use current stormwater treatment and flow control standards on new and redevelopment projects.	Enforce regulations and methods that would protect quality and quantity of stormwater runoff entering SeaTac's streams and wetlands.	City Council, Planning Commission	Ongoing,
9.3D Require resource industries management practices that protect drainage systems.	Enforce regulations and methods that minimize the amount of erosion, sedimentation, and water pollutants created by resource industries.	City Council, Planning Commission	Ongoing,
9.4 IMPROVE AIR QUALITY			
9.4A Continue to support and rely on State, federal, and local programs to protect air quality.	Work with the Puget Sound Air Quality Control Agency and with Federal and State agencies to ensure that air quality is protected within SeaTac.	Staff	Ongoing
9.4B Require vegetation and landscaping to filter particulates.	Enforce landscape codes that allow the use of existing vegetation to be used for biofiltration.	City Council, Planning Commission	Ongoing,

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.4C Support programs that reduce Vehicle Miles Traveled (VMT) and locally generated air emissions.	Work with local business to adopt "Transportation Demand Management Programs" (TDM) to encourage their employees to use alternative forms of transportation to reduce vehicle trips and emissions.	City Council, Planning Commission	Ongoing
	Enforce regulations that require new development to adopt TDM programs.	City Council, Planning Commission	Ongoing
9.5 REDUCE GREENHOUSE GAS EMISSIONS AND ADDRESS CLIMATE CHANGE			
9.5A Commit to meeting State and County greenhouse gas emissions reduction targets.	Advocate for a comprehensive approach that requires responsible, science-based limits on climate pollution and market-based prices for emissions.	City Council	Ongoing
9.5B Reduce vehicle greenhouse gas emissions.	Support statewide clean fuel standards and participate in regional efforts to expand the use of low emission and zero emission vehicles. Partner on catalytic pilot projects such as: • Expansion of electric vehicle charging stations available at public facilities, • Incentives that encourage building owners to have EV-ready building systems, and • Construction of bicycle infrastructure such as cycle tracks, dedicated lanes, and greenways.	City Council	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.5C Limit energy use and emissions in buildings.	Work with energy utilities to develop a regional retrofit program to lower energy use in existing residential and commercial buildings and coordinate with existing programs.	City Council	Ongoing
	Support implementation of the Washington State Energy Code.	City Council	Ongoing
	Demonstrate innovation in local codes, ordinances, and partnerships to encourage green building, in particular through the Regional Code Collaboration.	City Council, City Staff	Ongoing
9.5D Foster community-wide renewable energy use.	Support implementation of Washington State Renewable Portfolio Standard and strong federal policy on reducing GHG emissions from power production.	City Council	Ongoing
	Work with local utilities to help transition to increasingly renewable and efficient energy resources for electricity and heating.	City Staff	Ongoing
	Remove regulatory barriers to small scale local energy projects.	City Council, Planning Commission, Staff	Ongoing
	Partner on catalytic pilot projects such as pilot incentives to encourage building owners to have solar-ready rooftops.	City Council, Planning Commission, Staff	Ongoing
9.5E Increase natural carbon storage by increasing tree canopy.	Develop a street and city lands tree program.	City Staff, City Council	Short Term
	Maintain healthy urban forests, such as those in the Des Moines Creek corridor and around Tub Lake.	City Council, Planning Commission, City Staff	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.5F Reduce GHG emissions in City operations.	Reduce fuel consumption through efficient fleet management practices.	Staff	Ongoing
	Support ways to create ongoing funding for government agency projects related to energy efficiency, renewable energy, and transportation emissions reduction.	City Council	Ongoing
9.5G Increase the recycling rate citywide.	Work with solid waste utilities on outreach to businesses and city residents and to develop and implement education programs	Staff	Ongoing
9.5H Develop plans to adapt to climate change.	Review Emergency Management plans and amend as necessary. Climate change-related amendments may include identifying vulnerable areas and developing adaptation measures.	City Council, Staff	Ongoing
9.6 PROTECT STREAMS AND LAKES			
9.6A Preserve stream corridor buffers.	Enforce regulations that mandate a minimum buffer area between streams, lakes, and wetlands.	City Council, Planning Commission	Ongoing
9.6B Preserve, protect, and restore natural stream channels.	Enforce regulations that protect natural stream channels.	City Council, Planning Commission	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.6C Use State standards and guidance for in-channel and in-water construction.	Update regulations to reference State standards and guidance for in-channel and/or in-water construction, or incorporate state regulations into SMC Chapter 15.30.	Staff	Short-Term
9.6D Rehabilitate degraded stream channels and banks.	Work with the school district, nonprofit organizations, and other public agencies to implement programs to rehabilitate streams and creeks. Such programs could be implemented separately or combined and may include: • Establishing a school curriculum from K-12 that would adopt and rehabilitate a creek. • Working with public agencies or a nonprofit agency, such as the Adopt-A-Stream Foundation, in coordination with school programs.	Staff	Ongoing
9.6E Require stormwater infiltration techniques to maintain natural flows streams.	Update development codes to encourage use of LID techniques.	City Council, Staff	Short Term
	Retain existing wetlands and creeks on the site of new development and require the maintenance of natural features.	City Council, Planning Commission	Ongoing
9.7 ENHANCE WETLANDS			
9.7A Preserve and enhance wetlands with buffers from adjacent new development.	Enforce development regulations at significant wetlands.	City Council, Planning Commission	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.7B Develop public access to wetlands for scientific and recreational use.	Develop regulations that would allow public access to sensitive areas habitat; provided, that such access does not impact such habitat areas.	City Council, Planning Commission	Ongoing
9.7C Allow the reasonable use of property containing wetlands if the adopted criteria can be met.	Enforce regulations that allow the reasonable use of a piece of property that is totally impacted by a "Sensitive Area."	City Council, Planning Commission	Ongoing
9.7D Prohibit altering of wetlands for speculative purposes.	Enforce specific regulations to prohibit speculative landfills in wetland areas.	City Council, Planning Commission	Ongoing
9.7E Maintain water level fluctuations similar to natural conditions.	Enforce regulations that would ensure the water level fluctuations within wetland areas are maintained similar to natural conditions as part of new development.	City Council, Planning Commission	Ongoing
9.8 PROTECT GROUNDWATER AQUIFERS			
9.8A Protect aquifers from contamination.	Work with the Water Districts, Dept. of Ecology and others to delineate aquifer recharge areas and determine if additional regulations to protect these areas are needed.	Staff	Short-Term
	Update regulations as necessary.	Staff	Short-Term
9.8B Protect streams, wetlands, and lakes from contamination.	Enforce regulations to minimize impacts from new development.	Staff	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.9 PROTECT STEEP SLOPE, LANDSLIDE, EROSION, AND SEISMIC HAZARD AREAS			
9.9A Design land use development to prevent environmental degradation and enhance habitat.	Enforce regulations to minimize impacts from new development.	Staff	Ongoing
9.9B Decrease development density as slopes increase.	Enforce regulations that would limit or prohibit development on steep areas.	Staff	Ongoing
9.9C Preserve severe landslide hazard areas from development.	Limit development within severe landslide areas.	Staff	Ongoing
9.9D Require best erosion and sedimentation management practices on construction projects.	Enforce regulations that require special construction practices to reduce or prevent erosion and sedimentation in erosion hazard areas.	City Council, Planning Commission	Ongoing
9.9E Require appropriate engineering, building design and construction measures to minimize the risk of structural damage, fire and injury to occupants, and to prevent post-seismic collapse in areas with severe seismic hazards.	Enforce building and fire codes that require construction to standards that account for the severity and frequency of seismic activity in the Puget Sound area.	City Council	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.9F Require seismic studies to evaluate risks and use appropriate engineering and construction measures.	Enforce building and fire codes that require construction to standards that account for the severity and frequency of seismic activity in the Puget Sound area.	City Council	Ongoing
9.9G Work with other affected entities to protect steep slopes, landslide, erosion, and seismic hazard areas.	Provide notice of development proposals to adjacent jurisdictions when those proposals are within or near these types of sensitive areas on a shared boundary.	Staff	Ongoing
	When reviewing proposals from adjacent jurisdictions in areas where these types of sensitive areas are located, consider potential impacts to these sensitive areas.	Staff	Ongoing
9.10 PRESERVE FLOODPLAINS			
9.10A Maintain natural flood storage functions and minimize hazards.	Floodplain areas are designated by the Federal Emergency Management Agency. Enforce regulations that restrict development in such areas.	City Council, Planning Commission	Ongoing
9.10B Protect floodplains by limiting development, encouraging low-impact uses, and requiring new development to replace existing flood storage capacity.	Floodplain areas are designated by the Federal Emergency Management Agency. Enforce regulations that restrict development in such areas.	City Council, Planning Commission	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.10C Allow no permanent structures nor land uses in a floodway that would divert water from the floodway, change flood elevation obstruct natural flow, or reduce existing level of flood storage capacity.	Floodplain areas are designated by the Federal Emergency Management Agency (FEMA). Enforce regulations that restrict development in such areas.	City Council, Planning Commission	Ongoing
9.10D Do not permit permanent structures along small streams non-identified floodways.	Identify the floodplain on smaller stream corridors (other than Miller and Des Moines Creeks) and enforce regulations that would control development in the same manner as development within floodplain areas designated by FEMA.	City Council, Planning Commission	Ongoing
9.11 ENHANCE WILDLIFE HABITAT			
9.11A Protect and enhance fish and wildlife habitat corridors.	Adopt regulations that protect wildlife habitat areas for endangered or threatened species.	City Council, Planning Commission	Ongoing
	Continue working with King County and City of Des Moines to monitor the performance of the Des Moines Creek Basin Plan.	Staff	Ongoing
	Adopt regulations that would require buffer areas adjacent to wetlands, streams and creeks, and steep slope areas.	City Council, Planning Commission	Ongoing
9.11B Encourage development to provide wildlife buffer areas.	Enforce regulations that allow the clustering of residential units (in both single family and multi-family zones) to preserve as much open space area as possible.	City Council, Planning Commission	Ongoing

PROPOSED POLICIES	IMPLEMENTATION STRATEGIES	PRIMARY RESPONSIBILITY	TIME LINE
9.11C Preserve and enhance habitat by fostering native vegetation and controlling invasive species.	Develop regulations requiring all new development to establish native vegetation as the dominant plant species in buffers around wetlands, streams, creeks, and steep slope areas.	City Council, Planning Commission	Short-Term
	Develop regulations allowing buffer width reductions for redevelopment situations as part of an approved vegetation management plan.	City Council, Planning Commission	Short-Term
9.12-9.18 IMPLEMENTATION ACTIONS RELATED TO THE SHORELINES POLICIES CAN BE FOUND IN TITLE 18 OF THE SEATAC MUNICIPAL CODE AND THE SEATAC SHORELINE MASTER PROGRAM			