McMinnville Natural Resources Management Program Recommendations

Winterbrook Planning | June 30, 2021

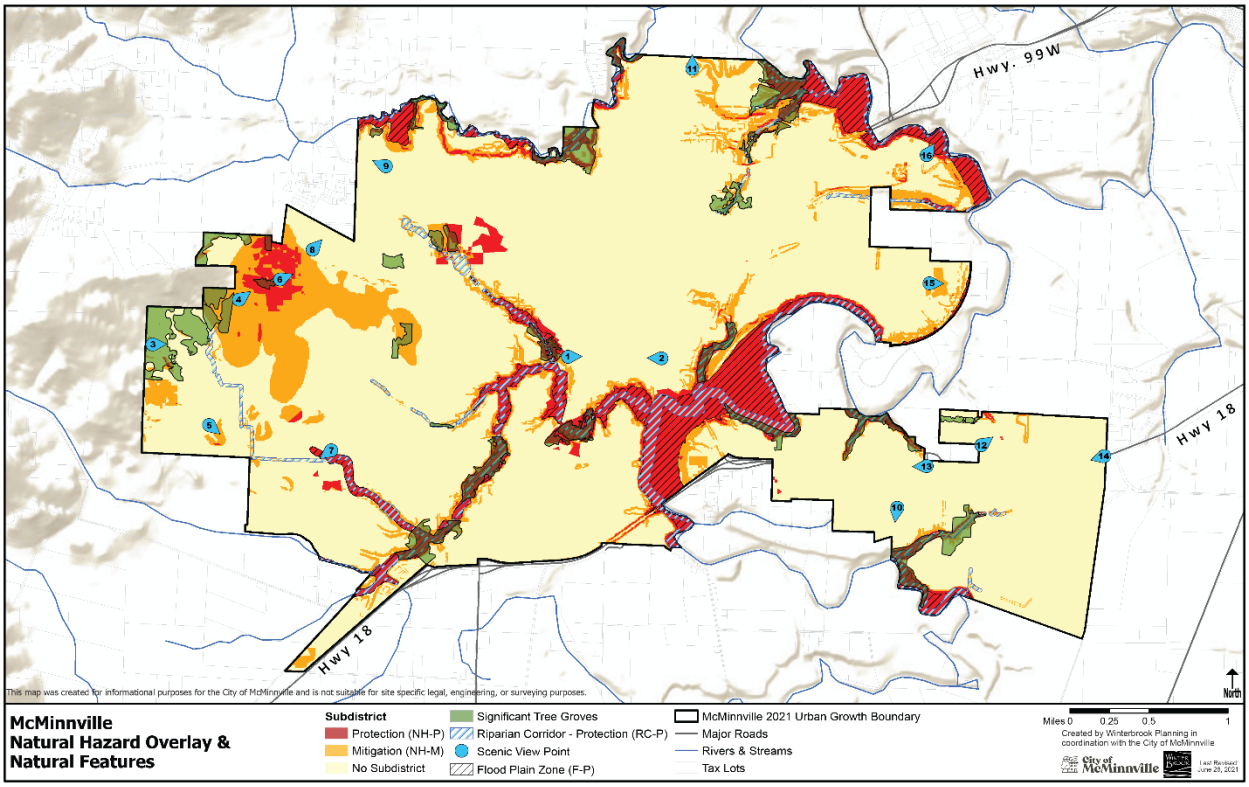

Figure 1 Proposed McMinnville Natural Hazard and Resource Subdistricts and Significant Viewpoints and Tree Groves

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I. Introduction

In 2019, McMinnville adopted the Great Neighborhood Principles (McMinnville Comprehensive Plan, Chapter IX Urbanization) to guide future community growth and development. Policies 187.40 and 187.50 provide policy basis for this report. Proposals 40, 41 and 42 provide direction for preparation of natural resource inventories.

> ***Policy 187.40*** ***The Great Neighborhood Principles shall guide long range planning efforts including, but not limited to, master plans, small area plans, and annexation requests. The Great Neighborhood Principles shall also guide applicable current land use and development applications.***
>
> ***Policy 187.50*** ***The McMinnville Great Neighborhood Principles are provided below. Each Great Neighborhood Principle is identified by number below (numbers 1 – 13) and is followed by more specific direction on how to achieve each individual principle****.*
>
> *1.* ***Natural Feature Preservation****. Great Neighborhoods are sensitive to the natural conditions and features of the land. a. Neighborhoods shall be designed to preserve significant natural features including, but not limited to****, watercourses****, sensitive lands, steep slopes, wetlands,* ***wooded areas,*** *and* ***landmark trees****.*
>
> 2. **Scenic Views**. Great Neighborhoods preserve scenic views in areas that everyone can access. a. Public and private open spaces and streets shall be located and oriented to capture and preserve scenic views, including, but not limited to, views of significant natural features, landscapes, vistas, skylines, and other important features. […]

Proposals:

> **40.00** The City shall complete an inventory of the applicable natural resources listed in Goal 5 of the Oregon Statewide Planning Goals and Guidelines. The resources to be included in the inventory include, but are not limited to, **riparian corridors**, **wetlands**, **wildlife habitat**, **open space, and scenic views**. The City shall coordinate with the Department of Land Conservation and Development to determine which Goal 5 resources to include in the inventory.
>
> **41.00** The City shall complete an inventory of **landmark trees that are of significance** or value to the City's environment or history.
>
> **42.00** The City shall develop specific park and open space requirements for different types of neighborhoods and developments, such as multiple family residential uses or single family residential subdivisions. The park and open space requirements for individual developments shall be based on the size or scale of the proposed development and on the number of dwelling units within the proposed development and shall incorporate both active and passive parks, open spaces, and opportunities to connect with nature.

In June 2020, Winterbrook prepared the “City of McMinnville Natural Features White Paper” (Winterbrook Planning, 2020). This white paper recommended an integrated Goal 5 (Natural Resources)

and Goal 7 (Natural Hazards) work program to comprehensively address "natural features" for areas within the existing or potential UGB.[1]

In December 2020, the City expanded the McMinnville Urban Growth Boundary, including supporting Comprehensive Plan, Urban Growth Management Agreement, and Zoning Ordinance amendments. The 2020 amendment package included Chapter 17.10 Area and Master Planning Process. Chapter 17.10 requires a "master plan" for all land designated as Urban Holding (UH) on the McMinnville Comprehensive Plan Map. Among other things, Section 17.10.060 requires consistency with applicable Framework Plans, Area Plans and Great Neighborhood Principles, requires preservation of scenic views and natural resources, and requires an inter-connected system of streets, bicycle routes and trails through the master planning process.[2]

In March 2021, the City authorized Winterbrook to prepare natural resource inventories, program recommendations, and natural features subdistricts (overlay zones) to implement the McMinnville Comprehensive Plan's Great Neighborhood Principles.

Winterbrook Work Program

This report provides a detailed description of the Winterbrook's natural resource inventory and program development efforts over the last four months.

Riparian Corridor Products

- GIS maps and written descriptions showing river and stream centerlines, delineated wetlands, top-of-bank estimates, and riparian corridor boundaries based on stream flows. Please see:
    - **McMinnville Riparian Corridor Inventory**
- Draft comprehensive Plan policies and land use regulations protecting land within designated riparian corridors. Please see:
    - **Section II Riparian Corridors** of this report
    - **Appendix A Draft McMinnville Comprehensive Plan Chapter XI Natural Features**
    - **Appendix B Draft Riparian Corridors – Protection (RC-P) Subdistrict**
    - **Appendix C Draft Floodplain (FP) Zone Amendments**

Tree Grove Products

- GIS maps and written descriptions showing tree grove location, quality and quantity. Please see
    - **Draft McMinnville Tree Grove Inventory**
- Draft comprehensive Plan policies and recommendations for next steps (ESEE and land use regulations) to protect significant tree groves. Please see:
    - **Section III Urban Forestry** of this Report
    - **Appendix A** Draft McMinnville Comprehensive Plan Chapter XI Natural Features

[1] In 2021, Winterbrook revised the 2020 McMinnville Natural Hazard Inventory that includes flood, steep slope, landslide, earthquake and wildfire hazard areas. Winterbrook also prepared draft Natural Hazard comprehensive plan policies and draft Zoning Ordinance amendments (a new Chapter 17.49 Natural Hazards Subdistricts). Note that Natural Hazard Subdistricts frequently overlap with inventoried natural resources (stream corridors, tree groves and scenic viewpoints and viewsheds).

[2] The McMinnville Comprehensive Plan includes additional policies that apply to the design of public and private parks, protection of wooded areas and scenic views. Such policies are referenced as appropriate in the applicable Scenic and Urban Forestry section of this report.

Significant and Landmark Trees

- Draft methods for identifying and protecting landmark and significant trees outside of tree groves and riparian corridors. Please see:
    - **Section IV Landmark and Significant Trees** of this Report.
    - **Appendix A Draft McMinnville Comprehensive Plan Chapter XI Natural Features**

Scenic View Products

- GIS Viewshed and Viewpoint Inventory Maps and Descriptions. Please see:
    - **McMinnville Scenic Viewpoints and Viewsheds Inventory**
- ESEE Analysis and Program Recommendations. Please see:
    - **Appendix A** Draft McMinnville Comprehensive Plan Chapter XI Natural Features
    - **Section IV Scenic Views** of this Report

Summary of Goal 5 Inventories

In the spring of 2021, Winterbrook conducted natural resource inventories for "wooded areas" (tree groves), "water courses" (riparian corridors), and "views of significant natural features, landscapes, vistas, skylines, and other important features" (scenic viewpoints and viewsheds). The proposed natural resource program recommendations are based on the three draft natural resource inventories:

- **The McMinnville Riparian Corridor Inventory (Winterbrook Planning, May 2021)**
- **The McMinnville Tree Grove Inventory (Winterbrook Planning, May 2021)**
- **The McMinnville Scenic Viewpoints and Viewshed Inventory (June 2021)**

Summary of Goal 5 Procedural Requirements of Program Recommendations

This document:

1. Summarizes the City's existing Comprehensive Plan policy and regulatory framework related to natural resources;
2. Explains Goal 5 procedural requirements for inventories, ESEE analyses and protection program development;
3. Recommends review and adoption of a new Comprehensive Plan **Chapter XI Natural Features** (which includes natural hazard and natural resource protection policies);
4. Recommends a new Zoning Ordinance **Chapter 17.47 Natural Resource Subdistricts** that includes the draft **Chapter 17.47.100 Riparian Corridor – Protection (RC-P**) Subdistrict to protect water courses and adjacent wooded areas;
5. Recommends amendments to **Chapter 17.48 Floodplain Zone** to protect wetlands and wooded areas within the 100-year floodplain;
6. Recommends amendments to **Chapter 17.58 Trees** related to the definition and protection of landmark and significant trees.

II. Riparian Corridors

The recommended Riparian Corridor Protection Program consists of the following:

- The draft **McMInnville Riparian Corridor Inventory** (2021).
- **Section II** of this Report.
- **Appendix A: Draft McMinnville Comprehensive Plan Chapter XI Natural Features** (including draft Riparian Corridor protection policies).
- **Appendix B**: Draft **Chapter 17.47 Natural Resource Subdistrict** amendments to the McMinnville Zoning Ordinance, including the **Riparian Corridor - Protection (RC-P) Subdistrict**.
- **Appendix C**: Draft **Chapter 17.48 Flood Plain (F-P) Zone** amendments.

A. Riparian Corridor Inventory

The McMinnville Riparian Corridor Inventory is one of three natural resource inventories prepared by Winterbrook Planning in 2021.[3] The Riparian Corridor Inventory describes and maps all fish bearing rivers and streams within the recently adopted McMinnville UGB using the "safe harbor" provisions or OAR 660-023-090(5).[4] A "safe harbor" is a way to by-pass the standard (and more time-consuming and demanding) Goal 5 process in exchange for meeting prescribed resource inventory and protection standards.

Under the riparian corridor safe harbor option fish-bearing streams within the McMinnville UGB are identified on Oregon Department of Fish and Wildlife (ODFW) and Oregon Department of Forestry (ODF) maps. Fish bearing streams include the Yamhill River, Cozine Creek, Baker Creek and their fish-bearing tributaries. The riparian corridor includes (a) the top of bank of each fish-bearing river or stream, and (b) a riparian setback area (buffer) measured outward from the top-of-bank. Winterbrook measured the top-of-bank for each river or stream reach using GIS (geographic information system) mapping protocols.

Under riparian corridor safe harbor provisions, the riparian setbacks depend on average annual stream flow, measured in cubic feet per second (cfs). Rivers or streams with an average annual flow of 1,000 cfs

[3] The two other natural resource inventories are:

- The McMinnville Scenic Viewpoint and Viewshed Inventory (Winterbrook Planning, 2021), and
- The McMinnville Tree Grove Inventory (Winterbrook Planning, 2021).

[4] (5) As a safe harbor in order to address the requirements under OAR 660-023-0030, a local government may determine the boundaries of significant riparian corridors within its jurisdiction using a standard setback distance from all fish-bearing lakes and streams shown on the documents listed in subsections (a) through (f) of section (4) of this rule, as follows:
(a) Along all streams with average annual stream flow greater than 1,000 cubic feet per second (cfs) the riparian corridor boundary shall be 75 feet upland from the top of each bank.
(b) Along all lakes, and fish-bearing streams with average annual stream flow less than 1,000 cfs, the riparian corridor boundary shall be 50 feet from the top of bank.
(c) Where the riparian corridor includes all or portions of a significant wetland as set out in OAR 660-023-0100, the standard distance to the riparian corridor boundary shall be measured from and include the upland edge of the wetland.

greater have a 75-foot riparian setback; and rivers or steams with an average annual flow of less than 1,000 cfs have a 50-foot riparian setback.[5]

- The North Yamhill River has an average annual flow of greater than 1,000 cfs – with a corresponding 75-foot riparian corridor setback area.
- The South Yamhill River, Cozine Creek and Baker Creeks (and their fish-bearing tributaries) have an average annual flow of less than 1,000 cfs – with a corresponding 50-foot riparian corridor setback area.

B. Goal 5 Process Considerations

As noted above, adoption of riparian corridor safe harbor provisions obviates the need to go through the standard Goal 5 process relating to the conduct of natural resource inventories, determination of "significance", identification of conflicting uses, ESEE analysis that consider three resource protection options, and adoption of a local protection program.

C. Riparian Corridor Management Program

The proposed riparian corridor management program includes amendments to the McMinnville Comprehensive Plan and Zoning Ordinance.

1. Draft Riparian Corridor Protection Policies

As envisioned in the Natural Features White Paper (Winterbrook Planning, 2020), a new Comprehensive Plan Chapter XI Natural Features would include policies related to both natural hazards and natural resources. Natural resource policies and natural resource policies address (a) riparian corridors, (b) tree groves and (c) scenic views. Please see **Appendix A Draft McMinnville Comprehensive Plan Chapter XI Natural Features** (including draft Riparian Corridor Protection Policies 202.00 *et seq*).

2. Draft Riparian Corridor Zoning Ordinance Amendments

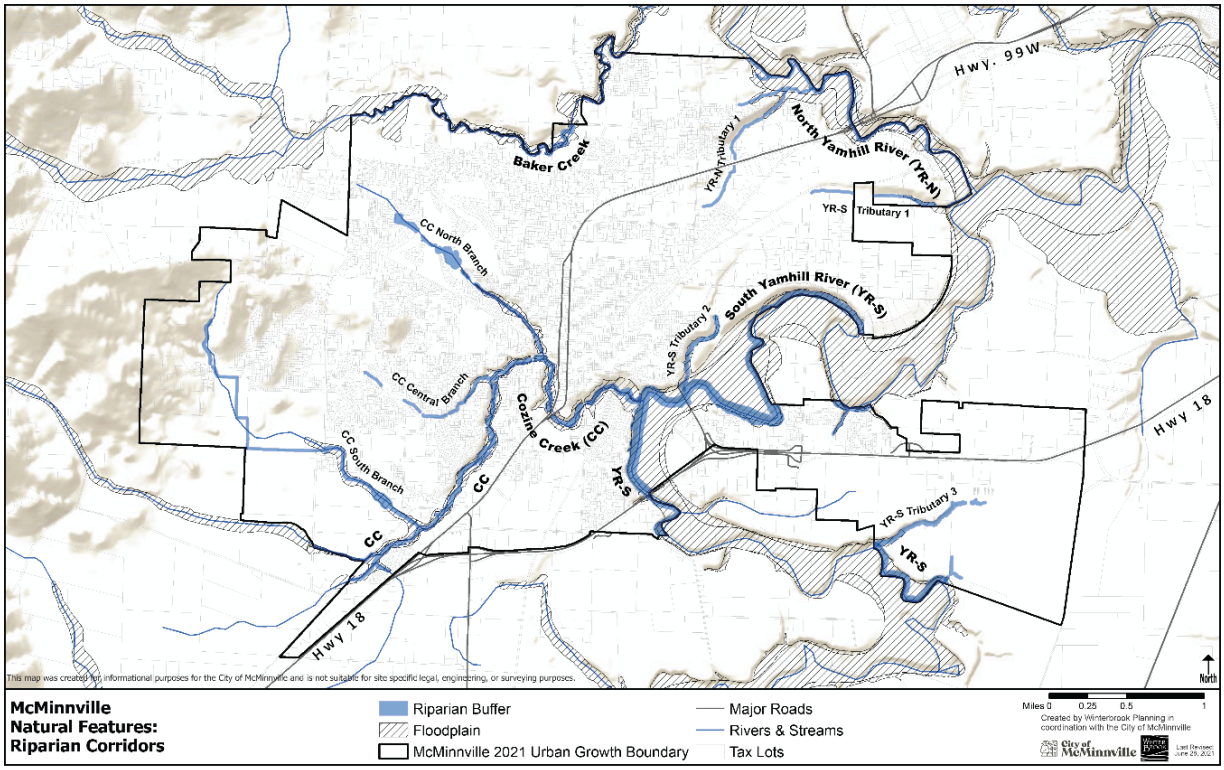
Appendix B includes the draft **Chapter 17.47 Natural Resources Subdistricts**. This chapter is designed to accommodate both future natural resources subdistricts (for example, the tree grove protection subdistrict) and the draft **Riparian Corridor – Protection (RC-P) Subdistrict**. The draft RC-P Subdistrict is based on the riparian corridor "safe harbor" provisions of OAR 660-023-090(8).[6] If adopted, the RC-P

[5] The riparian corridor "safe harbor" states that the riparian corridor may be expanded to include locally-significant wetlands based on a Local Wetlands Inventory (LWI) that meets Department of State Lands (DSL) administrative rule requirements. However, McMinnville has not prepared an LWI. The Riparian Corridor Inventory includes a list of Department of State Lands (DSL) delineated wetlands within or partially within mapped riparian corridors; however, because the City has not conducted a LWI pursuant to DSL administrative rules, the "riparian corridor" boundary is based solely on the required setback distance from mapped tops-of-bank.

[6] (8) As a safe harbor in lieu of following the ESEE process requirements of OAR 660-023-0040 and 660-023-0050, a local government may adopt an ordinance to protect a significant riparian corridor as follows:
(a) The ordinance shall prevent permanent alteration of the riparian area by grading or by the placement of structures or impervious surfaces, except for the following uses, provided they are designed and constructed to minimize intrusion into the riparian area: (A) Streets, roads, and paths; (B) Drainage facilities, utilities, and irrigation pumps; (C) Water-related and water-dependent uses; and (D) Replacement of existing structures with structures in the same location that do not disturb additional riparian surface area.
(b) The ordinance shall contain provisions to control the removal of riparian vegetation, except that the ordinance shall allow: (A) Removal of non-native vegetation and replacement with native plant species; and (B) Removal of vegetation necessary for the development of water-related or water-dependent uses.

Subdistrict will prohibit most urban development within the designated riparian corridor except for uses specifically listed in the administrative rule (such as replacement of existing structures, water-dependent uses and public facilities).

Figure 2 Riparian Corridors within McMinnville UGB and Related Floodplains



As shown on Figure 2, most of McMinnville's riparian corridors are located within the Floodplain Zone. The McMinnville Zoning Ordinance **Chapter 17.49 Floodplain Zone** prohibits most types of urban development. Because of native vegetation, trees and wetlands have water quality, erosion control and flood management functions, proposed revisions to the Floodplain Zone will limit the removal of native vegetation, trees and wetlands within the 100-year floodplain. (**Appendix C Proposed Floodplain Zone Amendments**).

(c) Notwithstanding subsection (b) of this section, the ordinance need not regulate the removal of vegetation in areas zoned for farm or forest uses pursuant to statewide Goals 3 or 4;
(d) The ordinance shall include a procedure to consider hardship variances, claims of map error, and reduction or removal of the restrictions under subsections (a) and (b) of this section for any existing lot or parcel demonstrated to have been rendered not buildable by application of the ordinance; and
(e) The ordinance may authorize the permanent alteration of the riparian area by placement of structures or impervious surfaces within the riparian corridor boundary established under subsection (5)(a) of this rule upon a demonstration that equal or better protection for identified resources will be ensured through restoration of riparian areas, enhanced buffer treatment, or similar measures. In no case shall such alterations occupy more than 50 percent of the width of the riparian area measured from the upland edge of the corridor.

III. Tree Grove Protection Program

Winterbrook has been assigned the following tasks related to updating the City's urban forestry program:

1. Winterbrook will prepare recommendations for comprehensive plan policies and land use regulations amendments to limit uses that conflict with tree grove protection and describe the ESEE analysis process to justify adoption of protective measures.

The recommended Tree Grove Protection Program consists of the following:

- The draft **McMInnville Tree Grove Inventory** (2021).
- **Section III** of this Report.
- **Appendix A:** Draft **McMinnville Comprehensive Plan Chapter XI Natural Features** (including draft Tree Grove protection policies).

Please see Section IV of this report for proposed definitions and methods of protection (recommended plan policies) for individual significant and landmark trees.

A. Existing Comprehensive Plan Policies

Policy 187.50 The McMinnville Great Neighborhood Principles are provided below. Each Great Neighborhood Principle is identified by number below (numbers 1 – 13) and is followed by more specific direction on how to achieve each individual principle.

1. ***Natural Feature Preservation****. Great Neighborhoods are sensitive to the natural conditions and features of the land. a. Neighborhoods shall be designed to preserve significant natural features including, but not limited to**, watercourses, sensitive lands, steep slopes, wetlands, **wooded areas,** and **landmark trees**.*

Most of the larger tree groves within the UGB are planned for residential development. Comprehensive Plan Policy 80.00 supports protection of wooded areas (tree groves)

> "*In proposed residential developments, distinctive or unique natural features such as **wooded areas**, **isolated preservable trees**, and drainage swales shall be preserved wherever feasible.*

B. Tree Grove Inventory

"Wooded areas" (tree groves) are identified as significant natural features in the City of McMinnville's Great Neighborhood Policies. To implement Great Neighborhood Policies, the City authorized Winterbrook Planning to prepare an inventory and assessment of significant wooded areas (tree groves) outside floodplains and within the McMinnville UGB. The project follows the inventory process outlined in the Statewide Planning Goal 5 (Natural Resources) administrative rule (OAR Chapter 660 Division 023), which requires that groves be inventoried and described.[7]

[7] (1) Inventories provide the information necessary to locate and evaluate resources and develop programs to protect such resources. The purpose of the inventory process is to compile or update a list of significant Goal 5 resources in a jurisdiction. * * * The standard Goal 5 inventory process consists of the following steps, which are set out in detail in sections (2) through (5) of this rule and further explained in sections (6) and (7) of this rule: (a) Collect information about Goal 5 resource sites; (b) Determine the adequacy of the information; (c) Determine the significance of resource sites; and (d) Adopt a list of significant resource sites.

1. Tree Grove Resource Site Location and Quantity

To determine eligible tree groves, Winterbrook worked with the City to identify trees predominantly 25 feet or more in height with contiguous canopy cover of one acre or more outside the floodplain. Tree groves beginning outside the floodplain and extending into the floodplain were also inventoried. Tree groves generally do not include linear plantings that are one or two trees wide (*e.g.*, street trees, rows of trees along a property line), or fragmented areas, such as treed areas with a high proportion of the canopy broken by houses, roads, and other developed uses. Winterbrook Inventoried 30 tree grove sites that met these thresholds.

Inventoried tree groves range from 1.2 to 47.1 acres, with a combined area of 450 acres. The average site size is 15 acres; the median size is 9 acres. Overall TGA scores ranged from a high of 46 (Site C5) to a low of 20 (Site E4). The average score for all groves was 31.93; the median score for all groves was 33.

2. Tree Grove Resource Quality

The assessment section of the survey focuses on the functional characteristics of each tree grove. Ten functional categories were evaluated, and each grove received a score of low (1), medium (3), or high (5). Potential cumulative scores for a given grove ranged from 10 to 50 points. Resource site "significance" (see below) is based on the cumulative score for each inventoried tree grove. Ten factors (functional characteristics) were used to determine the resource quality and ranking of each tree grove: (Grove Maturity and Tree size, Grove Size, Grove Health, Grove Visibility, Screening/Buffering Value, Grove Accessibility, Rarity of Tree Types, Educational/Recreational Potential, Wildlife Habitat Value[8] and Connectivity, Level of Existing Development.)

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(2) Collect information about Goal 5 resource sites: The inventory process begins with the collection of existing and available information, including inventories, surveys, and other applicable data about potential Goal 5 resource sites. * * *

(3) Determine the adequacy of the information: In order to conduct the Goal 5 process, information about each potential site must be adequate. *** The information about a particular Goal 5 resource site shall be deemed adequate if it provides the location, quality and quantity of the resource, as follows:

(a) Information about location shall include a description or map of the resource area for each site. The information must be sufficient to determine whether a resource exists on a particular site. However, a precise location of the resource for a particular site, such as would be required for building permits, is not necessary at this stage in the process.

(b) Information on quality shall indicate a resource site's value relative to other known examples of the same resource. While a regional comparison is recommended, a comparison with resource sites within the jurisdiction itself is sufficient unless there are no other local examples of the resource. Local governments shall consider any determinations about resource quality provided in available state or federal inventories.

(c) Information on quantity shall include an estimate of the relative abundance or scarcity of the resource.

(4) Determine the significance of resource sites: For sites where information is adequate, local governments shall determine whether the site is significant. This determination shall be adequate if based on the criteria in subsections (a) through (c) of this section, unless challenged by the department, objectors, or the commission based upon contradictory information. The determination of significance shall be based on:

(a) The quality, quantity, and location information;

(b) Supplemental or superseding significance criteria set out in OAR 660-023-0090 through 660-023-0230; and

(c) Any additional criteria adopted by the local government, provided these criteria do not conflict with the requirements of OAR 660-023-0090 through 660-023-0230.

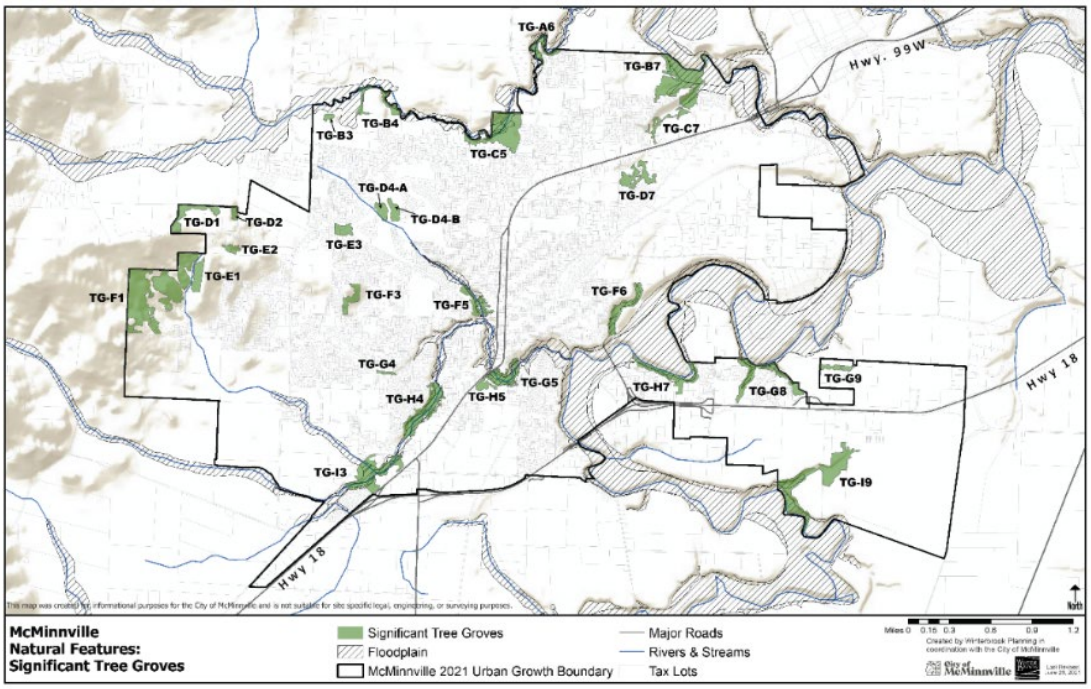
[8] As noted in the Tree Grove Inventory, several significant tree groves provide habitat for western blue birds, white breasted nuthatches, and olive-sided flycatchers.

The location and score for each tree grove was geocoded for GIS mapping purposes. These tree grove layers and information were then compared via GIS for overlap with floodplain and riparian corridor areas. Thirteen (13), or 43 percent, of the grove sites are located partially within protected floodplain areas. A larger number – 17 groves (57%) – are located within protected riparian corridors. These groves generally support greater habitat complexity due to variation in the plant community related to moisture gradients between upland, riparian and wetland habitats. In areas influenced by nearby streams or wetlands, Oregon ash, red alder, Pacific willow, and black cottonwood are dominants, while Douglas fir and bird cherry are often found at slightly higher elevations.

3. Significance Determination

Goal 5 requires that cities make a formal determination of the significance of each inventoried resource site.[9] Winterbrook recommends that the numerical threshold for determine tree grove significance be a cumulative score of at least 25; the maximum possible score is 50. Using this significance threshold, 27 of the 30 inventoried tree groves qualify as "significant" for Goal 5 purposes. Under the Goal 5 rule, significant tree groves must be evaluated further before a protection program can be adopted. Figure 3 and Table 1 show the 27 significant tree groves within the McMinnville UGB.

Figure 3 Significant Tree Groves within the McMinnville UGB



[9] 660-023-0030(5) Adopt a list of significant resource sites: When a local government determines that a particular resource site is significant, the local government shall include the site on a list of significant Goal 5 resources adopted as a part of the comprehensive plan or as a land use regulation. Local governments shall complete the Goal 5 process for all sites included on the resource list * * * (6) Local governments may determine that a particular resource site is not significant, provided they maintain a record of that determination. Local governments shall not proceed with the Goal 5 process for such sites and shall not regulate land uses in order to protect such sites under Goal 5.

Table 1. Characteristics of McMinnville Tree Groves

Grove#	Site / Location	Acres	Score	Dominant Species
A6	Lower Baker Creek / Harvest Ct	8.2	30	Douglas fir, Oregon ash
B3	Baker Creek Oaks	1.9	26	Oregon oak
B4	Upper Baker Creek / Pinot Noir Ct	9.75	34	Douglas fir, Oregon oak
B7	Grandhaven Dr (north)	45.7	36	Douglas fir, Oregon oak, Oregon ash
C4	Baker Crest Ct	1.2	22	Douglas fir, Oregon oak
C5	Tice Park / Rotary Nature Preserve	36.5	46	Douglas fir, Oregon oak, Oregon ash
C7	Grandhaven Dr (south)	6.9	26	Douglas fir, Black cottonwood
D1	Fox Ridge Rd (west)	12	30	Oregon oak, Douglas fir
D2	Fox Ridge Rd (east)	2.5	26	Oregon oak (no view, aerials only)
D4-A	Michelbrook Country Club (west)	5.3	34	Douglas fir, Oregon oak
D4-B	Michelbrook Country Club (east)	5.8	34	Douglas fir, Oregon oak
D7	Wortman Park	14	40	Oregon oak, Douglas fir
D8	Riverside Dr	2.5	22	Douglas fir plantation
E1	Redmond Hill	47.1	26	Douglas fir plantation
E2	Fox Ridge Rd / Masonic Cemetery	3.4	28	Douglas fir, Oregon oak
E3	Meadows Dr	6.1	36	Oregon ash – Forested wetland
E4	Michelbrook Country Club (South)	2.3	20	Black cottonwood (linear feature)
F1	Redmond Hill (west)	44.7	32	Douglas fir, Oregon oak
F3	Quarry Park	7.9	32	Douglas fir
F5	City Park	11.1	42	Douglas fir
F6	Public Works/ Oregon St	15.1	34	Douglas fir, Oregon ash
G4	Ash Meadows	1.5	28	Oregon ash
G5	Linfield College: Cozine Creek	14.75	34	Douglas fir, Oregon ash
G8	Yamhill River branch / Kingwood	20.3	34	Douglas fir
G9	Evergreen Aviation Chapel	4.6	28	Oregon oak
H4	Tall Oaks/Cozine Creek	24.7	34	Douglas fir, Oregon oak
H5	Linfield College: Queen's Grove	4.1	38	Oregon oak

Grove#	Site / Location	Acres	Score	Dominant Species
H7	Yamhill River extension	16.5	26	Douglas fir
I3	Barbel/Grange	29.5	42	Douglas fir, Oregon ash
I9	Airport Park	45	38	Douglas fir, Oregon oak, bigleaf maple

Three tree groves did not meet the significance threshold. Tree Groves E4 (Michelbrook Country Club-South), C4 (Baker Crest Ct), and D8 (Riverside Dr) have a score of less than 25 and are therefore not deemed "significant". These three tree groves will not be evaluated further in the development of a Goal 5 protection program.

C. Goal 5 Process Considerations

Once the location, quality and quantity of significant tree groves has been determined, cities must follow the remaining steps in the standard Goal 5 process to support adoption of tree grove protection program – consisting of comprehensive plan policies and land use regulations. These steps include[10]:

- Determine the "impact area" outside of the inventoried resource site (tree grove).
- Identify conflicting uses that would adversely impact the quantity or quality of the resource site and its impact area (tree grove).
- Describe the three required tree grove protection options (full protection, limited protection with mitigation, and no protection).
- Analyze the economic, social, environmental and energy consequences of each protection option (ESEE Analysis).
- Based on the ESEE analysis, develop a local protection program (plan policies and an overlay zone – or "subdistrict") for each resource site and its impact area.

Please note that administrative rule citations related to the Goal 5 process for significant tree groves also apply to significant scenic views that could affect development on private land. Please see discussion under Scenic Viewpoints and Viewsheds.

1. Determine the Impact Area[11]

Winterbrook mapped the boundaries of each significant tree grove to show the outer extent of the existing tree canopy – based on a combination of aerial photography analysis and on-site observation. This boundary is a reasonable starting point for determining potential adverse impacts on tree groves.

[10] OAR 660-023-0040(1) Local governments shall develop a program to achieve Goal 5 for all significant resource sites based on an analysis of the economic, social, environmental, and energy (ESEE) consequences that could result from a decision to allow, limit, or prohibit a conflicting use. This rule describes four steps to be followed in conducting an ESEE analysis, as set out in detail in sections (2) through (5) of this rule. Local governments are not required to follow these steps sequentially, and some steps anticipate a return to a previous step. However, findings shall demonstrate that requirements under each of the steps have been met, regardless of the sequence followed by the local government. The ESEE analysis need not be lengthy or complex, but should enable reviewers to gain a clear understanding of the conflicts and the consequences to be expected.

[11] OAR 660-023-0040(3) Determine the impact area. Local governments shall determine an impact area for each significant resource site. The impact area shall be drawn to include only the area in which allowed uses could

However, further on-site analysis will be necessary as part of the land use review process to determine the critical root zone and driplines of significant trees within each tree grove, and thereby minimize impacts on the tree's health and survival. Moreover, the Winterbrook tree grove inventory did not formally survey the tree canopy for each affected parcel, and tree canopies expand as trees grow.

Each tree of 6 inches or greater DBH within a significant tree grove is considered to be a "significant" tree. Avoiding development under the significant tree drip line and within the tree's critical root zone (whichever is greater) is necessary to ensure the significant tree's health and survival.[12] To ensure that potential development impacts (vegetation removal, grading and construction) are considered in the ESEE analysis, the impact area should be measured 25 feet from the outer boundary of the inventoried tree grove site.

2. Conflicting Use Identification

The Goal 5 rule defines a "conflicting use" as a land use, or other activity reasonably and customarily subject to land use regulations, that could adversely affect a significant Goal 5 resource (in this case, a significant tree in a significant tree grove). Conflicting uses are determined based on a review of permitted and conditional uses allowed by applicable City zones and the County UF (Urban Future) Zone.[13]

However, conflicting activities (such as tree removal unrelated to a development proposal) need not be related to a land use application. Conflicting activities that must be considered include tree removal, major pruning, mechanical vegetation removal, grading, and construction that does not require a building permit within either the drip line or the critical root zone of each potentially impacted tree.

However, as shown on Figure 4 and Table 2 below, about half of the significant tree grove canopy area would be protected upon adoption of the draft NH-P or RC-P Subdistricts. As proposed, both of these subdistricts limit permitted and conditional uses and activities that could conflict with tree grove protection. Upon adoption of these subdistricts:

- Potential land use conflicts with tree grove protection will have been resolved within these subdistricts: and

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adversely affect the identified resource. The impact area defines the geographic limits within which to conduct an ESEE analysis for the identified significant resource site.

[12] The McMinnville Zoning Ordinance (Section 17.06.045 Tree Related Definitions) defines "crown" (canopy), "dripline" and "critical root zone" as follows: **Crown -** the leaves and branches of a tree or shrub; the upper portion of the tree from the lowest branches on the trunk to the top. May also be referred to as "canopy." **Dripline** - A vertical line extending from the outermost edge of the tree's original canopy to the ground." **Critical Root Zone** – Generally a circular region measured outward from a tree trunk representing the essential area of the roots that must be maintained or protected for the tree's survival. Critical root zone is one foot of radial distance for every inch of tree diameter measured at 4.5 feet above ground level, with a minimum of eight feet.

[13] OAR 660-023-0040(2) Identify conflicting uses. Local governments shall identify conflicting uses that exist, or could occur, with regard to significant Goal 5 resource sites. To identify these uses, local governments shall examine land uses allowed outright or conditionally within the zones applied to the resource site and in its impact area. Local governments are not required to consider allowed uses that would be unlikely to occur in the impact area because existing permanent uses occupy the site. The following shall also apply in the identification of conflicting uses: (a) If no uses conflict with a significant resource site, acknowledged policies and land use regulations may be considered sufficient to protect the resource site. The determination that there are no conflicting uses must be based on the applicable zoning rather than ownership of the site.

- An ESEE Analysis will not be required to protect tree grove canopy area within these subdistricts.
- The ESEE Analysis will focus on land use conflicts and activities that conflict with tree grove canopy protection outside of the NH-P and RC-P Subdistricts.

It should also be noted that the draft NH-M Subdistrict prohibits tree removal on an interim basis.

Figure 4 Significant Tree Groves within or partially within Natural Hazard Subdistricts

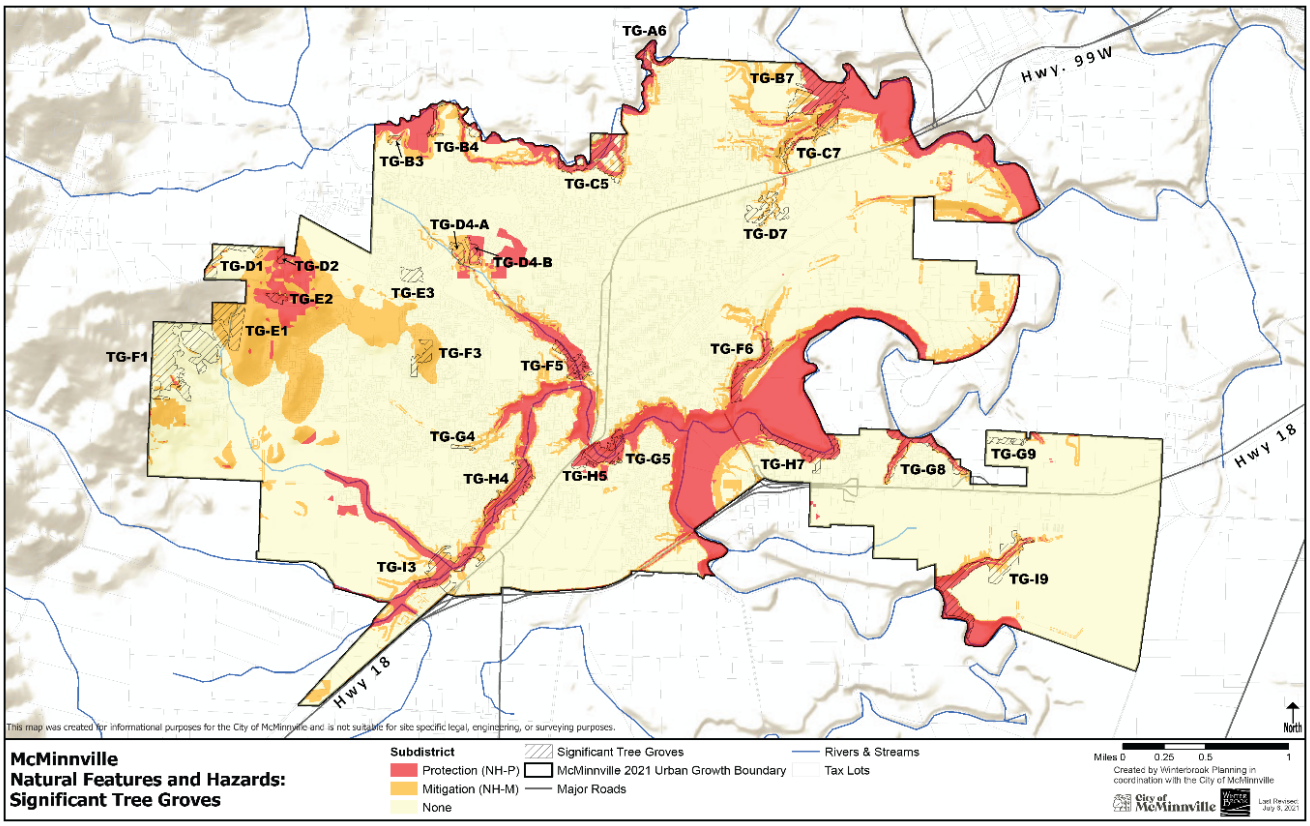

Table 2 summarizes the tree canopy area for each significant tree grove that is protected by the NH-P and RC-P Subdistricts.

Table 2. Significant Tree Groves Protected by NH-P and RC-P Subdistricts

Grove #	Significant Tree Grove Acres	Protected NH-P | RC-P Subdistrict Acres	Percent Protected	Unprotected Acres
A6	8.20	8.02	98%	0.18
B3	1.91	0.45	24%	1.46
B4	9.75	6.48	66%	3.27

B7	45.71	31.44	69%	14.26
C5	36.51	22.27	61%	14.24
C7	6.90	2.60	38%	4.30
D1	11.96	0.34	3%	11.62
D2	2.53	2.47	98%	0.05
D4-A	5.35	1.18	22%	4.17
D4-B	5.78	3.41	59%	2.36
D7	13.95	2.53	18%	11.42
E1	47.08	0.21	0%	46.87
E2	3.39	3.29	97%	0.10
E3	6.09	0.00	0%	6.09
F1	44.68	0.55	1%	44.13
F3	7.95	0.00	0%	7.95
F5	11.10	8.74	79%	2.36
F6	15.08	13.63	90%	1.45
G4	1.50	1.41	94%	0.09
G5	14.75	14.45	98%	0.30
G8	20.29	15.36	76%	4.93
G9	4.46	0.00	0%	4.46
H4	24.66	21.55	87%	3.12
H5	4.05	3.34	82%	0.72
H7	16.50	14.07	85%	2.43
I3	29.50	18.77	64%	10.73
I9	45.00	29.70	66%	15.29
TOTAL	**444.62**	**226.27**	**51%**	**218.35**

As shown in Table 2, no significant tree groves are completely covered by natural resource or natural resource protection districts. Therefore, an ESEE Analysis must be prepared prior to applying the anticipated tree grove protection subdistrict to any of the 27 significant tree groves.

In summary, the NH-P and RC-P Subdistricts:

- Protect about half (51%) of the total canopy area in the 23 significant tree groves.
- Protect 10% or less of the tree canopy area in five of the significant tree groves;
- Protect 90% or more of the tree canopy area in five of the significant tree groves.
- Protect from 20% to 89% of the canopy area in the remaining 17 significant tree groves.

As noted below, where tree grove canopy is protected by existing zoning or overlay (subdistrict) standards, an ESEE analysis is required only for the portion of the tree grove where unresolved conflicting uses remain. Based on Table 2, the ESEE analysis would need to address an estimated 49% of the existing tree canopy (and its impact area) outside of the NH-P and RC-P Subdistricts.

3. Tree Grove Protection Program Options

Goal 5 requires that each city consider three resource protection options for significant tree groves outside or partially outside the NH-P or RC-P Subdistricts:

- Full resource protection (no conflicting uses allowed)
- Limited resource protection (one or more conflicting uses allowed with restrictions)
- No resource protection (conflicting uses allowed without restriction)

Cities rarely adopt the full resource protection or the no resource site protection options because:

1. Full tree grove protection (a) would not allow transportation and public facilities that often need to pass through resource sites to serve nearby buildable areas, (b) could potentially result in little or no economic use of a property, which would be unfair to property owners, and (c) would preclude fuel reduction requirements in identified wildfire hazard areas.
2. On the other hand, the no tree grove protection option would allow conflicting uses without mitigation – which would be inconsistent with adopted Great Community Principles.

In most cases, cities adopt a "limited protection program" for significant resource sites. Such programs usually (a) allow some conflicting uses with restrictions and subject to clear mitigation standards, and (b) provide for density transfer from the resource site to adjacent buildable land. Winterbrook's recommended limited tree grove protection program (see Subsection D below) would be implemented by natural resource protection policies and a new Tree Grove – Conservation (TG-C) Subdistrict.

4. ESEE Analysis

The ESEE analysis must consider the economic, social, environmental and energy consequences of the full tree grove protection, limited tree grove protection and no tree grove protection options.[14] We

[14] OAR 660-023-0040(4) Analyze the ESEE consequences. Local governments shall analyze the ESEE consequences that could result from decisions to allow, limit, or prohibit a conflicting use. The analysis may address each of the identified conflicting uses, or it may address a group of similar conflicting uses. A local government may conduct a single analysis for two or more resource sites that are within the same area or that are similarly situated and subject to the same zoning. The local government may establish a matrix of commonly occurring conflicting uses and apply the matrix to particular resource sites in order to facilitate the analysis. A local government may conduct

recommend that the ESEE analysis be conducted for all 27 significant tree groves at the same time, so that the City can comprehensively and comparatively evaluate ESEE consequences for each resource site. Based on the ESEE consequences analysis, it is possible that one or more significant tree groves may *not* be selected for inclusion in the Tree Grove – Conservation (TG-C) Subdistrict.

D. Tree Grove Limited Protection Program Recommendations

Under Goal 5, the final tree grove management program must be based on an ESEE analysis. However, as noted above, the required Goal 5 ESEE analysis process requires that three program options be considered[15]: For an ESEE analysis to be useful, cities should be able to outline key provisions of a limited protection program. Winterbrook recommends that the following tree grove limited protection program be considered when the required ESEE analysis is conducted in the future. [16]

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a single analysis for a site containing more than one significant Goal 5 resource. The ESEE analysis must consider any applicable statewide goal or acknowledged plan requirements, including the requirements of Goal 5. The analyses of the ESEE consequences shall be adopted either as part of the plan or as a land use regulation.
One of the following determinations shall be reached with regard to conflicting uses for a significant resource site:

(a) A local government may decide that a significant resource site is of such importance compared to the conflicting uses, and the ESEE consequences of allowing the conflicting uses are so detrimental to the resource, that the conflicting uses should be prohibited.

(b) A local government may decide that both the resource site and the conflicting uses are important compared to each other, and, based on the ESEE analysis, the conflicting uses should be allowed in a limited way that protects the resource site to a desired extent.

(c) A local government may decide that the conflicting use should be allowed fully, notwithstanding the possible impacts on the resource site. The ESEE analysis must demonstrate that the conflicting use is of sufficient importance relative to the resource site, and must indicate why measures to protect the resource to some extent should not be provided, as per subsection (b) of this section.

[15] OAR 660-003-0050(1) For each resource site, local governments shall adopt comprehensive plan provisions and land use regulations to implement the decisions made pursuant to OAR 660-023-0040(5). The plan shall describe the degree of protection intended for each significant resource site. The plan and implementing ordinances shall clearly identify those conflicting uses that are allowed and the specific standards or limitations that apply to the allowed uses. A program to achieve Goal 5 may include zoning measures that partially or fully allow conflicting uses (see OAR 660-023-0040(5)(b) and (c)).
(2) When a local government has decided to protect a resource site under OAR 660-023-0040(5)(b), implementing measures applied to conflicting uses on the resource site and within its impact area shall contain clear and objective standards. For purposes of this division, a standard shall be considered clear and objective if it meets any one of the following criteria: (a) It is a fixed numerical standard, such as a height limitation of 35 feet or a setback of 50 feet; (b) It is a nondiscretionary requirement, such as a requirement that grading not occur beneath the dripline of a protected tree; or (c) It is a performance standard that describes the outcome to be achieved by the design, siting, construction, or operation of the conflicting use, and specifies the objective criteria to be used in evaluating outcome or performance. Different performance standards may be needed for different resource sites. If performance standards are adopted, the local government shall at the same time adopt a process for their application (such as a conditional use, or design review ordinance provision).
(5) Develop a program to achieve Goal 5. Local governments shall determine whether to allow, limit, or prohibit.

[16] Programs to Achieve Goal 5
(1) For each resource site, local governments shall adopt comprehensive plan provisions and land use regulations to implement the decisions made pursuant to OAR 660-023-0040(5). The plan shall describe the degree of protection intended for each significant resource site. The plan and implementing ordinances shall clearly identify those conflicting uses that are allowed and the specific standards or limitations that apply to the allowed uses. A program to achieve Goal 5 may include zoning measures that partially or fully allow conflicting uses (see OAR 660-023-0040(5)(b) and (c)).

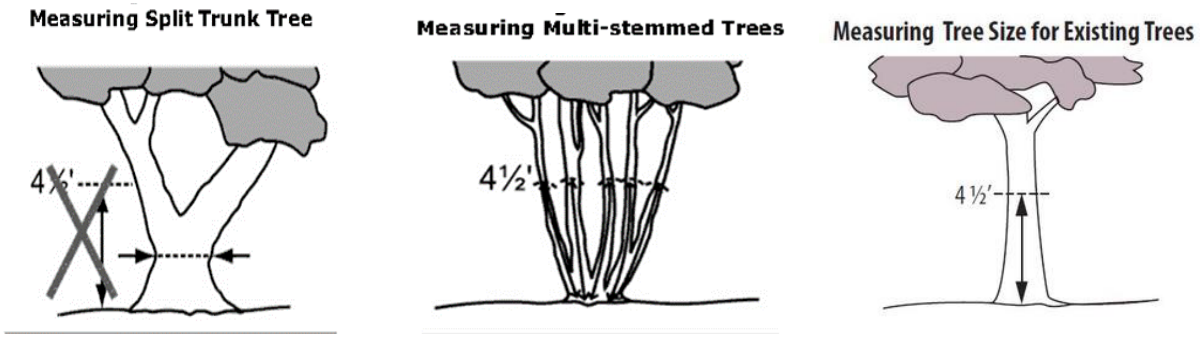
Recommended Limited Protection Program

Winterbrook recommends the following limited tree grove protection program, based on draft policies found in **Appendix A McMinnville Comprehensive Plan Chapter XI Natural Features.** In addition to the full protection and no protection options, the City shall consider (in broad outline) the following limited protection program option when preparing in the required Goal 5 ESEE Analysis.

This draft program would be implemented by a new **Tree Grove – Conservation (TG-C) Subdistrict** that could apply (if supported by the required ESEE analysis) to each of the 27 significant tree groves described and mapped in the McMinnville Tree Grove Inventory. **Chapter 17.58 Trees**, as amended, would also apply to tree removal and major pruning of trees within the TG-C Subdistrict. (See definitions of Landmark and Significant Trees in Subsections E and F below.)

Significant trees within significant tree groves have a diameter at breast height (dbh) of 6 inches or more, measured as shown on Figure7 below.

Figure 7 Measuring Tree Trunk Diameter at Breast Height (dbh)



(2) When a local government has decided to protect a resource site under OAR 660-023-0040(5)(b), implementing measures applied to conflicting uses on the resource site and within its impact area shall contain clear and objective standards. For purposes of this division, a standard shall be considered clear and objective if it meets any one of the following criteria:

(a) It is a fixed numerical standard, such as a height limitation of 35 feet or a setback of 50 feet;

(b) It is a nondiscretionary requirement, such as a requirement that grading not occur beneath the dripline of a protected tree; or

(c) It is a performance standard that describes the outcome to be achieved by the design, siting, construction, or operation of the conflicting use, and specifies the objective criteria to be used in evaluating outcome or performance. Different performance standards may be needed for different resource sites. If performance standards are adopted, the local government shall at the same time adopt a process for their application (such as a conditional use, or design review ordinance provision).

(3) In addition to the clear and objective regulations required by section (2) of this rule, except for aggregate resources, local governments may adopt an alternative approval process that includes land use regulations that are not clear and objective (such as a planned unit development ordinance with discretionary performance standards), provided such regulations:

(a) Specify that landowners have the choice of proceeding under either the clear and objective approval process or the alternative regulations; and

(b) Require a level of protection for the resource that meets or exceeds the intended level determined under OAR 660-023-0040(5) and 660-023-0050(1).

Except for nuisance, diseased, dead or dangerous trees as determined in an arborist's report approved by the City, removal of trees within significant tree groves would be prohibited on public and private land unless approved through a land use review process.

1. The City may approve selective tree thinning and trimming within significant tree groves to address applicable NH-P, NH-M and RC-P Subdistricts to meet wildfire fuel reduction standards.
2. The tree protection standards of the NH-P, NH-M and RC-P Subdistricts shall apply upon their adoption by the City and will limit tree removal to significant tree groves within their respective boundaries.
3. Under most circumstances, significant tree removal within significant tree groves would be prohibited – unless approved through a land use review process.
4. For development sites within or partially within a significant tree grove (outside the NH-P and RC-P) Subdistricts, at least 50 percent of the significant tree canopy would be protected through the land use review process. The location of the on-site protected area would be determined on the following priorities:
    a. First priority would be given to protection of landmark tree canopy.
    b. Second priority would be given to protection of significant tree canopy within 100 feet of significant riparian corridors.
    c. Third priority would be given to protection of the remaining significant tree canopy as recommended by the consulting certified arborist.
5. Residential density transfer from protected land within the TG-C Subdistrict to buildable land on contiguous property under the same ownership (*i.e.*, land outside the floodplain and any appliable Natural Resource or Natural Hazard Subdistrict) would be encouraged.
    a. The maximum density allowed in the transfer area would be the maximum density allowed in the next higher residential zoning district. For example, density transfer from protected TG-C area with an underlying R1 zone to buildable land outside the applicable natural hazard and resource subdistricts would be capped at the maximum density allowed in the R2 zone.
    b. In exchange for density transfer, the protected area would be placed in a conservation easement enforceable by the City.
6. In situations where density transfer is not feasible, a maximum of one dwelling unit per 2.5 acres shall be permitted on land zoned for residential use.
    a. In such situations, the maximum development area on the 2.5 acre site would be one-quarter acre and the remainder of the tree grove area shall be protected.
    b. The location of the quarter-acre development area would be based on the priorities in Subsection 4 above.

1. Land Use Regulations

If the ESEE analysis supports the proposed (or similar) limited protection program, a new Tree Grove – Conservation (TG-C) Subdistrict would be prepared to implement the limited protection program outlined above. The standards in the TG-C Subdistrict will need to be clear and objective. However, the subdistrict could also allow a discretionary approach (for example, a planned development) that equally or better protects landmark and significant trees within the TG-C Subdistrict.

IV. Landmark and Significant Trees

Winterbrook agreed to prepare definitions and methods for identifying and protecting individual landmark and significant trees.

Appendix A McMinnville Comprehensive Plan Chapter XI Natural Features includes proposed landmark and significant tree definitions and recommended protection measures. In addition to landmark and significant tree protection policies found in Appendix A, Winterbrook recommends text amendments to the City's existing tree protection program as set forth in **Chapter 17.58 Trees**.

A. Proposed Amendments to Section 17.06.030 Tree Related Definitions

Winterbrook recommends the following amendments to tree related definitions:

1. Definitions of Trees, Nuisance Trees and Significant Trees

- Significant Tree – ~~*Selected trees placed on an inventory based on the age, species, and location*~~ Significant trees are either (1) trees from 12 inches but less than 36 inches dbh on public and private land within the McMinnville UGB, or (2) trees 6 inches or greater dbh in the Floodplain (F-P) Zone, the Natural Hazard – Protection (NH-P) Subdistrict or the Riparian Corridor – Protection (RC-P) Subdistrict. Significant trees do not include hazardous, diseased, dead or nuisance trees as determined by the Planning Director in consultation with a certified arborist.
- **Tree** – Any woody plant having a trunk ~~five~~ six inches or more in diameter 4.5 feet above ground level at the base of the trunk. If a tree splits into multiple trunks below 4.5 feet, the trunk is measured at its most narrow point beneath the split.

Rationale for Amendments

The six-inch dbh tree definition is the industry standard for tree regulation in Oregon communities.

Most urban forestry programs exempt nuisance trees[17] from local protection because they are by definition invasive, hazardous or likely to damage public infrastructure.

The 12-inch diameter significant tree threshold for regulating tree removal (outside of environmental zones) through the development process comes from the City of Portland Urban Forestry Program.

The 6-inch diameter threshold is common practice in most Oregon jurisdictions with urban forestry programs and applies to tree removal within Portland's environmental zones. Each of the proposed McMinnville natural resource and natural hazard subdistricts includes tree protection standards to maintain and improve water quality related to temperature and sedimentation, and to improve upland and riparian habitat values.

2. Definition of Landmark Trees

Winterbrook recommends a new "landmark tree" definition as follows:

[17] The City of Portland defines "nuisance trees" to include the following: Norway maple, sycamore maple, horse chestnut, tree-of-heaven, cutleaf birch, English holly, golden chain tree, Chinese empress, white popular, sweet cherry, English laurel, black locust, European mountain ash , Siberian elm. Winterbrook recommends that the City develop its own nuisance list. For example, some communities consider large cottonwood trees to be hazardous when located outside of floodplains and riparian corridors.

- Landmark Tree – Trees located on public and private land within the McMinnville UGB that are either (1) 36 inches or greater dbh, or (2) Oregon white oak trees 12 inches dbh or greater.

Rationale for Amendment

The 36 inch dbh threshold comes from the City of Portland definition for "large trees" that require public notice before they can be removed.

The reason for including smaller Oregon white oak trees is that such trees are (a) are found in rapidly disappearing oak savannah habitat, and (b) are typically found on dry south-facing hillside areas with relatively poor soils and grow slowly.

B. Proposed Amendments to Chapter 17.58 Trees

To protect against Landmark and Significant tree removal, Winterbrook recommends the following amendments to **Chapter 17.58 Trees** *in addition to* adoption of tree protection standards in the F-P, NH-P, NH-M and RC-P Subdistricts.

Section 17.58.020 Applicability

Winterbrook recommends amending Section 17.58.020 Applicability as follows:

A. All individual significant, landmark and ~~or~~ historic trees as defined in this ordinance located on public or private land within the UGB.

B. All trees with trunks located completely or partially within any public area or right-of-way;

C. All trees with trunks located completely within any private property which directly affect public infrastructure including but not limited to sewers, water mains, sidewalks, streets, public property, or clear vision distances at street intersections;

D. All significant trees on developable land **or** ~~and~~ subject to or undergoing development review such as site plan review, tentative subdivision review, or partition review.

Section 17.58.040 Tree Removal/Replacement

Winterbrook recommends amending Section 17.58.040 Tree Removal/Replacement as follows:

A. The removal or major pruning of any tree, if applicable under Section 17.58.020, shall require City approval, unless specifically designated as exempt by this ordinance. * * *

B. Trees subject to this ordinance shall be removed or pruned following accepted pruning standards adopted by the City. * * *

C. The applicant shall be responsible for all costs associated with the tree removal or pruning, or as otherwise required by this ordinance, and shall ensure that all work is done in a manner which ensures safety to individuals and public and private property.

D. Approval of a request to remove a tree may be conditioned upon replacement of the tree with ~~another~~ tree**s** approved by the city, and/or a requirement to pay to the city

an amount sufficient to fund the planting and establishment by the city of a tree, or trees, of similar value **to the community**.

~~1. The value of the existing tree to be removed shall be calculated using the methods set forth in the edition then in effect of the "Guide for Plant Appraisal" published by the International Society of Arboriculture Council of Tree Landscape Appraisers. Every attempt should be made to plant replacement trees in the same general location as the tree being removed. In the event that a replacement tree cannot be planted in the same general location, a condition of approval may be required to allow for Ordinance 3380 199 the replacement tree to be planted in another location in the City as part of the City's annual tree planting program.~~

1. Significant and Landmark Tree Removal and Major Pruning Generally.

   a. Removal of up to one significant tree during a calendar year, on a developed residential lot of 10,000 square feet or less, shall be exempt from the provisions of this ordinance. This exemption does not apply to significant trees within the Floodplain (F-P) Zone or to applicable Natural Hazard or Natural Resource Protection Subdistricts.

   b. Removal of landmark trees shall only be permitted pursuant to Subsection 4 below.

   c. Any tree may be pruned to meet wildfire fuel reduction requirements under the supervision of a certified arborist.

2. Significant trees outside of Natural Resource and Natural Hazard Protection Subdistricts. If the review authority approves significant tree removal, the value of each significant tree to be removed shall mitigated as follows:

   a. At least one 10 gallon tree approved by the City shall be planted on-site or on adjacent public land for each six inches of significant tree diameter removed; or

   b. If the certified arborist determines that there is no suitable location for replacement trees on-site or on adjacent public land, then the replacement fee shall be determined as follows:

      i. Trees ≥12 and <20 inches diameter: $1,800.00 per tree; and

      ii. Trees ≥20 and <36 inches diameter $3,600.00 per tree.

3. Significant trees within NH-P, NH-M, TG-C and RC-P Subdistricts. Where limited significant tree removal is permitted consistent with applicable zoning standards, a tree mitigation plan shall be required, and replacement trees shall be determined by required tree mitigation planting plans(s).

4. Landmark Trees outside of Natural Resource and Natural Hazard Protection Subdistricts.

   a. If removal is approved by the review authority on private land not required for public right-of-way dedication, the value of the landmark tree to be removed shall be charged to the property owner or land developer based on the value of the tree to the community.

b. The City has determined that the value of a landmark tree shall be $300 per dbh inch removed.

c. This fee is intended to encourage the property owner or developer and certified arborist to evaluate every reasonable development option prior to deciding to remove the landmark tree.

d. In addition, as recommended by a certified arborist, at least one 10 gallon replacement tree within the potential to grow to a similar size as the lost landmark trees, shall be planted on-site.

5. Landmark Trees within of the NH-P and RC-P Subdistricts.

a. Landmark trees shall be protected unless there is no practicable alternative means to construct a planned public facility identified on an adopted city master plan.

a. If approved by the review authority for removal, at least one 10 gallon replacement tree approved by the City shall be planted on-site or on adjacent public land for each six inches of landmark tree diameter removed in a location recommended by a certified arborist.

b. Removal of landmark trees within significant tree groves shall be prohibited.

Section 17.58.050 Review Criteria

Winterbrook recommends amending Section 17.58.050 Review Criteria as follows:

Review Criteria. A permit for major pruning or tree removal shall be granted if any of the following criteria apply:

A. The tree is unsafe, dead, or diseased as determined by a Certified Arborist or has been determined to be a nuisance tree by the City. Verification of tree health may be required, at the expense of the applicant, by a Certified Arborist acceptable to the City.
B. The tree is in conflict with planned public improvements, no reasonable and practicable alternative to significant or landmark tree removal exists, and any required mitigation plans have been approved by the land use review authority.
C. The proposed removal or pruning is part of an approved development project, ~~a public improvement project where no alternative is available, or is part of a street tree improvement program.~~ is consistent with the tree removal provisions of applicable natural hazard and natural resource subdistricts, and a mitigation plan for tree loss has been approved by the land use review authority.
D. Verification of tree health or a tree's impacts on infrastructure shall be required, at the expense of the applicant, by a Certified Arborist acceptable to the City.
E. The permit is consistent with applicable standards of Section 17.58.040 Tree Removal / Replacement.

Rationale for Tree Removal and Mitigation Standards

It is very difficult to apply clear and objective standards to limit removal of individual significant and landmark trees on private property outside of natural hazard or natural resource subdistricts – while allowing site development consistent with applicable zoning standards. For example, requiring the

applicant to demonstrate that "there is no reasonable alternative" does not meet the clear and objective standards test required on buildable land by Statewide Planning Goal 10 Housing rules. Therefore, the decision as to whether to protect or remove a landmark or significant tree outside the F-P zone and the RC-P, and NH-M and NH-P Subdistricts is left to the developer in consultation with a certified arborist. However, if the fee for significant or landmark tree removal is sufficiently high, it can substantially deter tree removal.

The City of Portland discourages removal of very large trees (trees of 36 inches or greater dbh) by requiring public notice and payment to the city tree fund of $450 per diameter inch removed. Thus, removal of a 36 inch dbh tree would cost the developer $16,200. This fee effectively deters developers from unnecessarily removing large trees, while providing a fund for tree planting on a city-wide basis. Portland charges:

Because land values are lower in McMinnville than Portland, we recommend that removal of landmark trees require a fee of $300 per diameter inch lost. This fee would be assessed whenever a non-hazardous and healthy landmark tree is removed – regardless of whether tree removal occurs as part of a development application or a property owner's preference. Thus, removal of a 36-inch dbh landmark tree in McMinnville would cost the landowner/developer $10,800, which would be a substantial deterrent.

As noted in Section III of this report and in draft Appendix A policies, landmark trees would be protected in significant tree groves.

V. Scenic Viewpoints and Viewsheds

Community values play a much more important role in assessing and protecting significant scenic viewsheds and viewpoints. Winterbrook agreed to prepare recommendations for Comprehensive Plan policies and alternatives for limiting uses that conflict with scenic viewpoint and viewshed protection and describe the ESEE analysis process to justify adoption of protective measures.

- GIS Viewshed and Viewpoint Inventory Maps and Descriptions. Please see:
  - **McMinnville Scenic Viewpoints and Viewsheds Inventory**
- ESEE Analysis and Program Recommendations. Please see:
  - **Appendix A** Draft McMinnville Comprehensive Plan Chapter XI Natural Features Policies
  - **Section V Scenic Viewpoints and Viewsheds** of this Report

Existing Comprehensive Plan Policies

The City of McMinnville's Great Neighborhood Principles call for equitable access to community amenities such as scenic views and viewpoints. McMinnville residents have expressed their desire to preserve the City's scenic views for all to enjoy – as stated in Great Neighborhood Principle 2 as implemented by Policy 187.50(3) Scenic Views:

> *Policy 187.50. The McMinnville Great Neighborhood Principles are provided below. Each Great Neighborhood Principle is identified by number below (numbers 1 – 13) and is followed by more specific direction on how to achieve each individual principle.*
>
> 3. ***Scenic Views**. Great Neighborhoods preserve scenic views in areas that everyone can access.*
>   *a. Public and private open spaces and streets shall be located and oriented to capture and preserve scenic views, including, but not limited to, views of significant natural features, landscapes, vistas, skylines, and other important features.*

McMinnville's Comprehensive Plan also calls for provision of scenic areas in Goal VII 3, implemented by Policies 159.00, 166.00 and 167.00:

> *GOAL VII 3: TO PROVIDE PARKS AND RECREATION FACILITIES, OPEN SPACES, AND SCENIC AREAS FOR THE USE AND ENJOYMENT OF ALL CITIZENS OF THE COMMUNITY**.***
>
> 1. *Policy 159.00 The City of McMinnville's Parks, Recreation, and Open Space Master Plan shall serve to identify future needs of the community, available resources, funding alternatives, and priority projects.*
> 2. *Policy 166. 00 The City of McMinnville shall recognize open space and natural areas, in addition to developed park sites, as necessary elements of the urban area.*
> 3. *Policy 167.00 The City of McMinnville shall encourage the retention of open space and scenic areas throughout the community, especially at the entrances to the City.*

McMinnville Comprehensive Plan Policy 187.50(2) focuses primarily on the future location, orientation and design of viewpoints from existing and planned public parks, streets and trails to corresponding viewsheds (significant scenic features that are observable from viewpoints). In such cases, including scenic viewpoints and viewsheds in the location, orientation and design of public facilities does not require an ESEE analysis because there are no conflicting uses.

Scenic viewpoints may also be located on private land subject to Area Plans. If the Area plans identifies a scenic viewpoint, then an ESEE analysis will be required to implement the Area Plan prior to land division or planned development approval.

While City designated viewpoints are all located within the McMinnville Urban Growth (UGB), scenic views from these viewpoints (viewsheds) include urban and rural landscapes, such as significant natural features and urban streetscapes within the UGB, and rural farm and forest lands, and distant hills and mountains outside the UGB.

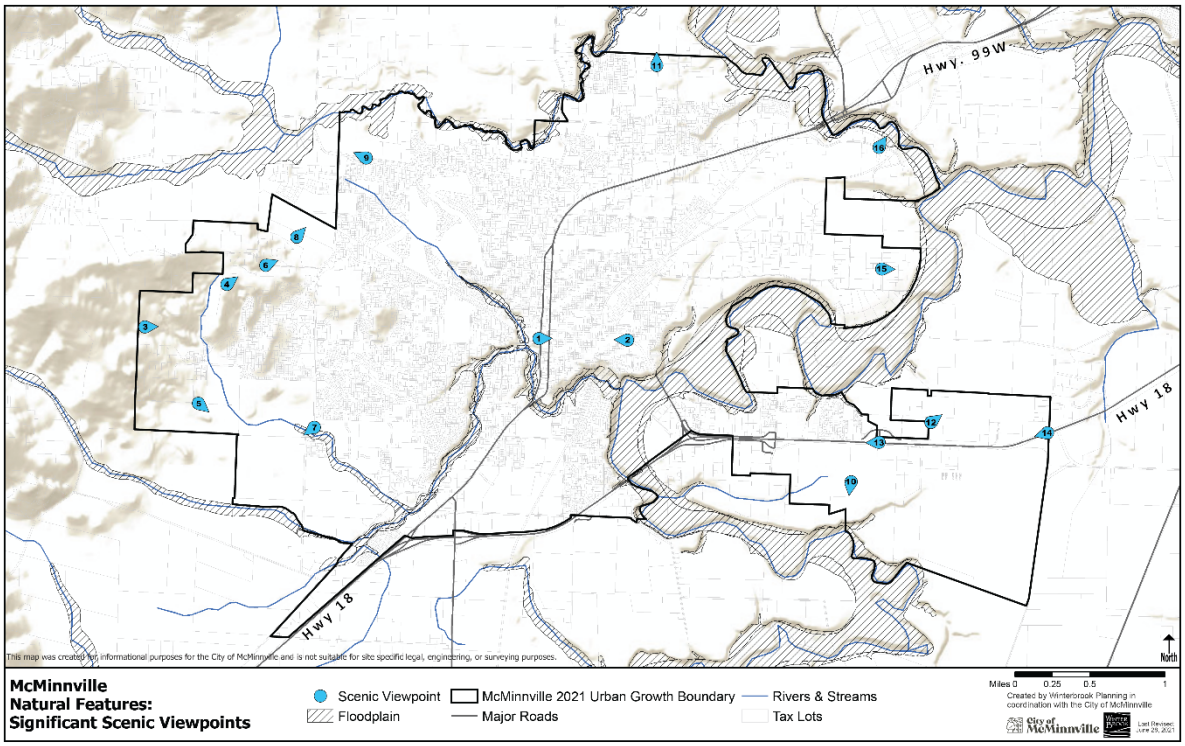
Existing Land Use Regulations

The McMinnville Zoning Ordinance includes provisions that require scenic views to be considered in the master planning process, and in the land division and planned development review processes.

A. McMinnville Scenic Viewpoint and Viewshed Inventory

Working collaboratively with City planning staff, the project team identified 16 scenic viewpoints within the McMinnville UGB. Each viewpoint has a corresponding viewshed. Viewsheds include both urban landscapes (within the McMinnville UGB) and rural landscapes (outside the UGB). Viewsheds have scenic characteristics that, when considered together, are valued by the community. These 16 viewpoints are shown below in Figure 5.

Figure 5 Significant Scenic Viewpoints

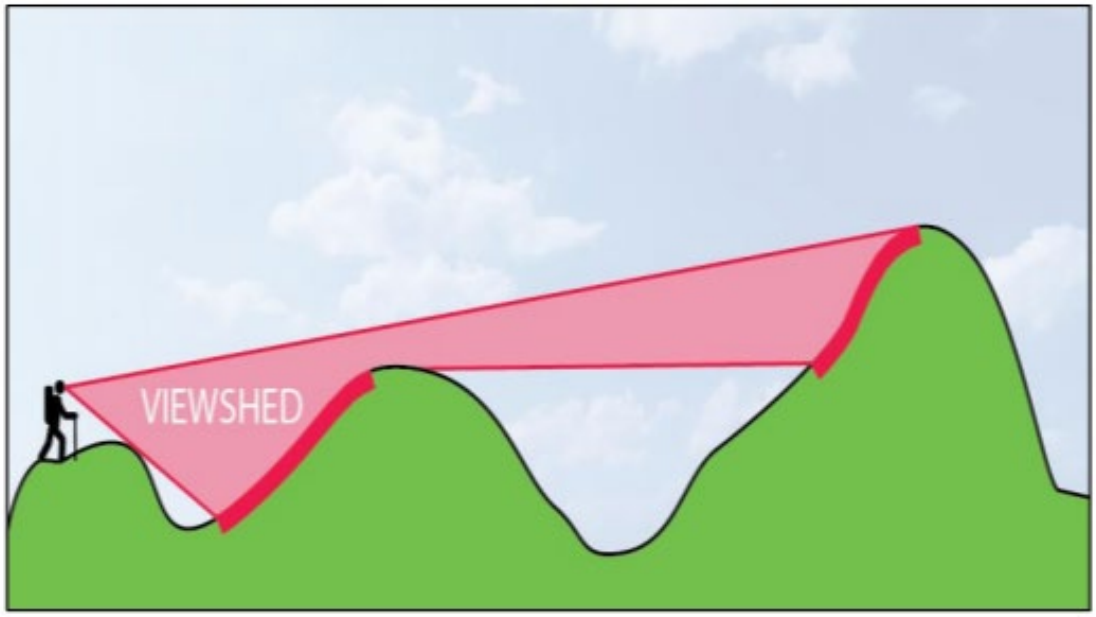


1. Resource Site Location and Quantity

GIS mapping analysis is an efficient and reliable method to illustrate significant viewpoints and viewsheds. GIS viewshed analysis relies on two main data inputs: observation points and elevation

modeling. Observation points provide the "starting point" of the analysis, or the subject's view. Once observation points are established, the analysis incorporates digital elevation models (DEMs) to determine the viewshed from the single point. Figure 6 shows the theoretical outcome of the analysis, with the hiker representing an observation point and the viewshed shown in red.

Figure 6 An Observer and their Viewshed[18]



2. Resource Site Quality

City staff and Winterbrook have identified the following scenic characteristics that define significant scenic viewsheds:

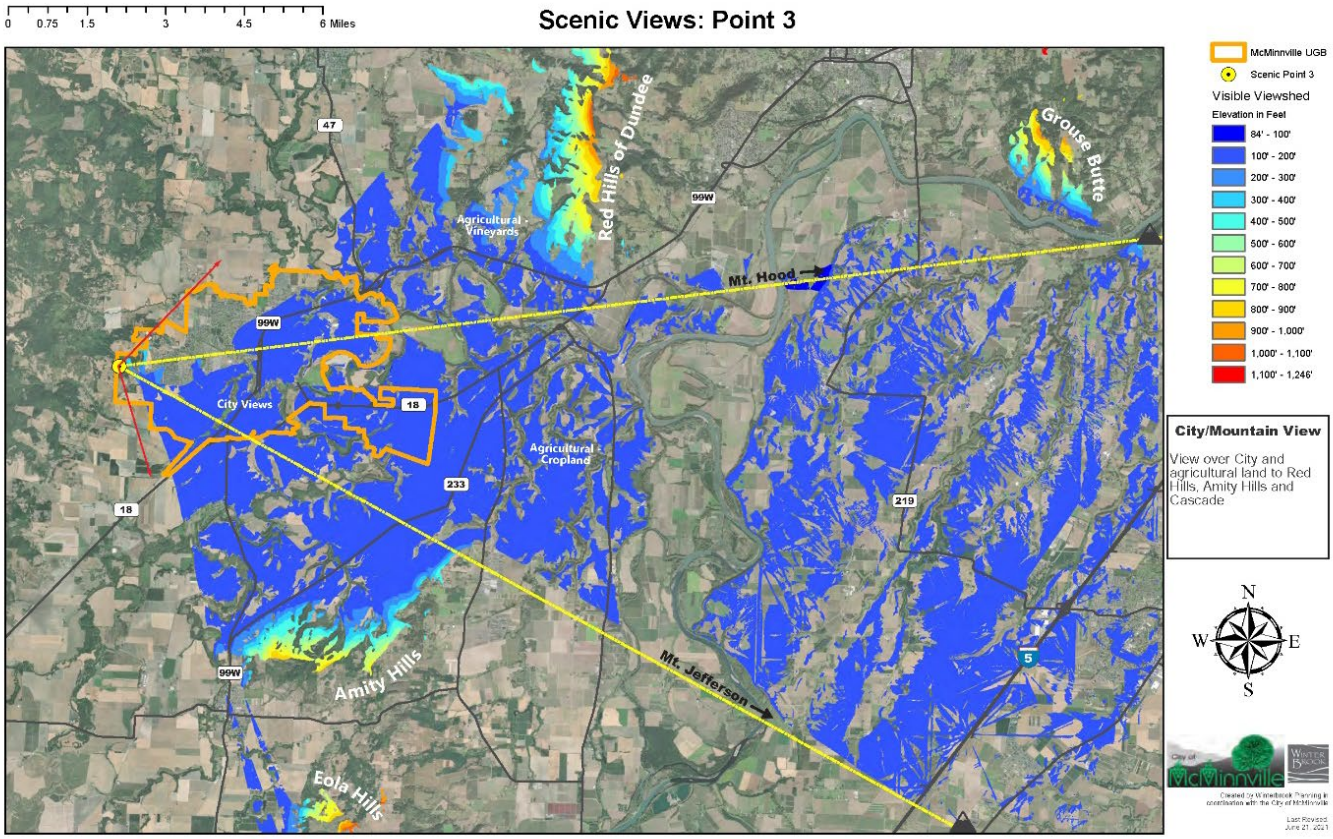
- **Mountain views** – Cascade Range, including Mt. Jefferson and Mt. Hood and the Coast Range areas.
- **Hill views** - McMinnville's West Hills, Red Hills of Dundee, Amity Hills, and Chehalem Mountains, including forested areas.
- **Agricultural land views** - Cropland, pastures, orchards, and vineyards.
- **Riparian corridor views** - Forests and floodplains along North and South Yamhill Rivers and Baker Creek.
- **Gateway views** - Views entering City along Hwy. 18 and views of Downtown historic buildings and tree-lined streets.
- **City views** – Views of the City from the West Hills, including downtown, forested riparian corridors and park views.

Figure 6 shows a viewpoint located at the western edge of the UGB with a corresponding viewshed that includes both urban and rural landscapes. The viewshed stretches west across entire UGB and continues

[18] https://www.ledgeviewwisconsin.com/wp-content/uploads/2019/10/Ledgeview_Viewshed-Analysis_FINAL_2019-07-09.pdf

outside the UGB to include agricultural lands to the west, the Red Hills and Amity Hills to the northwest and southwest, respectively, and distant views of the Cascade Mountains.

Figure 7 Example of Scenic View and Viewshed (Scenic Viewpoint 3)



3. Determination of "Significance"

The Scenic Viewpoint and Viewshed Inventory documents the characteristics of each of the 16 viewsheds. The presence of one or more of these characteristics is sufficient for a determination of significance. Therefore, all of the mapped scenic viewpoints and their corresponding viewsheds are significant.

B. Goal 5 Process Considerations

The standard Goal 5 review process requires a valid Goal 5 inventory of scenic sites, determination of the relative value of each site, a determination of significance, and the identification of conflicting land uses.

If conflicting uses are identified, then an evaluation of the ESEE (economic, environmental, social and energy consequences) of three alternative protection programs is required. Based on the ESEE analysis, the City may adopt a scenic protection program that includes comprehensive plan policies and land use regulations.

Significant Goal 5 resource sites (in this case, viewpoints and their respective viewsheds) must go through the remaining Goal 5 procedural steps. These steps including conflicting use identification,

identifying three program options, and considering the ESEE consequences of each program option *before* adopting a protection program.

1. Conflicting Use Identification

Conflicting uses are identified based on uses allowed in the underlying zoning district in combination with any applicable subdistricts (overlays). Most of the 16 significant viewpoints are located on existing or planned public land. Viewsheds extend over private land within and outside the UGB, but in most cases development on privately-owned land is not limited by this policy.

The City's adopted Scenic Views Policy (Comprehensive Plan Policy 187.50(2)) applies primarily to existing or planned public land (parks and transportation rights-of-way) to guide the location, orientation and design of existing and planned public facilities. The policy does not limit private land uses or development allowed either outright or conditionally by the McMinnville Zoning Ordinance.[i] Therefore, in most cases, implementation of this policy does not have any "conflicting uses" within the meaning of Goal 5. Therefore, an ESEE analysis is not required to protect scenic viewpoints located on public land.

However, a conflicting use and ESEE analysis is required for viewpoints and corresponding viewsheds located on private land *before* a scenic view protection program is adopted by the City. The Goal 5 process must follow the same steps (impact area determination, identification of conflicting uses, and analysis of three regulatory protection options) required for significant tree grove sites.

Table 2 identifies scenic viewpoints that are within existing rights-of-way or parks and therefore do not require an ESEE analysis prior to implementation (because there are no conflicting uses), in contrast to viewpoints located on private land, that will require an ESEE analysis prior to implementation (where the determination of conflicting uses depends on a future master planning process).

Table 2. Characteristics of McMinnville Scenic Viewsheds

Viewpoint #	Ownership	Future ESEE Required	Scenic View Type
1	Public	No	City/Gateway view
2	Public	No	City/Gateway view
3	**Private**	**Yes**	**City/Mountain view**
4	**Private**	**Yes**	**City/Mountain view**
5	**Private**	**Yes**	**Agricultural view**
6	Public	No	Agricultural/City view
7	Public	No	Agricultural/Local Hills view
8	**Private**	**Yes**	**Mountain view**
9	Public	No	Local Hills view
10	**Private**	**Yes**	**Mountain/Local Hills view**
11	**Private**	**Yes**	**River Corridor view**
12	**Private**	**Yes**	**Mountain/Local Hills view**
13	Public	No	Mountain/Gateway view
14	Public	No	Gateway view
15	Public	No	River Corridor view
16	Public	No	River Corridor view

2. Goal 5 Program Options

Like significant tree groves, the City must identify the three protection options for consideration in the ESEE Analysis: full scenic view/viewshed protection, no scenic viewpoint/viewshed protection, and a limited protection option.

However, unlike significant tree groves, the precise location of the viewpoint and the corresponding viewshed on private land *may* change somewhat based on a master plan that has yet to be developed. Moreover, the potential conflicting viewshed uses (vertical features that could block desired views) may not be known until the master plan is largely complete.

Therefore, unlike significant tree groves, the outline of a future "limited protection program" for viewpoints on private land is unknown at this point – and an analysis of the ESEE consequences of an unknown limited protection program would have little utility. Therefore, an ESEE analysis should be conducted prior to adoption of a protection program – but based on conflicts identified through the master planning process.

Table 2 identifies the nine scenic viewpoints/viewsheds that have no conflicting private development uses and therefore can be protected on a limited basis without an ESEE analysis. However, seven scenic viewpoints/viewsheds located on private land require a conflicting use and ESEE analysis before a limited protection program can be developed through the master planning process.

3. Goal 5 ESEE Analysis

Once conflicting uses have been identified through the master planning process for scenic viewpoints on private land, a Goal 5 ESEE analysis will need to be prepared and adopted by the City prior to implementation of a program to allow, limit or prohibit land uses that obstruct scenic viewsheds observable from significant viewpoints.

C. Scenic Program Recommendations

The City's policy is to preserve community views with the following characteristics:

- **Mountain views** – Cascade Range, including Mt. Jefferson and Mt. Hood and the Coast Range areas.
- **Hill views** - McMinnville's West Hills, Red Hills of Dundee, Amity Hills, and Chehalem Mountains, including forested areas.
- **Agricultural land views** - Cropland, pastures, orchards, and vineyards.
- **Riparian corridor views** - Forests and floodplains along North and South Yamhill Rivers and Baker Creek.
- **Gateway views** - Views entering City along Hwy. 18 and views of Downtown historic buildings and tree-lined streets.
- **City views** – Views of the City from the West Hills, including downtown, forested riparian corridors and park views.

Appendix A includes draft Comprehensive Plan policies that require the preparation of scenic view studies to inform the location, orientation and design of public facilities that may adversely impact scenic views with the above characteristics.

Other policies require protection of significant scenic viewpoints and viewsheds identified on the McMinnville Scenic Viewpoint and Viewshed Inventory. These policies apply directly to public works and parks projects located on public land. There is no "conflicting use" because the public entity is regulating itself, or in the case of an ODOT project, is subject to applicable comprehensive plan policies.

These policies specify that an ESEE analysis is required prior to adoption of a program to protect scenic viewpoints and corresponding viewsheds located on private land. This ESEE analysis is expected to occur as part of the master planning process.

Thus, viewpoint and viewshed studies shall be required in the following instances:

Scenic viewshed studies shall be required and scenic viewpoints and viewsheds protected in the orientation and design of the following public facilities:

- Public park master plan amendments,
- When amendments to park master plans are proposed
- When development or redevelopment of park infrastructure (development) is proposed

Viewpoints and viewsheds shall be considered in the design of above-ground (vertical elements) infrastructure projects that could obstruct scenic views from public land or improvements, including but not limited to:

- Signage
- Above ground utilities
- Public buildings
- Transportation improvements, including bridges, highways and trails
- Street trees

Pursuant to Area Plans, significant scenic views identified in the 2021 Scenic Viewpoint and Viewshed Inventory shall be protected in the location, orientation, and design of public parks and transportation facilities and private land development.

An ESEE analysis shall be required prior to submittal of a development application on private land with an identified scenic viewpoint. The analysis shall consider alternative programs options to protect identified scenic viewsheds, including but not limited to the layout and design of private streets and open spaces, pedestrian and bicycle circulation systems, and the spacing and design of proposed buildings, landscaping and above-ground utilities.

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[i] As noted in the McMinnville Scenic Viewpoint and Viewshed Inventory (p. 2), Scenic Views Policy 187.50(2):

- Applies primarily to public improvements on public land – to ensure that vertical public improvements (including but not limited to signs, bridge railings, lighting, overhead wires, utility cabinets, and street trees) are considered in the public facilities design process and do not unnecessarily obstruct significant scenic views.
- Applies when determining the location, orientation and design of planned public streets, parks and trails that will serve future urban development – focusing on undeveloped land within the 2020 UGB expansion area – consistent with applicable area plans such as the McMinnville UGB Framework Plan and the Three Mile Lane Corridor Plan. The intent is to provide public access to significant viewsheds by locating, orientating and designing public streets, trails and parks to take maximum scenic view potential.

- Is intended to limit the location, orientation or design of private development allowed under the McMinnville Zoning Ordinance (including base zones, and natural resource and natural hazard subdistricts) but requires an ESEE analysis before a specific program can be adopted.
- Is not intended to provide an additional layer of local protection to scenic viewsheds outside the McMinnville UGB. The protection of rural areas, however, is ensured by state and federal ownership and management practices, and Oregon Statewide Planning Program, primarily Goals 3 (Agricultural Lands) and Goal 4 (Forest Lands) that restrict development on farm and forest lands.