

**Preliminary Report:
Identification of Candidate Heritage Trees,
Assessment of Condition, and
Estimation of Heritage Tree Protection Areas**

for

**Cameron Curtis
Curtis Homes LLC**

by

**David M. Braun
Braun Arboricultural Consulting LLC
Hood River OR
November 7th, 2023**

Background

I was contacted by Cameron Curtis in early November 2023 regarding the need for an arborist's assessment of candidate heritage trees potentially present on a lot and covered by the White Salmon Heritage Tree Ordinance. The lot is on the north side of Spring St. in White Salmon (Lot 4, Klickitat County Tax Lot #0310247500400, 7.93 ac.; Klickitat County, 2023).

Mr. Curtis requires an arborist's assessment of Candidate Heritage Trees to facilitate final development plans and obtain permit approvals. The focus of this Report is to provide location and condition information on trees likely qualifying as Heritage Trees based on the Heritage Tree portion (18.10.317- Special Provisions-Heritage Trees) of the White Salmon Critical Areas Ordinance (Chapter 18.10) of Title 18 – Environment, White Salmon Code of Ordinances.

The following is my interpretation of the meaning and application of Section 18.10.317:

HTPAs: designation of Heritage Tree Protection Areas (HTPAs) is required for qualifying trees; dimensions are 10 times tree diameter at breast height (diameter at 4.5 ft.) plus a 15 ft. wide Building Set Back Line (BSBL), e.g., a 20 in. diameter oak would require a circle 200 in. (16.7 ft.) wide plus 15 ft. on all sides, adding up to a 46.7 ft. (47 ft.) wide protection zone (alternative is average crown width plus BSBL). Trees over 14 in. dbh (Oregon White Oak) or 18 in. dbh (other species) may be designated Heritage Trees. I refer to such trees as “Candidate Heritage Trees” before a final determination is made by the City as to what trees will be retained (see Tree removal, below). Significant incursions that are likely to significantly decrease tree health or stability are not allowed, such as cuts, fills, buried utilities, or building footprints over a significant portion of a HTPA; mitigation including fencing, mulching, temporary irrigation, are recommended to reduce impacts by minor incursions inside or work outside the HTPA.

Tree removal: If a property can't be reasonably developed based on zoning due to extensive coverage of the parcel area by HTPAs, some Candidate Heritage Trees may be removed; dead, high risk, “weed” tree species such as *Ailanthus altissima* (Tree of Heaven), non-maintained fruit trees, or trees in very poor condition may also be removed even if they meet diameter requirements. Key sections of the Heritage Tree Ordinance are included at the end of this report.

Scope

Two objectives are the subject of this report:

Describe the large trees on the property: their species, location, size (diameter, height, and spread), and overall condition. Trees over 14 in. dbh (Oregon White Oak) or 18 in. dbh (other species) may be designated Heritage Trees and protected during and after construction activities under the White Salmon Critical Areas Ordinance.

Identify Candidate Heritage Trees and estimate Heritage Tree Protection Areas (HTPAs) in relation to development plans. A Heritage Tree Protection Plan (HTPP) for mitigation of impacts to specific HTPAs will be prepared as a supplement to this Preliminary Report upon request that describes likely construction impacts and proposes mitigation. The HTPP will be based on this preliminary report, updated with revised recommendations for mitigation of likely construction impacts to Heritage Trees, and include a revised schematic showing the HTPAs, BSBLs, and building and other construction footprints; this schematic would ideally be prepared by the surveyor producing plans for the site.

Methods

Candidate Heritage Trees

Identify species and measure the diameter using a diameter tape. Visually assess trees for condition and defects. This involves viewing all sides from the root crown to the top of the crown.

Establish approximate tree locations. This was done with photographs and visually estimated position relative to fence lines likely to be near property lines; candidate trees are located on a schematic (Figure I). More exact locations were not determined at this time because only one marker from the 2022 survey was observed, and because survey work to produce final plans for the site can more efficiently define tree locations.

Site

Walk the property and observe approximate property boundaries. Determine past disturbance history that may have affected the large trees. Identify Candidate Heritage Trees based on species and diameter.

Results

Number and Species of Candidate Heritage Trees

Eight Candidate Heritage Trees were identified by the assessor: all were Oregon White Oak (*Quercus garryana*) (Table I). Other tree species included Bitter Cherry (*Prunus avium*), Bigleaf Maple (*Acer macrophyllum*), Black Locust (*Robina pseudoacacia*), and Oregon Ash (*Fraxinus*

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latifolia); none of these were 18 in. dbh. Some fruit trees, cherries, were present that may have approached or exceeded 18 in. dbh, but these were non-maintained and in very poor condition.

Likely Cons. HTPA+BSBL

#	Sps	dbh	Ht.	Cond.	Impacts	Diameter (ft.)	Notes
1	Oak	15.8	40	Fair	None	43	High crown, lean to SE
2	Oak	22.2	40	Fair	Slight	48	High crown, lean to SE, basal opening
3	Oak	13.4	35	Fair	None	42	High crown, suppressed by maple, lean to S
4	Oak	16.9	25	Good	None	44	Full crown, old, barbed wire embedded
5	Oak	25.3	30	Good	None	51	Full crown to E, old, barbed wire embedded, adjacent to #6 to W
6	Oak	19.5	30	Good	None	47	Full crown to W, adjacent to #5 to E
7	Oak	13.5	35	Fair	None	42	One-sided crown to S, suppressed by #8
8	Oak	13.5	35	Fair	None	42	One sided high narrow crown to N (in clump NE of #7 and a third smaller stem)

Table I. Candidate Heritage Trees. All trees were measured at 4.5 ft. (dbh) from soil line on side-hill, except for trees #2 and #8, which were measured at the narrowest point at about 3 ft. Height and distance from fence lines (“boundaries”) were visually estimated. Trees in fair condition (1,2,3,7,8) had one sided crowns lacking low branches or suppressed by a taller tree nearby. Trees in good condition had larger crowns and were open grown (although #5 and #6 were a pair, and therefore had one-sided crowns). All were relatively young (estimated 30 - 50 years) and fast growing; some had light crown die-back likely caused by anthracnose disease (which the species tolerates); all were likely of sprout origin from old stumps; an old stump protruded from the basal opening of #2, and was within the clump made up of #7, #8, and a third smaller stem. The oak diameters of 13.4, 13.5, and 13.5 in. were considered to be 14 in. based on rounding and allowance for measurement error.

Tree Locations and Protected Areas

All trees were within the property lines based on old fence lines observed on site, and within property lines based on inspection of the Klickitat County Tax Lot Map (Klickitat County, 2023) and the 1992 property survey (Trantow Surveying, 1992). One surveyor lath stake (marked “PROPERTY CORNER LOT 3”) was observed 20 ft. north of oak #6 on the newer west fence line; this likely was from the 2022 survey referred to by Mr. Curtis. Trees depicted in Figure I.

Incursion into Protected Areas by Proposed Construction

Although the footprints of hardscapes, buried utilities, or buildings are not known at this time, construction impacts to the Candidate Heritage Trees are likely to be minimal. Mr. Curtis described the plans for the area as a multi home development, with the access road leaving Spring St. and traversing the narrow portion (101 ft. wide) to access the larger rectangular area to the north where the homes would be located (Klickitat County, 2023; Figure I). The first three oaks are 10 – 20 ft. from the west property line in the narrow area; the other trees are closer to

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other boundaries (< 1 to 4 ft.). Construction impacts to trees #2 - #8 are estimated to be “none” based on current information, but this assessment could change based on final plans (Table I).

Oak #2 would be closest to the access road of the three trees in the narrow area; its HTPA would be 18.3 ft. (22 in. dbh * 10) + a BSBL of (15 ft.)*2 ft., or a circle 48 ft. in diameter. This would put the edge of the protection area about 44 ft. from the west property line and 6 ft. west of the center of the 101 ft. wide area (the tree is about 20 ft. from the west boundary).



Figure I. Candidate Heritage Trees. Eight Oregon White Oaks qualify as Heritage Trees based on species and diameter. Condition was fair or good, and all were determined to be at a hazard level of “low risk”, based on improvements such as homes, common areas, sidewalks, and roads built within 1.5 tree heights of the trees. Diameter ranged from 14 to 25 in., and heights from 25 – 40 ft. Trees are near property boundaries: Oaks #1, #2, and #3 are along the west boundary in the southern, narrow neck of the property; oaks #4, #5, and #6 are along the west boundary, and oaks #7 and #8 are along the north boundary. Oak #2 was the farthest from a boundary, about 20 ft. east of the west boundary along the narrow neck of the property at bottom. The property approximated by the black lines is Tax Lot 4, 7.93 ac., # 0310247500400. Aerial photo date is July 24th, 2021.

Discussion

Heritage Tree Protection Areas (HTPAs) and Setbacks (BSBLs)

Heritage Trees receive protection in the form of Heritage Tree Protection Areas (HTPAs) and Building Set Back Lines (BSBLs), and the trees and protection areas are included on plans. Assuming the eight Candidate Heritage Trees will appear on final plans as Heritage Trees, entry into the protected zones is unlikely except for Oak #2. Retaining some of the existing trees and shrubs around the eight identified trees would also benefit the trees, although removal or pruning of some competing Bitter Cherry, Bigleaf Maple and Black Locust would improve vigor of trees #1 - #3.

Fate of Candidate Heritage Trees

All the Candidate Heritage Trees were determined to be in fair or good health and low risk (Dunster, 2017). The trees can be retained as Heritage Trees, represent a benefit to the property, and will maintain other environmental benefits: the goal of the Critical Area Ordinance. Given all the activities on a home construction site, designation of HTPAs plus BSBLs and application of the mitigation discussed, at minimum, should ensure that this occurs.

Risk Assessment

Tree risk assessment assigns a risk rating to trees based on the likelihood that a tree or tree part will fail and contact a target; overall risk is assigned based on the probability of that contact and the consequence (Dunster et al, 2017). Based on the assumption that buildings or roads or other improvements will be within 1.5 tree heights of the trees, overall risk was estimated to be minimal due to low failure risk, small tree size, and the types of targets.

Mitigation

Besides erection of fencing, mulching and supplemental irrigation will likely be recommended once the development footprints are known. Grade changes or footings near or slightly in HTPAs will affect root health, so trees will benefit from this mitigation; it is of critical importance in the dry summer months. Removal or crown reduction of nearby trees will also improve health.

Recommendations

The surveyor would ideally include tree locations, HTPAs and BSBLs for the flagged Candidate Heritage Trees on plans that depict grade changes, footings, roads, buildings, and buried utilities.

Depending on the type and location of construction related disturbance near the trees, mitigation can be recommended by a qualified arborist in a HTPA as a brief supplement to this report.

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Key Sections of the Heritage Tree Ordinance Relating to this Report

18.10.317-Special Provisions—Heritage Trees

- A. "...All heritage trees...shall be protected as critical areas. The tree protection area shall be equal to ten times the trunk diameter of the tree or the average diameter of the area enclosed by the outer edge of the drip line of the canopy, whichever is greater."

- B. "Heritage trees include:
 - 1. Oregon White Oaks with a trunk diameter larger than fourteen inches,
 - 2. All tree species with a trunk diameter greater than eighteen inches, or
 - 3. Any tree designated as a heritage tree by the city council in accordance with the nomination process detailed below."

- E. Maintenance and preservation of heritage trees is required.
 - 1. Any owner or applicant shall use reasonable efforts to maintain and preserve all heritage trees located thereon in a state of good health. ..."
 - a. Avoidance of grading, excavation, demolition, or construction activity within heritage tree protection area where possible.
 - b. Grading, excavation, demolition, or construction within the heritage tree protection area shall require submittal of a tree protection plan..."
 - 2. The critical area report ...shall include a heritage tree protection plan and shall be prepared by a certified arborist. The plan shall address issues related to protective fencing and protective techniques to minimize impacts ..."
 - 3. Building setback lines stipulated by subsection 18.10.212 shall be measured from the outer line of the tree protection area for heritage trees (18.10.212-Building Setback Line (BSBL): "Unless otherwise specified, a minimum BSBL of fifteen feet is required from the edge...").

- G. Exceptions to the provisions in this section include:
 - 1. A heritage tree can be removed if it is dead, dangerous, or a nuisance, as attested by an arborists' report..."
 - 2. A heritage tree in or very close to the "building area" of an approved single-family residence design can be replaced by another tree. A heritage tree can be removed if its presence reduces the building area of the lot by more than 50 percent after all potential alternatives including possible setbacks to minimum yard depth and width requirements have been considered.

References

City of White Salmon 2021. Chapter 18.10 – Critical Areas Ordinance, including 18.10.317-Special Provisions—Heritage Trees (18.10.317-Special Provisions—Heritage Trees) Accessed and downloaded November 3rd, 2023.

https://library.municode.com/wa/white_salmon/codes/code_of_ordinances?nodeId=TIT18EN_CH18.10CRAROR

Dunster, J. A., T. Smiley, N. Matheny, and S. Lilly, 2017. Tree Risk Assessment Manual. International Society of Arboriculture, Champaign, IL. 194 pgs.

Google 2023. Google Earth Pro used to produce schematic based on aerial imagery, Tax Lot Map, and Trantow Survey. Schematic based on an image dated July 24th, 2021, and accessed November 4th, 2023. Google Earth Pro 7.3.3.7786(32-bit) Build Date July 21, 2020. Copyright 2020 Google LLC.

Klickitat County 2023. Klickitat County Tax Lot Maps. Accessed and downloaded Map on November 4th, 2023. Approximate boundaries transferred to schematic with drawing tools in Google Earth Pro. <https://imap.klickitatcounty.org/#10/45.8283/120.7404/c22ecdf827df6af49a>

Trantow Surveying, 1992. Klickitat County WA Short Plat No. SP – 91 – 17 NW ¼ NE1/4 SEC. 24, T. 3N., R. 10 E., W.M. "Cherry Hill Estates". T. N. Trantow Surveying P. L. S., Bingen, WA. Filed in Klickitat County, July 24th, 1992. Obtained via link from Tax Lot Map (Klickitat County, 2023).

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Assessors Credentials

David M. Braun Ph.D., Owner, Braun Arboricultural Consulting LLC
Cell: 541-806-0347 dave@braunarborcare.com www.braunarborcare.com
Ph.D., Forest Ecology, 1998
College of Forest Resources, University of Washington, Seattle, Washington.
M.F.S., Forest Ecology, 1986.
School of Forestry and Environmental Studies, Yale University, New Haven, Connecticut.
B. S., Biology, 1982.
Fairfield University, Fairfield, Connecticut.

Memberships, Certifications, Licenses

Certified Arborist, International Society of Arboriculture (ISA) #PN-6114A
TRAQ Tree Risk Assessment Credential, ISA (being renewed)
Member, American Society of Consulting Arborists (ASCA)
Oregon CCB #188757; Washington Registration # BRAUNAC908DQ
Oregon Commercial Pesticide Operator License AG-L1017983CPO
Oregon Commercial Pesticide Applicator License AG-L1017982CPA (being renewed)
Washington Commercial Pesticide Applicator License: 82597

Insurance and Bond

David M. Braun and Braun Arboricultural Consulting LLC, Reg. Num. 354066-93 (Nov. 2007), is insured with a standard business insurance policy through Columbia River Insurance, Hood River, OR. Phone: 541-386-2444. Coverage includes: \$1,000,000 Liability and Medical Expenses, \$2,000,000 Products –Completed Operations, \$1,000,000 Professional Liability Insurance, Workman’s Compensation Insurance, and a \$20,000 surety bond.

Assumptions and Limiting Conditions

1. Any legal description provided to the assessor (David M. Braun) is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is assessed or evaluated as though free and clear, under responsible ownership and competent management.
2. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the assessor can neither guarantee nor be responsible for the information provided by others.
3. The assessor shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
4. Loss or alteration of this report invalidates the entire report.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the assessor.
6. Neither all or any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed written or verbal consent of the assessor particularly as to the conclusions or recommendations, identity of the assessor, or any reference to any professional society or institute or designation conferred upon the assessor as stated in his qualification.
7. This report and conclusions expressed herein, represents the opinion of the assessor, and the assessor’s fee is in no way contingent upon the reporting of a specified value, stipulated results, and the occurrence of a subsequent event nor upon any finding to be reported.
8. Unless expressed otherwise: (1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring, except for those minimally invasive procedures that were performed and described in the report. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree or property in question may not arise in the future.

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Certification of Performance

Location of Assessed Trees: Lot 4, Tax Lot #0310247500400, Spring St., White Salmon, Washington
I, David M. Braun certify to the best of my knowledge and belief that:

1. That the statements of fact contained in this Heritage Tree report are true and correct.
2. That the assessment, analysis, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and that they are my personal, unbiased professional analysis, opinions, and conclusions.
3. That I have no present or prospective interest in the trees that are the subject of the assessment, and that I have no personal interest or bias with respect to the client. Because Braun Arboricultural Consulting LLC provides multiple services, including appraisal, risk assessment, tree pruning, diagnosis and treatment of injurious insects and diseases, and tree removal, a bid for possible future work on the subject trees may be provided to the client, or the property owners, if one or more are requested. David M. Braun states that the methods, observations, conclusions, and recommendations contained in this tree Risk Assessment report were in no way influenced by a desire for a particular outcome that could form the basis of additional work on the subject trees; he also urges the client and property owners to obtain additional bids from other contractors if one is requested from Braun Arboricultural Consulting LLC.
4. That my compensation is not contingent upon a predetermined result or the occurrence of a subsequent event.
5. That my analysis, conclusions, and opinions were developed, and this assessment has been prepared, in conformity with industry standards and guidelines.
6. That methods found in this assessment were based on a request by the client to determine risk posed by the tree and provide recommendations for reducing it.
7. That my assessment is based on information known to me at this time. If more information is disclosed, I may have further opinions.
8. That, as a result of my examination, investigations, and analysis of the trees and all of the data pertinent thereto, and in the light of my experience, the recommendations for removing trees or retaining them while mitigating health impacts may be acted on with some assurance of success.

I further certify that I am a registered member in good standing of the American Society of Consulting Arborists (ASCA) and the International Society of Arboriculture (ISA), that I have a Tree Risk Assessment Qualification (TRAQ) and that I have been active in the field of Arboriculture for a period of 15 years.



Signed

November 7th, 2023

Date