

Sonoma County Board of Supervisors

Modernizing Tree and Woodland Protections

12/12/2023

Staff:

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Summary of 11/28/2023 Meeting

- Staff presented Planning Commission recommendations 11/28/2023 for updates to zoning code to modernize tree protections and adopt a new Oak Woodland Ordinance and Oak Woodland Combining District
- BOS directed staff to address:
 - ▣ Interaction between Tree Protection Ordinance (TPO) and Oak Woodland Ordinance (OAK)
 - ▣ Address hazard tree removals and maintenance of evacuation routes
 - ▣ Facilitating property maintenance without large landowner expense, including nuisance trees
 - ▣ Exemptions that would apply to each ordinance

Overlap between TPO and OAK

□ Native Oaks:

- Any size removed in Oak Woodland – OAK
- Over 6"+ removed outside Oak Woodland – TPO
- Under 6" DBH removed outside Oak Woodland - N/A (may be protected under another rule)

□ Other Protected Species

- Over 6"+ removed in Oak Woodland – TPO
- Over 6"+ removed outside Oak Woodland – TPO
- Removed in conjunction with type conversion (eg, clearcut) in Oak Woodland - OAK

Hazardous, Dead, Dying, Diseased

- Exempt from mitigation and zoning permit:
 - ▣ In defensible space; or
 - ▣ Within striking distance of structure

- Exempt from mitigation:
 - ▣ Removal is outside defensible space or striking distance of structures;
and
 - ▣ qualified professional determines removal is necessary

Fire Hazards and Evacuation Routes

- Multiple exemption options:
 - ▣ Defensible space
 - ▣ Fire risk reduction activities
 - ▣ Emergency operations
 - ▣ Hazard tree removal
 - ▣ Residential maintenance for nuisance trees (for driveways and roadways)
- Sonoma County Public Infrastructure projects exempt from County Zoning Code

Property Maintenance

- **Residential maintenance**
 - ▣ Exempts tree removal incidental to maintaining legally established residential uses.
- **Removal of nuisance trees**
 - ▣ Nuisance means causing damage to improvements, such as building foundations, retaining walls, roadways/driveways, patios, sidewalks and decks, pipes, utility conduits, or otherwise interfering with the operation, repair, replacement or maintenance of public or private utilities.
- **Septic Exemption**
 - ▣ Exempts tree removal necessary for repair or replacement, so long as no alternative option exists that would both cure the threat to human health and safety and avoids removal of protected trees.

Exemptions

- Exemptions mirrored as close as possible between TPO and OAK
- Exemptions don't require mitigation, but some require zoning permit
- Exemptions in TPO and OAK for:
 - ▣ Health and Safety
 - ▣ Stewardship and Resource Management
 - ▣ Forest Management
 - ▣ Pest Control
 - ▣ Agriculture Crop Maintenance
 - ▣ Property Maintenance

Additional Considerations

- Development in Urban Service Areas
 - ▣ OAK exempts by-right housing in USA
 - 933 Parcels & 2,497 acres of mapped OAK District in USA
- Flexibility in mitigation plantings
 - ▣ TPO now allows offsite mitigation when onsite not possible
 - ▣ TPO now allows deviations from same species replanting requirements w/ Director's approval
- Urgency Ordinance

Urgency Ordinance

- Prohibits removal of protected trees and Oak Woodland type conversion, except in specific circumstances
- Exemptions include:
 - ▣ Hazards to life or property
 - ▣ Maintenance of utilities, ROW, emergency evacuation routes
 - ▣ Removals associated with complete or in-progress development applications and by-right housing
 - ▣ Timber harvesting

Urgency Ordinance Cont.

- Optional Urgency Ordinance would go into affect immediately
- Would limit tree removal before TPO and OAK become effective
- Effective dates of ordinances would be:
 - ▣ OAK January 11
 - ▣ TPO February 9

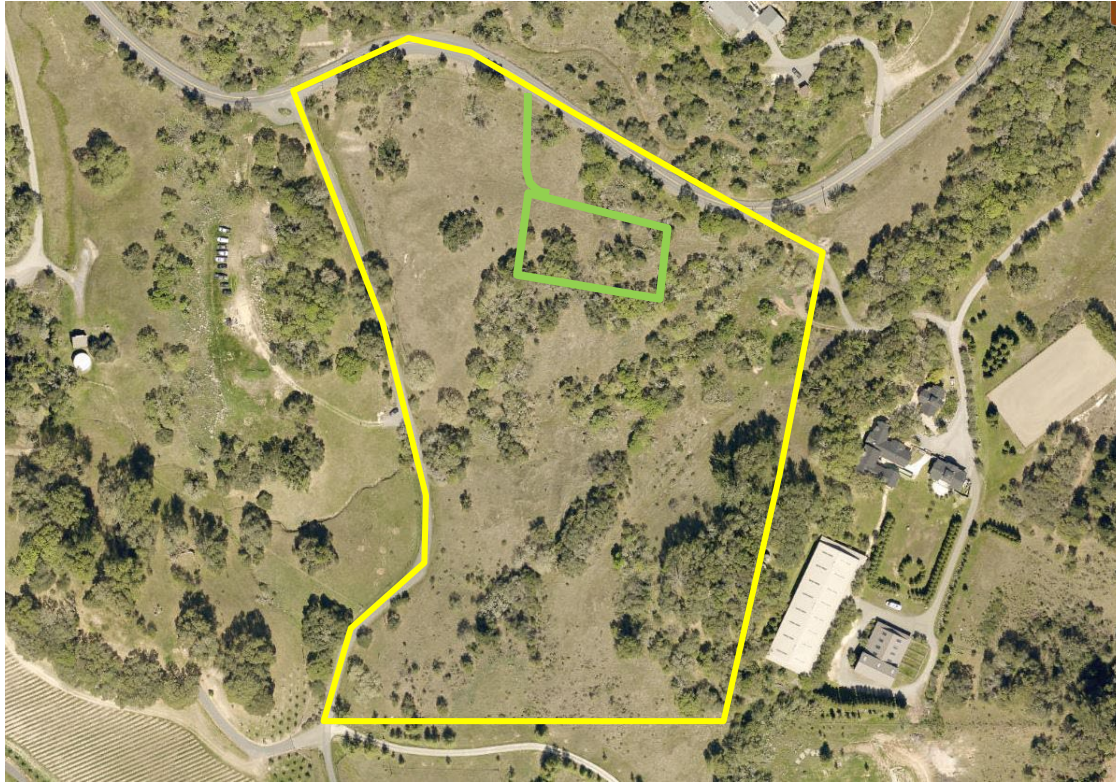
Recommendation

- **Tree Protection Ordinance:**
 - Introduce and waive further reading of an Ordinance amending Chapters 25 (subdivision ordinance) and 26 (zoning ordinance) to update tree protection regulations, and direct staff to bring the ordinance back on consent on January 10, 2024, to the Board for final adoption or another date no less than five days from the date of introduction.
- **Oak Woodland Ordinance:**
 - Adopt an Ordinance amending Chapter 26 (zoning ordinance) to add the Oak Woodland Combining District, rezone certain parcels to apply the District, and update the Valley Oak Habitat Combining District.
- **Optional Urgency Ordinance:**
 - Consider an urgency ordinance establishing a temporary moratorium, with limited exceptions, to prohibit: (1) the removal of Protected Trees greater than six inches (6”) diameter at breast height (dbh); and (2) any Type Conversion of Oak Woodland, throughout the unincorporated area of the County, excluding the Coastal Zone, for no more than 45-days and expiring January 26, 2024, unless extended to May 31, 2024 or different date by subsequent action of the Board of Supervisors, pursuant to and consistent with Government Code Sections 65858 and 25123
- **All Ordinances:**
 - Find the proposed actions exempt from CEQA



End

Example 1 – Residential Use on Undeveloped Parcel



- 13 acre parcel in OAK district
- Parcel is entirely in Oak Woodland
- Proposed residence, including driveway, septic, and well
- Eligible for .5 acre, one time conversion of woodlands
- If impacts exceed .5 acre subject to use permit
- Maintenance of defensible space is exempt from ordinance.

Example 2 – New Workshop in Valley Oak Area



- ❑ Developed site with individual valley oaks
- ❑ In VOH district
- ❑ Proposed 2000 square foot garage
- ❑ Yellow location requires use permit, removing 2 valley oaks over 36" dbh
- ❑ Green location avoids large valley oak, doesn't require planning permit for tree removal

Example 3 – New Vineyard in Oak Woodland Combining District



- 50 acre parcel with 20 acres of woodland
- Proposed 25 acre vineyard
- In woodland (green), vineyard requires use permit and VESCO
- Outside woodland, only requires VESCO

Example 4 – Agricultural Conversion and Expansion



- Parcel contains native trees and orchards, not located in OAK or VOH
- Proposal: remove 10 acres of orchard, replace with 20 acres of vineyard
- Orchards are not protected species, may be removed
- Removal of native trees to expand cultivation area will require replanting or paying fees, subject to TPO
- Vineyard would then be subject to VESCO

Tree Protection Ordinance

Proposed Changes

1. Expand applicability
2. Protect more species
3. Protect smaller trees
4. Public health and safety exemptions
5. Proportional mitigation requirements
6. Use permit required for exceptional trees
7. Clarifying updates to Riparian Corridor Combining District, Timberland Conversion and Chapter 25

Tree Protection Ordinance

Summary

Tree Protection Ordinance Components	Existing Ordinance	New Ordinance
Minimum Diameter (Single Stem)	9"	6"
Number of Species	11	31
Applicability	Discretionary Permits	All projects removing protected trees
Agriculture	Exempt	Agricultural maintenance exempt
Big Trees	No extra protections	UPE requirement for large trees
Replanting Ratios	1:6 – 1:30, ratio caps over 33" DBH	Maintains existing ratios, no cap
Monitoring Required	None required	Seven-year monitoring period
Fee Option	Minimum \$200 fee	Appraised value of replacement cost

Mitigation Fee Comparison

Method	Cost – 28” Tree	Cost - 6” Tree (same species)
Existing Ordinance Fees	\$800	\$200
Trunk Formula Technique	\$22,810	\$916
Cost Compounding Technique	\$21,463	\$1,093



Oak Woodland Combining District

- Apply protections to woodlands in combining zone
- Exemptions for public safety, vegetation management, and ecological restoration
- Allows one-time conversions of up to 0.5 acre on undeveloped parcels
- Large scale conversion subject to use permit
- Prioritize impact avoidance, allow for environmental review, support public transparency, and reserve county discretion on private projects of public consequence



Oak Woodland Combining District

Allowed Uses

- Without zoning permit, provided it does not result in type conversion:
 - ▣ Hazard reduction
 - ▣ Hazardous / dead / dying / diseased
 - ▣ Beneficial woodland conservation activities
 - ▣ Residential or Agricultural Maintenance
- With zoning permit
 - ▣ One time conversion up to 0.5 acre on undeveloped parcels

Oak Woodland Combining District Use Permits

- Determination of Oak Ecological Categories
- Alternatives Analysis
- Conservation Plan outlining mitigation options:
 - ▣ Conservation Easement
 - ▣ Replanting
 - ▣ In-lieu fees using appraisal value

Valley Oak Combining District Updates

- Replace in-lieu fees with the same appraisal option recommended for the Tree Protection Ordinance
- Strike option to retain existing trees since doing so leads to resource loss
- Increase mitigation ratios to address limited survivability
- Integrate oak combining districts to simplify implementation

Enforcement Procedure

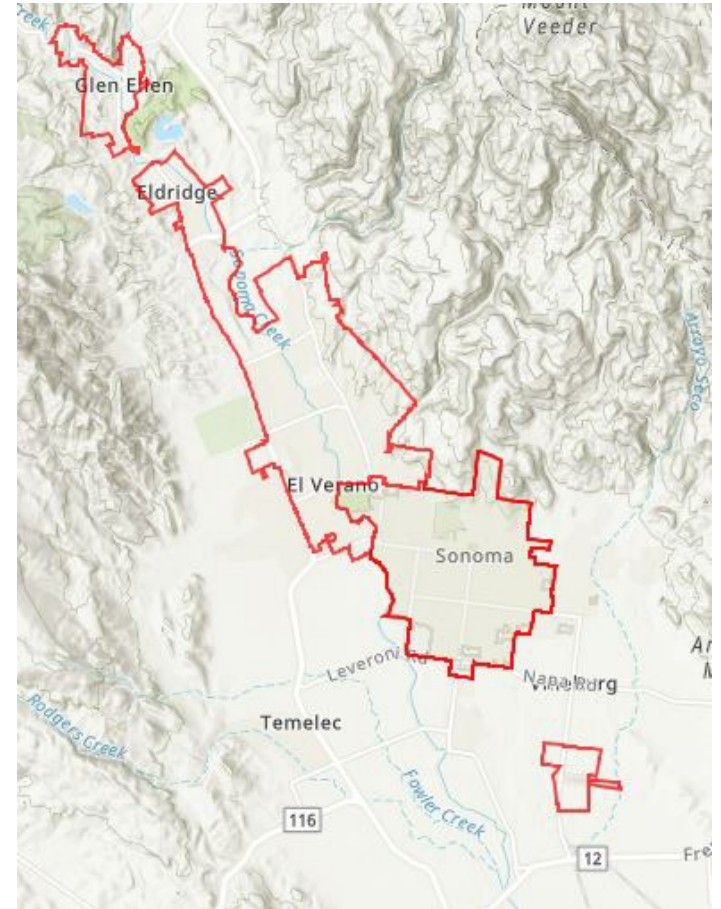
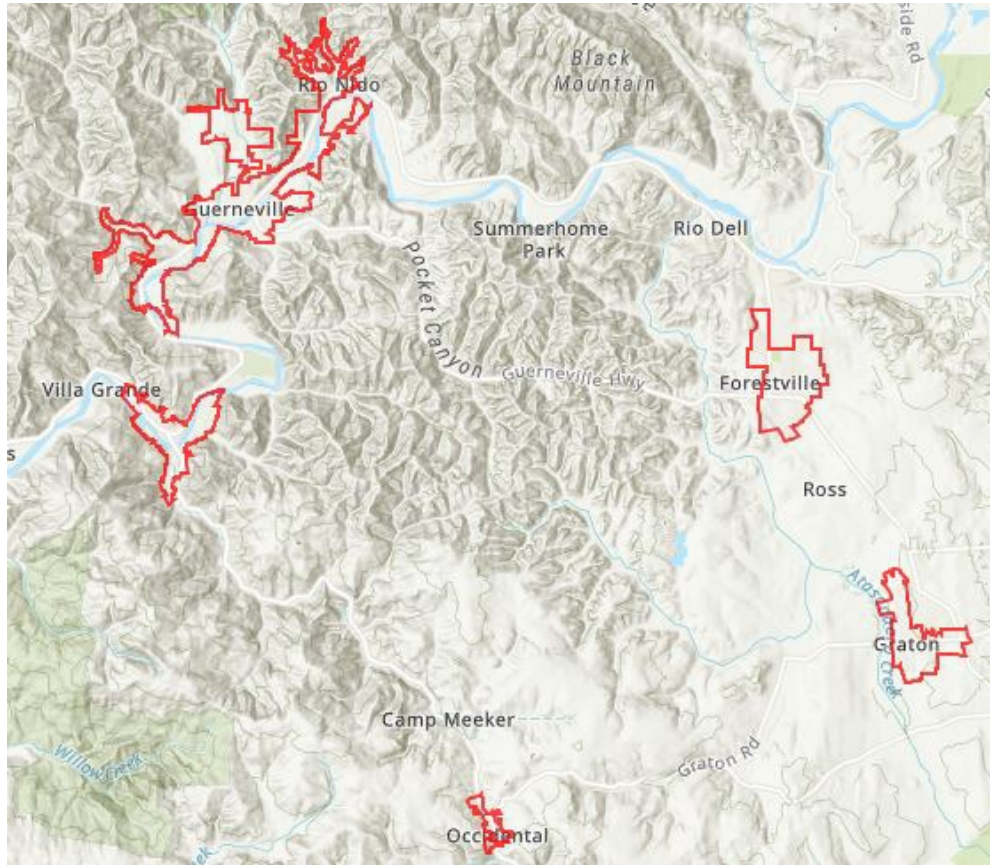
- Complaint submitted (e.g. sococonnect)
- Code enforcement works with Planning or Natural Resources staff to verify
- If valid complaint, code enforcement investigates
- Environmental restoration remedies in County Code

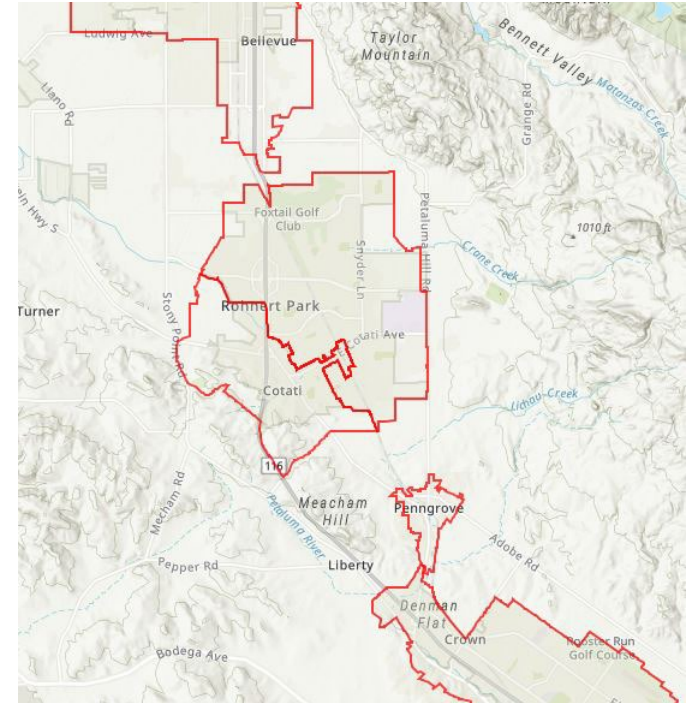
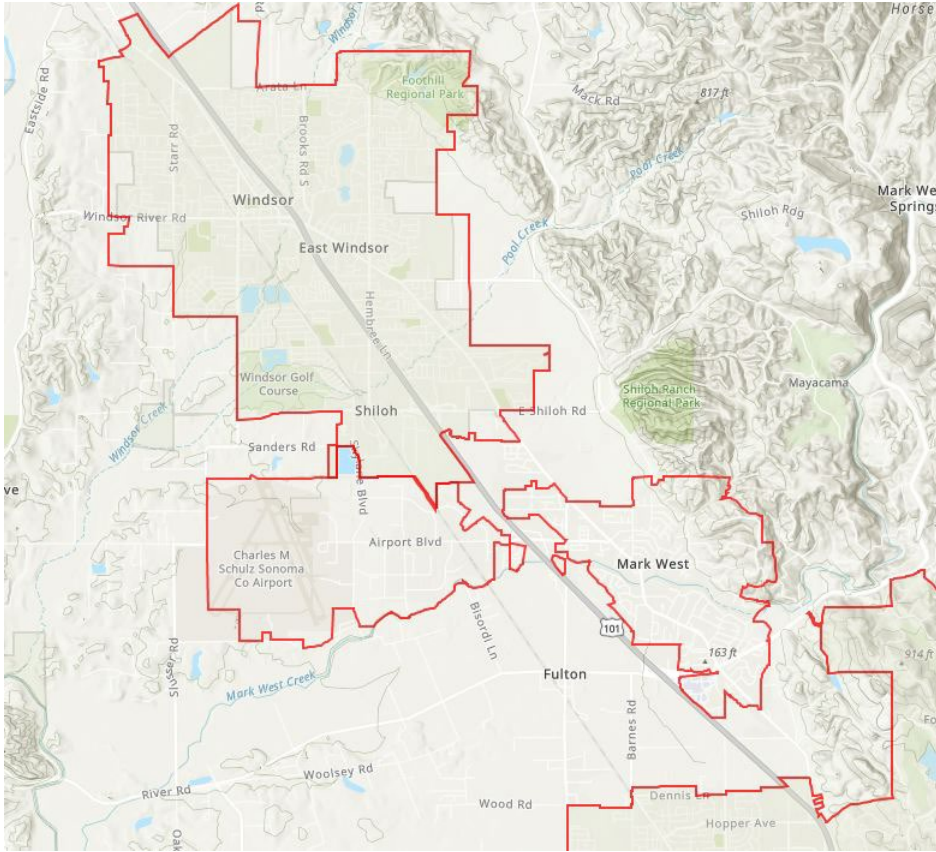
Valley Oak Habitat Combining District - Summary

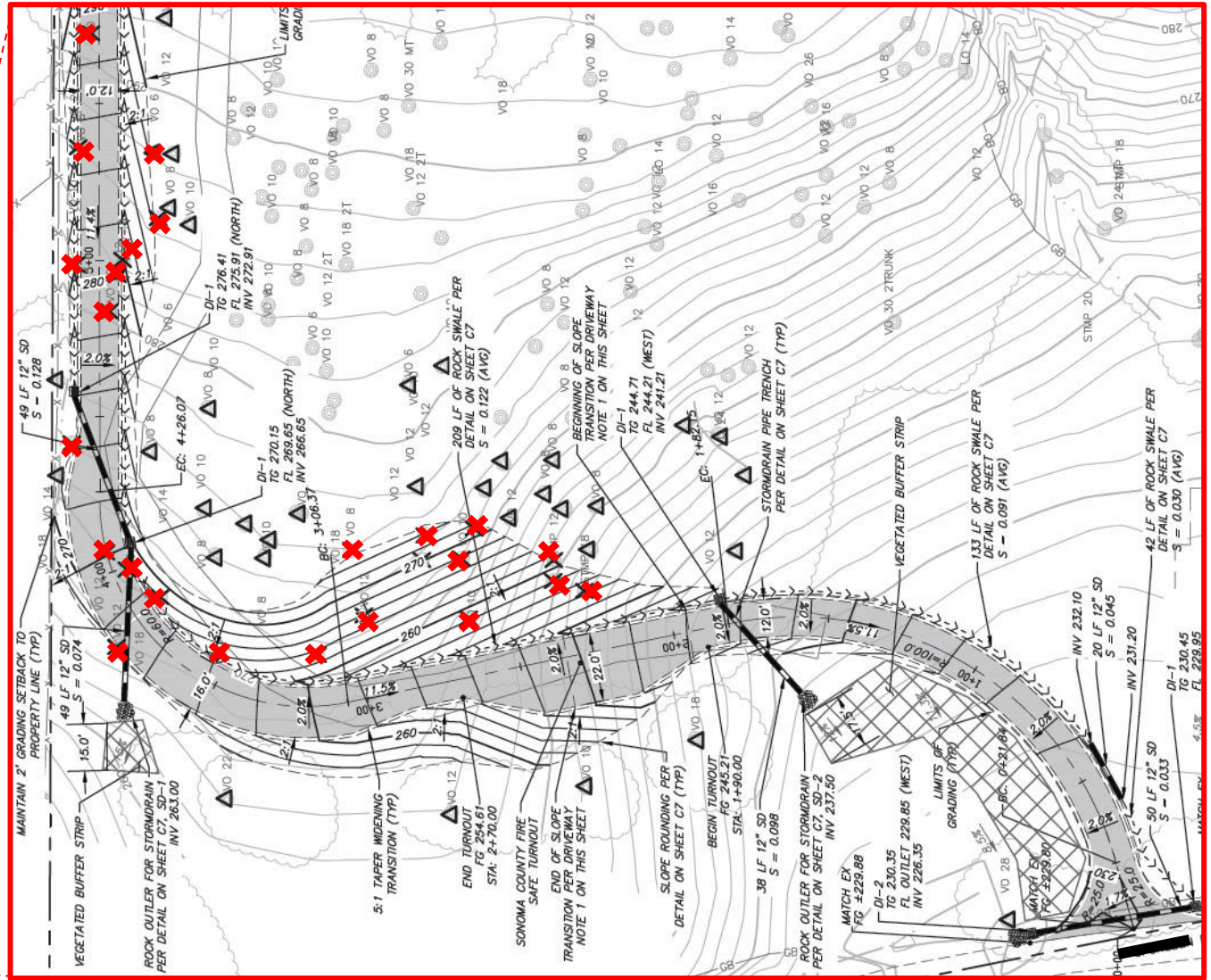
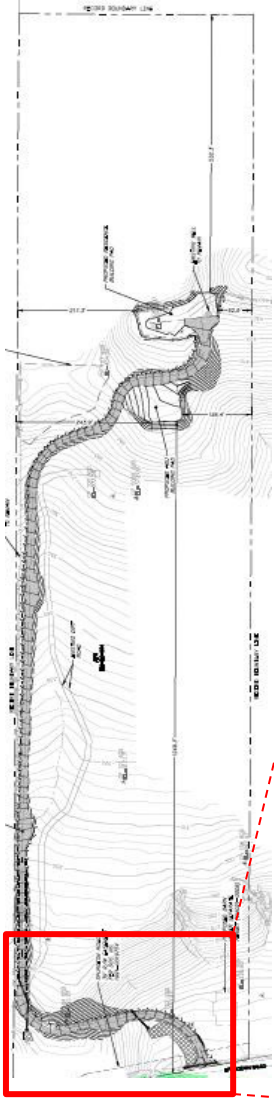
VOH Ordinance Components	Existing Ordinance	New Ordinance
Minimum Diameter	Single tree 20" Cumulative trees 60"	6"
Applicability	Any Removal of Minimum Diameter	Any Removal of Minimum Diameter
Big Trees	No extra protections, increased mitigation amounts	UPE requirement for large trees
Mitigation Options	Replant, Retain existing Valley Oaks, In-lieu fee	Replant at 1.5x Tree Protection Ordinance, Appraisal method replaces in-lieu payment
Fee Option	Minimum \$50 fee	Appraised value of replacement cost

Oak Woodlands

- No significant regulatory protections for oak woodlands
- Approximately 27,000 acres of oaks were significantly impacted since 2013
- Approximately 204 acres of trees removed under VESCO permits (2013-2021) outside wildfire areas
 - ▣ Removals under 1/2 acre are not counted because they are not tracked by VESCO process
 - ▣ Approximately 77% (159 acres) of acres of trees removed via VESCO occurred in oak woodlands in areas outside of wildfire (2013-2021)





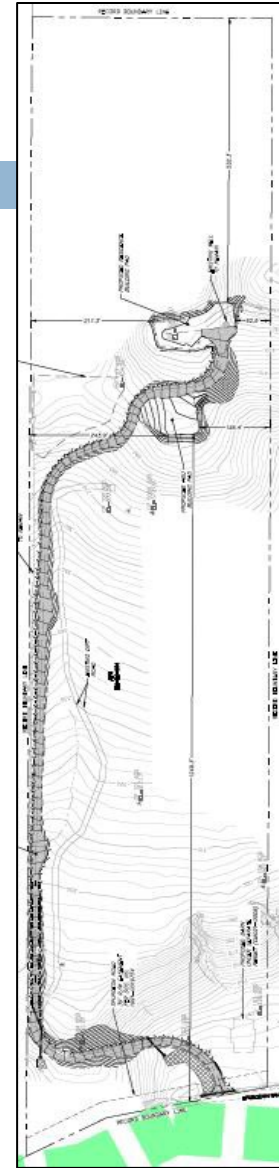


New driveway

X = Tree removed



Site with valley oak woodland



Approved driveway



Site with valley oak woodland
Approved driveway

Appraisal Methodology



- Methodologies outlined in Guide for Plant Appraisal 10th Edition
- Gives different approaches to estimate cost of replacement trees
- Recognized guidance across professional stakeholders

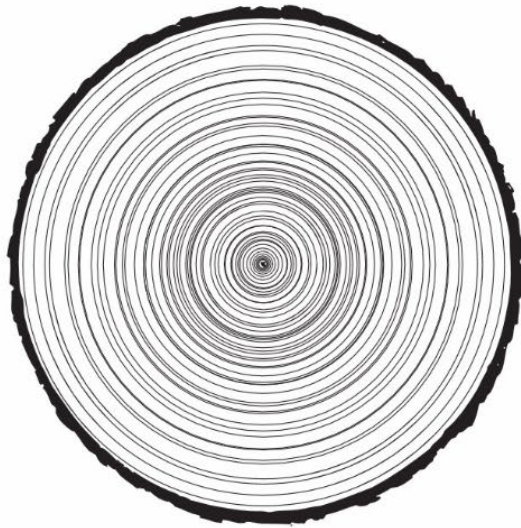
Methods of Estimating Cost

- Direct Cost Technique
 - ▣ When replacement trees are commonly available in same species and size
 - ▣ Estimate of cost of plants, services, other materials needed to reproduce or functionally replace the trees proposed for removal
- Extrapolated Cost Techniques
 - ▣ When replacement trees are not available in same size, but same species are available (ie, larger trees than common in nurseries)
 - ▣ Trunk Formula Technique (TFT) or Cost Compounding Technique (CCT)
 - ▣ Include depreciation factors in cost estimate

Depreciation Factors

- Condition
 - ▣ Consideration of structural integrity, tree health, and form
- Functional Limitations
 - ▣ Consideration of the interaction between the tree and site conditions that could limit the development of the tree
 - ▣ Includes species specific interaction with the site
- External Limitations
 - ▣ Factors outside of property, outside of owner's control that could impact development, condition or plant utility
 - ▣ Ex. Ordinances, pests, utility easements, changing climate zones, etc.
- Each factor expressed as a rating from 0-100%

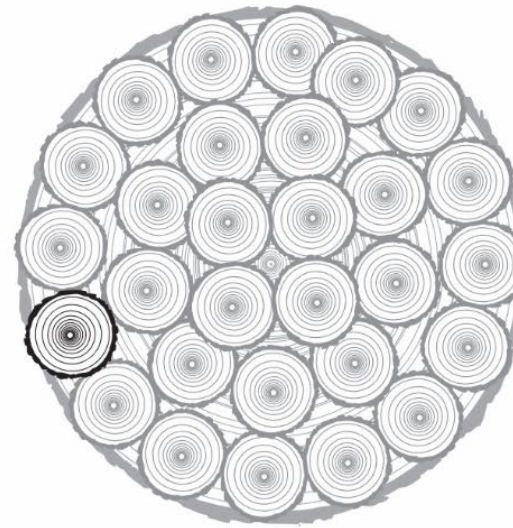
Trunk Formula Technique



Original tree



Reproduction tree

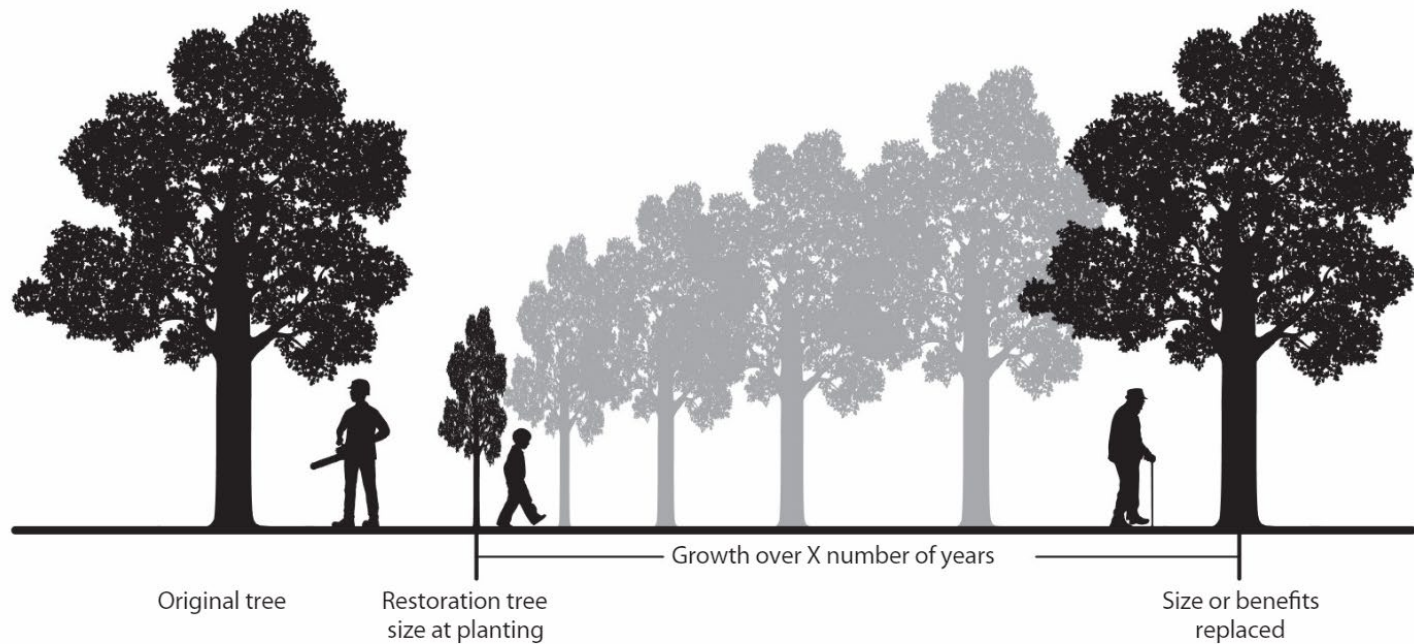


Reproduction tree
overlain on
original tree

Trunk Formula Technique

- Determine x-sectional area and unit cost of replacement tree
 - ▣ Ex. 3" DBH tree at nursery costs \$500 (largest size available at wholesale price to landscape professional).
 - X-sectional area is 7.07 square in – $(3.14 * 1.5 * 1.5)$
 - Unit Price is \$70.77/square inch – $(\$500 / 7.07)$
- Multiply the Unit Cost by the x-sectional area of the appraised tree.
 - ▣ Ex. 20" DBH tree has x-sectional area of 314 square inches $(3.14 * 10 * 10)$
 - ▣ Multiply by the unit cost for the above nursery tree $(314 * \$70.77)$
 - ▣ Appraised base cost is \$22,222
- Multiply by any applicable depreciation factors for assigned cost.

Cost Compounding Technique



Cost Compounding Technique

- Relates the cost of money to the tree growth time period
- Estimates time required for new planting to attain equivalent size as subject tree and then compounds the installed cost for that time period using an appropriate interest rate
- Formula is $CC = PC \times (1+i)^n$, where:
 - ▣ CC = Compounded Cost
 - ▣ PC = Present Installed cost of nursery tree
 - ▣ i = applicable interest rate
 - ▣ n = number of years for new tree to reach parity with subject tree

Example – Trunk Formula

- Blue oak, 28” DBH
 - ▣ X-sectional area: 615.44 square inches ($3.14 * 14 * 14$)
- Largest available nursery size:
 - ▣ 36” Box @ \$825 – 3.5” DBH
 - ▣ Nursery X-sectional area: 9.62 square inches
 - ▣ Unit Cost: \$85.79 ($\$825 / 9.62$ square inches)
- Base Value for appraised oak:
 - ▣ \$52,800 - (615.44 square inches * \$85.79)



Example – Trunk Formula

- Base Value for appraised oak:
 - \$52,800 - (615.44 square inches *\$85.79)
- Depreciation Factors
 - Condition – good form, healthy trunk, healthy branches, healthy upper branches – 90% rating
 - Functional Limitations – moderate to good site condition, dripline over pavement and may need to be pruned, sidewalk likely impeding roots, between road and building (could need more maintenance) – 70%
 - External Limitations – invasive oak borer beetle in area, but tree regularly inspected and overall healthy - 60%
- Depreciation Factor: $(90\%*70\%*60\%) = 38\%$, total depreciation of 62%
- Assigned Value = \$22,810 ($\$52,800* 90\%*70\%*60\%$)



Example – Cost Compounding

- Blue oak, 28" DBH
- Largest available nursery size:
 - 36" Box @ \$825 – 3.5" DBH
- Present Cost to install: $\$825 \times 2.5 = \$2,062.50$
- Interest Rate: 7.0%
- Assumed Growth Rate: 0.5"/year
- Years to Parity: 49 Years
- Compounded Cost for appraised oak:
 $\$56,780 (\$2,062.50 \times (1 + 7\%)^{49})$
- Assigned Value (using TFT depreciation):
\$21,463



Example – Arboreal Value Chart No. 1

- Blue oak, 28” DBH
- Arboreal Value Points: 4
- Equivalent Plantings: 24 5-gallon trees or ten 15-gallon trees
- Existing in-lieu fees: \$800



Minor Code Updates

- Riparian Corridor Combining District
 - Support invasive plant removal
 - Retain stumps in riparian corridor for soil stability
- Timberland Conversions
 - Add language clarifying existing policy
 - Minor Timberland Conversions are subject to a discretionary zoning permit
- Chapter 25
 - Align with Tree Protection Ordinance

Exemptions – Fire Risk Reduction

- i. Activities necessary to comply with local or state defensible space requirements, as defined in Chapter 13A of County Code or PRC 4291, or as otherwise required by either a fire professional or insurance company that insures an occupied dwelling or structure.
- ii. Fire risk reduction activities overseen, approved, completed in consultation with or undertaken by the County, CAL FIRE, or other public agencies. This includes prescribed or cultural burning projects. Nothing in this section is intended to modify the applicability of Section 26-02-070 of Chapter 26, related to applicability of Chapter 26 to governmental units.

Exemptions – Hazardous Trees

Exempt from zoning permit and mitigation.

Inside defensible space zone of structures.

Protected trees within striking distance of structures. When there is potential health and safety hazard due to the risk of its falling and its structural instability cannot be remedied.

Exemptions – Hazardous Trees (cont.)

Exempt from mitigation, requires a zoning permit.

Outside defensible space zone of structures.

Protected trees outside striking distance of structures.

Application must demonstrate that tree removal is necessary to protect life or property from the threat of harm as determined by a certified arborist or Registered Professional Forester.

Removal of tree over 36” dbh shall require a certified arborist or Registered Professional Forester to make the determination that such removal is necessary.

Exemptions – Resource Management

Projects consistent with a County approved Oak Woodland Management Plan, Forest Management Plan, Natural Communities Conservation Plan, Habitat Conservation Plan, Streamside Conservation Plan or other conservation management plan as determined by the Director.

Exemptions – Forest Management

Timber Harvest. The provisions of this section shall not apply to trees which are the subject of a valid timber harvesting permit approved by the state of California.

Timber Management. Activities meeting the definition of Timber Management on RRD or TP zoned parcels.

Forestry Activities. Other activities defined in PRC 750 – 781 as forestry conducted on forested landscapes overseen by a Registered Professional Forester shall not be subject to the provisions of this ordinance.