

APPENDIX C

TREE INVENTORY AND ASSESSMENT

TREE INVENTORY AND ASSESSMENT
LMC APARTMENTS-SOUTHEAST OF JEFFERSON BLVD
AND MURRIETA HOT SPRINGS RD.
MURRIETA, CALIFORNIA



6/1/2022

By

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Objective: I am to assess the trees with trunks four inches in diameter or greater at the site where the lot boundaries and were confirmed with Development Manager Alec Chasman.

Recommendations:

-Adequate fencing to be installed and signage posted to keep residents out of all sides of the riparian wash area.

-Any work is to be done by the latest ANSI specifications (American National Society Standard Institute).

-Dig Alert to be notified on any digging to be done such as removing tree trunks.

-Remove soil that is on the root ball and debris.

-Arborist to review the agricultural soil test and make a Soil Management recommendation.

-New landscape over five hundred square feet is to abide by the State required Model Water Efficiency Landscape Ordinance.

-A water audit is required after a new landscape over five hundred square feet.

-Any trees to be kept are to have Tree Protection zones and maintained by a Certified Arborist.

-Any trees to be kept are to have a yearly Hazard Assessment Inspection done by Certified TRAQ technician.

Limitations:

These recommendations do not constitute a complete risk assessment or warranty against continued decline or failure.

Comments:

The current site plan avoids these existing trees and none of the trees identified are anticipated to be removed.

The public is not to enter the riparian area as these trees are unstable due to erosion and poor limb and trunk structures.



Western Cottonwood; *Populus fremontii*

This tree requires a lot of water.



African Sumac; *Rhus lancea*

This is a non-native tree that is drought tolerant



Most of the tree inventory consists of Goodding's willow; *Salix gooddingii*. These trees are stressed due to the lack of soil moisture and it requires a lot of water. There was a lot of caterpillars eating the leaves of these trees. Caterpillars were seen crawling in the commercial building parking lot next to where I took this tree inventory.

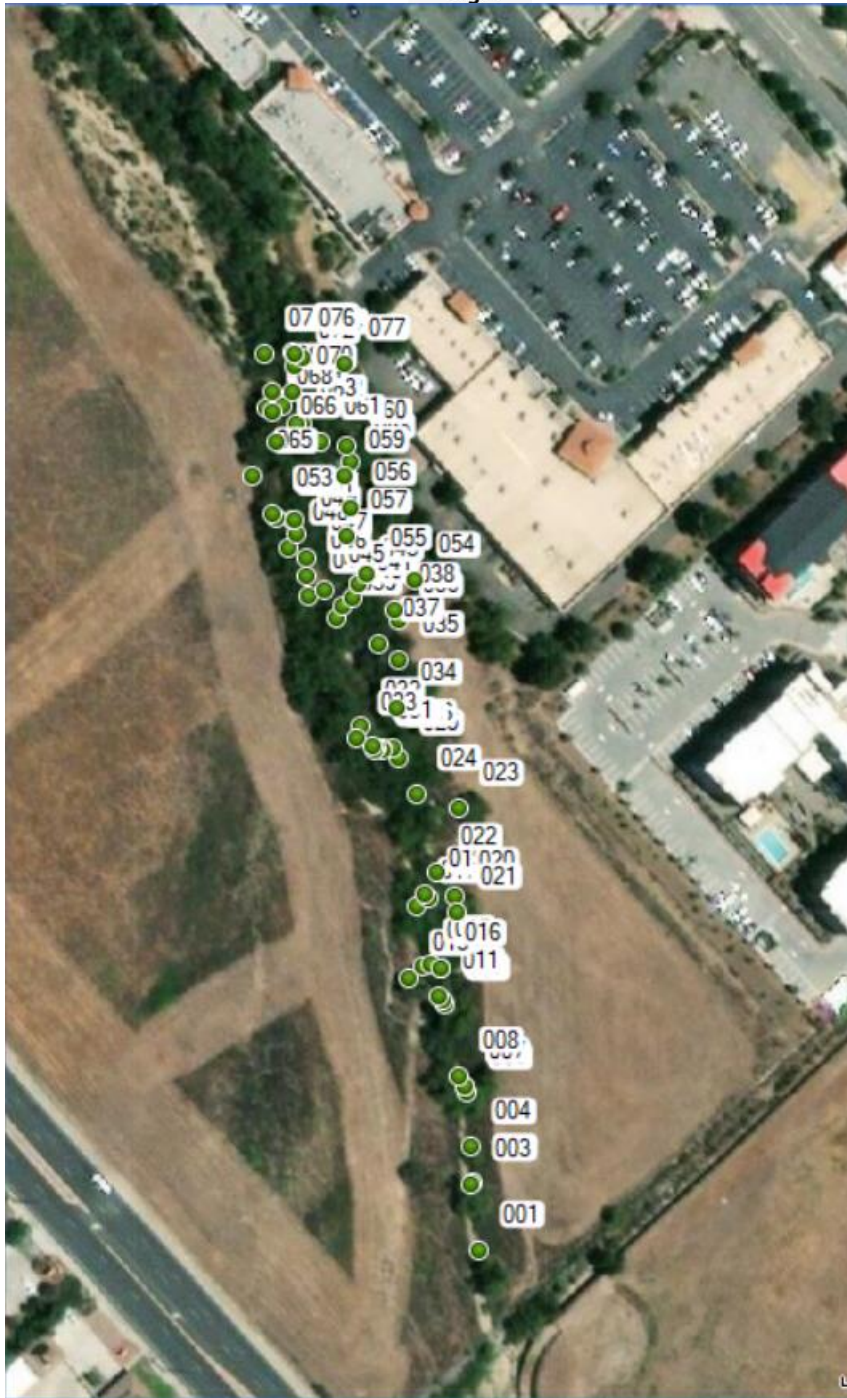


Elderberry; *Sambucus species*. The species can be identified when the berries are present.



Tamarix; Tamarix species. This tree is listed as a fire hazard and invasive on the Murrieta Fire Rescue Wildland Urban Interface Undesirable Plants & Trees list.

INVENTORY MAP



TREE INVENTORY

| Tree # | Common Name | Botanical Name | Diameter at 4.5 feet (dbh) in inches | Condition Rating | Structure Rating | Comments |
|--------|-------------------|-------------------------|--------------------------------------|------------------|------------------|-----------------------------|
| 1 | Goodding's willow | <i>Salix gooddingii</i> | 30x20x12,8 | 3 | 3 | |
| 2 | Goodding's willow | <i>Salix gooddingii</i> | 20x15x13 | 2 | 2 | |
| 3 | Goodding's willow | <i>Salix gooddingii</i> | 25x25x17 | 3 | 3 | |
| 4 | Goodding's willow | <i>Salix gooddingii</i> | 18x15x7 | 3 | 4 | |
| 5 | Goodding's willow | <i>Salix gooddingii</i> | 13x10x10 | 2 | 1 | Trunk decay |
| 6 | Goodding's willow | <i>Salix gooddingii</i> | 25x40x17 | 3 | 2 | |
| 7 | Goodding's willow | <i>Salix gooddingii</i> | 15x20x7 | 2 | 2 | Leaning |
| 8 | Goodding's willow | <i>Salix gooddingii</i> | 15x25x15,7,9 | 3 | 3 | |
| 9 | Goodding's willow | <i>Salix gooddingii</i> | 25x25x6,6,5 | 2 | 2 | Leaning, borers |
| 10 | Goodding's willow | <i>Salix gooddingii</i> | 25x15x10,8,12 | 3 | 3 | |
| 11 | Goodding's willow | <i>Salix gooddingii</i> | 20x10x6,4 | 2 | 2 | Leaning |
| 12 | Goodding's willow | <i>Salix gooddingii</i> | 17x15x13 | 2 | 3 | |
| 13 | Elderberry | <i>Sambucus species</i> | 20x20x7,8,9 | 3 | 3 | |
| 14 | Elderberry | <i>Sambucus species</i> | 12x15x8 | 3 | 3 | |
| 15 | Elderberry | <i>Sambucus species</i> | 13x10x5 | 3 | 1 | Roots out of soil |
| 16 | Goodding's willow | <i>Salix gooddingii</i> | 30x19x12 | 3 | 2 | |
| 17 | Goodding's willow | <i>Salix gooddingii</i> | 18x25x12,8 | 3 | 3 | |
| 18 | Goodding's willow | <i>Salix gooddingii</i> | 15x20x7 | 1 | 2 | Trunk decay |
| 19 | Goodding's willow | <i>Salix gooddingii</i> | 25x25x8 | 2 | 2 | |
| 20 | Goodding's willow | <i>Salix gooddingii</i> | 15x20x4,7 | 2 | 1 | Trunk decay |
| 21 | Goodding's willow | <i>Salix gooddingii</i> | 15x15x7 | 2 | 2 | |
| 22 | Goodding's willow | <i>Salix gooddingii</i> | 25x10x9 | 2 | 2 | |
| 23 | Elderberry | <i>Sambucus sp.</i> | 20x20x17 | 3 | 1 | Major trunks are collapsing |
| 24 | Goodding's willow | <i>Salix gooddingii</i> | 20x20x8 | 3 | 2 | |
| 25 | Goodding's willow | <i>Salix gooddingii</i> | 25x20x8,6,7 | 3 | 3 | |

Tree inventory consists of the condition and structure rating from 0-5.

5 No problem

4 No apparent problems

3 Minor problems

2 Major problems

0 or 1 Extreme problem(s).

Factors are roots, trunk, scaffold branches, smaller branches and twigs, foliage and/or buds.

Diameter of trunks are measured at breast height which is 4.5 feet.

Condition and Structure letter grade ratings are:

5= A, 4= B, 3=C, 2=, D, 1 and 0=F

TREE INVENTORY

| Tree # | Common Name | Botanical Name | Diameter at 4.5 feet (dbh) in inches | Condition Rating | Structure Rating | Comments |
|--------|--------------------|-------------------|--------------------------------------|------------------|------------------|--------------|
| 26 | Goodding's willow | Salix gooddingii | 18x25x10,9 | 2 | 1 | |
| 27 | Western Cottonwood | Populus fremontii | 35x20x13 | 2 | 3 | |
| 28 | Goodding's willow | Salix gooddingii | 25x30x6,6,6 | 3 | 3 | |
| 29 | Goodding's willow | Salix gooddingii | 14x10x6,5 | 2 | 2 | |
| 30 | Goodding's willow | Salix gooddingii | 12x5x5 | 2 | 2 | |
| 31 | Goodding's willow | Salix gooddingii | 10x10x5 | 1 | 0 | |
| 32 | Goodding's willow | Salix gooddingii | 22x30x6,9,7 | 3 | 3 | |
| 33 | Goodding's willow | Salix gooddingii | 25x15x7 | 1 | 1 | |
| 34 | Goodding's willow | Salix gooddingii | 15x20x6 | 1 | 0 | Broken trunk |
| 35 | Western Cottonwood | Populus fremontii | 40x35x18 | 3 | 3 | |
| 36 | Goodding's willow | Salix gooddingii | 25x20x14 | 2 | 2 | |
| 37 | Goodding's willow | Salix gooddingii | 15x25x5,7,8 | 1 | 1 | Trunk decay |
| 38 | Goodding's willow | Salix gooddingii | 20x15x14 | 1 | 1 | Trunk decay |
| 39 | Goodding's willow | Salix gooddingii | 30x25x8,7,7 | 1 | 2 | |
| 40 | Goodding's willow | Salix gooddingii | 35x40x12,8,8,8 | 1 | 1 | |
| 41 | Goodding's willow | Salix gooddingii | 20x15x7 | 2 | 1 | |
| 42 | Goodding's willow | Salix gooddingii | 25x20x11,7,8 | 2 | 1 | Leaning |
| 43 | Goodding's willow | Salix gooddingii | 20x15x5,7 | 1 | 1 | Trunk decay |
| 44 | Goodding's willow | Salix gooddingii | 15x20x7,7,6 | 1 | 2 | |
| 45 | Goodding's willow | Salix gooddingii | 13x15x4,4,5 | 2 | 1 | |
| 46 | Goodding's willow | Salix gooddingii | 17x17x6,7,8 | 1 | 2 | |
| 47 | Goodding's willow | Salix gooddingii | 15x10x7,8,9 | 1 | 2 | |
| 48 | Goodding's willow | Salix gooddingii | 18x7x6 | 1 | 2 | |
| 49 | Goodding's willow | Salix gooddingii | 19x25x8,7,6 | 1 | 1 | Trunk decay |
| 50 | Goodding's willow | Salix gooddingii | 25x20x10 | 2 | 1 | Trunk decay |

Tree inventory consists of the condition and structure rating from 0-5.

5 No problem

4 No apparent problems

3 Minor problems

2 Major problems

0 or 1 Extreme problem(s).

Factors are roots, trunk, scaffold branches, smaller branches and twigs, foliage and/or buds.

Diameter of trunks are measured at breast height which is 4.5 feet.

Condition and Structure letter grade ratings are:

5= A, 4= B, 3=C, 2=, D, 1 and 0=F

TREE INVENTORY

| Tree # | Common Name | Botanical Name | Diameter at 4.5 feet (dbh) in inches | Condition Rating | Structure Rating | Comments |
|--------|--------------------|-------------------|--------------------------------------|------------------|------------------|-----------------------------------|
| 51 | Goodding's willow | Salix gooddingii | 25x25x8 | 2 | 2 | |
| 52 | Goodding's willow | Salix gooddingii | 20x15x5,8 | 2 | 2 | |
| 53 | Goodding's willow | Salix gooddingii | 15x12x7 | 3 | 2 | |
| 54 | Tamarix | Tamarix species | 20x20x5,4,5 | 3 | 2 | Considered flammable and invasive |
| 55 | Goodding's willow | Salix gooddingii | 22x15x10 | 2 | 2 | |
| 56 | Goodding's willow | Salix gooddingii | 25x10x6,9,9 | 2 | 1 | Trunk decay |
| 57 | Goodding's willow | Salix gooddingii | 14x20x6,6,12 | 1 | 1 | |
| 58 | Goodding's willow | Salix gooddingii | 20x30x4,7,4,8 | 1 | 1 | Trunk decay |
| 59 | Goodding's willow | Salix gooddingii | 14x15x6 | 2 | 2 | |
| 60 | Western Cottonwood | Populus fremontii | 60x35x15 | 3 | 3 | Oozing sap |
| 61 | Goodding's willow | Salix gooddingii | 35x15x10 | 3 | 1 | Trunk is lying on the ground |
| 62 | Goodding's willow | Salix gooddingii | 25x30x9,10 | 3 | 2 | |
| 63 | Goodding's willow | Salix gooddingii | 14x15x6,4 | 3 | 2 | |
| 64 | Goodding's willow | Salix gooddingii | 22x15x7 | 3 | 2 | |
| 65 | Goodding's willow | Salix gooddingii | 18x7x6 | 2 | 2 | |
| 66 | Western Cottonwood | Populus fremontii | 40x50x23 | 3 | 2 | Trunk decay |
| 67 | Western Cottonwood | Populus fremontii | 35x25x14 | 3 | 3 | |
| 68 | Goodding's willow | Salix gooddingii | 12x10x8,12 | 1 | 1 | Trunk decay |
| 69 | Goodding's willow | Salix gooddingii | 15x13x9,5 | 1 | 1 | |
| 70 | Goodding's willow | Salix gooddingii | 10x7x12 | 1 | 1 | Trunk decay |
| 71 | African Sumac | Rhus lancea | 13x13x4,4 | 3 | 3 | |
| 72 | Goodding's willow | Salix gooddingii | 12x10x4 | 2 | 1 | Trunk decay |
| 73 | Goodding's willow | Salix gooddingii | 10x20x6 | 1 | 1 | Trunk decay |
| 74 | Goodding's willow | Salix gooddingii | 13x7x6 | 1 | 1 | Trunk decay |
| 75 | Goodding's willow | Salix gooddingii | 14x7x7 | 1 | 1 | |
| 76 | Goodding's willow | Salix gooddingii | 15x12x9 | 1 | 1 | |
| 77 | Goodding's willow | Salix gooddingii | 15x7x5 | 1 | 1 | Trunk decay |

Tree inventory consists of the condition and structure rating from 0-5.

5 No problem

4 No apparent problems

3 Minor problems

2 Major problems

0 or 1 Extreme problem(s).

Factors are roots, trunk, scaffold branches, smaller branches and twigs, foliage and/or buds.

Diameter of trunks are measured at breast height which is 4.5 feet.

Condition and Structure letter grade ratings are:

5= A, 4= B, 3=C, 2=, D, 1 and 0=F

GPS COORDINATES:

| | Latitude | Longitude |
|----|--------------------|---------------------|
| 1 | 33.548503993079066 | -117.19550200738013 |
| 2 | 33.548688981682062 | -117.1955259796232 |
| 3 | 33.54868596419692 | -117.19552799127996 |
| 4 | 33.548785960301757 | -117.19552899710834 |
| 5 | 33.548935996368527 | -117.19554198905826 |
| 6 | 33.548953011631966 | -117.19555104151368 |
| 7 | 33.548953011631966 | -117.19555296935141 |
| 8 | 33.548982013016939 | -117.19557199627161 |
| 9 | 33.54917898774147 | -117.19561700709164 |
| 10 | 33.549188962206244 | -117.19562597572803 |
| 11 | 33.549201032146811 | -117.19563402235508 |
| 12 | 33.549274038523436 | -117.1956279873848 |
| 13 | 33.549246964976192 | -117.19573896378279 |
| 14 | 33.549279989674687 | -117.19569303095341 |
| 15 | 33.549287030473351 | -117.19566503539681 |
| 16 | 33.549275966361165 | -117.1956330165267 |
| 17 | 33.549446035176516 | -117.19571096822619 |
| 18 | 33.549467995762825 | -117.19567199237645 |
| 19 | 33.549475958570838 | -117.19568096101284 |
| 20 | 33.549472019076347 | -117.19558599404991 |
| 21 | 33.549429019913077 | -117.19557702541351 |
| 22 | 33.549536978825927 | -117.19564097933471 |
| 23 | 33.549711992964149 | -117.19557199627161 |
| 24 | 33.549753986299038 | -117.19571297988296 |
| 25 | 33.549849959090352 | -117.1957709826529 |
| 26 | 33.549878038465977 | -117.19579403288662 |
| 27 | 33.549875020980835 | -117.19582596793771 |
| 28 | 33.549873009324074 | -117.19582596793771 |
| 29 | 33.549876026809216 | -117.19584398902953 |
| 30 | 33.549874015152454 | -117.19585102982819 |
| 31 | 33.549883989617229 | -117.1958589926362 |
| 32 | 33.549936963245273 | -117.19589998014271 |
| 33 | 33.549905028194189 | -117.19591003842652 |
| 34 | 33.549988009035587 | -117.19577500596642 |
| 35 | 33.550120024010539 | -117.19576997682452 |
| 36 | 33.550226977095008 | -117.19577299430966 |
| 37 | 33.550160005688667 | -117.19583703204989 |
| 38 | 33.55025296099484 | -117.19578397460282 |

GPS COORDINATES:

| | Latitude | Longitude |
|----|--------------------|---------------------|
| 39 | 33.550234017893672 | -117.19597600400448 |
| 40 | 33.550266036763787 | -117.19595697708428 |
| 41 | 33.550286991521716 | -117.19592303037643 |
| 42 | 33.550325967371464 | -117.19590500928462 |
| 43 | 33.550325967371464 | -117.19590500928462 |
| 44 | 33.55029403232038 | -117.19606996513903 |
| 45 | 33.550310963764787 | -117.19601598568261 |
| 46 | 33.550346000120044 | -117.19608002342284 |
| 47 | 33.550396962091327 | -117.19607600010931 |
| 48 | 33.550425041466951 | -117.19613802619278 |
| 49 | 33.55046502314508 | -117.19611397013068 |
| 50 | 33.550503998994827 | -117.19612302258611 |
| 51 | 33.550503998994827 | -117.19612201675773 |
| 52 | 33.550506010651588 | -117.19618001952767 |
| 53 | 33.550516990944743 | -117.19619401730597 |
| 54 | 33.55033602565527 | -117.19571499153972 |
| 55 | 33.550355974584818 | -117.19587701372802 |
| 56 | 33.550533000379801 | -117.19592898152769 |
| 57 | 33.550455970689654 | -117.19594499096274 |
| 58 | 33.550661997869611 | -117.19593300484121 |
| 59 | 33.550624027848244 | -117.19595303758979 |
| 60 | 33.550701979547739 | -117.1959419734776 |
| 61 | 33.550712959840894 | -117.19603300094604 |
| 62 | 33.55076601728797 | -117.19609301537275 |
| 63 | 33.550762999802828 | -117.19611397013068 |
| 64 | 33.550813961774111 | -117.19615998677909 |
| 65 | 33.550621010363102 | -117.19625797122717 |
| 66 | 33.550717988982797 | -117.19618001952767 |
| 67 | 33.550807004794478 | -117.19621396623552 |
| 68 | 33.550799963995814 | -117.19619502313435 |
| 69 | 33.550851009786129 | -117.19619301147759 |
| 70 | 33.550851009786129 | -117.19612796790898 |
| 71 | 33.550955029204488 | -117.1962200012058 |
| 72 | 33.550922004505992 | -117.19611598178744 |
| 73 | 33.550962992012501 | -117.19612402841449 |
| 74 | 33.550946982577443 | -117.19608899205923 |
| 75 | 33.550957040861249 | -117.19611698761582 |
| 76 | 33.550957040861249 | -117.19611598178744 |
| 77 | 33.550930973142385 | -117.19595102593303 |

Tree Protection Plan

Quality Assurance

Part 1 General

A. Tree service Qualifications:

1. Contractor shall have a qualified arborist on “The Project” site when grading within the dripline.
2. Arborist Qualifications:

Site Arborist: the Contractor shall utilize a registered Certified Arborist by the International Society of Arborist with a Bachelors Degree in Horticulture or equivalent to oversee all transplanting and trenching/tunneling near existing trees, oversee any pruning services required for existing and new trees. All site work shall be done under their review, in conformance with their recommendations.

Tree Protection zone needs to be maintained.

B. Tree Pruning Standards: Comply with the latest National Arborist Association’s “Pruning Standards for Shade Trees” except where more stringent requirements are indicated.

C. Pre-installation Conference:

1. Before commencing tree protection and trimming, meet with representatives of authorities having jurisdiction, The Owner Representative, consultants, and other concerned entities,
Review tree protection and trimming procedures and responsibilities. Notify participants at least five (5) working days prior to convening conference. Record discussion and agreements and furnish a copy to each participant.

Part 2 – A “Warning” sign is to be prominently displayed on each protective enclosure. The sign will be a minimum of 8.5 inches x 11 inches laminated and clearly state the following:



Part 3 –Products

Materials

- A. Topsoil. Any topsoil to be brought in is to be tested before coming on to the site by a soil laboratory to be determined by the Certified Arborist on site. Matching soil composition and element make up will be considered for the Soil Scientists approval. This is to make sure no toxic soil is brought on to the job site.

B. Protective Fencing:



Diagram A

Plastic construction fencing (diagram A) is easily moved, deteriorates, or destroyed by construction activities and therefore not recommended and will be rejected. A better method, often specified by municipalities, is the installation of chain link, wire mesh fence or wood fence (see Diagram b). The fencing should ideally be 4 to 6 feet (1.2 to 1.8 m) tall or higher and solidly anchored into the ground. In all cases, fencing should meet or exceed local ordinances. Root systems from trees on adjacent properties may also need to be fenced on the construction site side.



Diagram B

Each enclosure will have a laminated “Warning” sign placed at 10-foot intervals and clearly state the following:

WARNING

Tree Protection Zone

This Fence Shall Not be Removed

- C. Wood Chip Mulch: Any wood chip mulch to reduce compaction or for mulching is to be determined by Soil Scientist. Size particles, flammability and source are to be called out by Soil Scientist. Some mulch materials have caught on fire causing buildings to burn.
- D. Sensors: Sensors to be used to monitor moisture pre and post construction will be Granular Matrix Sensors by Irrrometer Co.

Part 4- Execution

4.1 Preparation

- A. Temporary Protection: Provide temporary fencing, barricades, or other suitable guards located outside the drip line (outer perimeter of branches) to protect remaining trees and other plants from damage

- B. Protect tree root systems from damage due to noxious materials caused by run-off or spillage while mixing, placing or storing construction materials. Protect root systems from flooding, eroding or excessive wetting caused by dewatering operations.
- C. Place wood chips mulch under drip line of all trees to remain. Size and type of wood mulch is to be specified by Soil Scientist.
- D. Do not store construction materials, debris or excavated material within the drip line of remaining trees.
- E. Do not permit vehicles or foot traffic within drip line, and prevent soil compaction over root systems. Temporary steel traffic plates may be employed.
- F. Do not allow fires under or adjacent to remaining trees or plants.

4.2 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
- B. Excavation within the drip line of existing trees to remain shall be prohibited without the approval of the Arborist. If approved, proceed as described below.
- C. Where excavation for new construction is required within tree drip lines, hand excavate to minimize damage to root systems. Use Air or water spades to expose roots.
 - 1. Relocate roots in backfill areas wherever possible. If encountering large, main lateral roots, expose beyond excavation limits as required to bend and relocate roots without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3 inch back from new construction.
 - 2. Do not allow exposed roots to dry out before placing permanent backfill. Use native soil and wrap with burlap. Water and maintain in a moist condition and temporarily support and protect roots from damage until they are permanently relocated and covered with native site soil.

D. Where utility trenches are required within tree drip lines, tunnel under or around the roots by drilling, auger boring, pipe jacking, or digging by hand.

1. Review: The Owner Representative shall review all proposed work within root area prior to execution of the work.
2. Root Pruning: Do not cut main lateral roots or tap roots; cut only smaller roots that interfere with installation of new work. Cut roots with sharp pruning instruments; do not leave jagged cuts.

4.3 REGRADING

A. Approval: Maintain the natural existing grade around all trees, within the drip line area, unless indicated otherwise. Cut and fill shall be accomplished only upon the authority of the Arborist or Owner Representative. If approved, proceed as described below.

B. Grade Lowering:

1. Where new finish grade must be set below existing grade around trees, slope grade away from trees as recommended by Arborist. Maintain existing grades within tree drip line.
2. Root Pruning: Prune tree roots exposed during grade lowering. Do not cut main lateral roots or tap roots; cut only smaller roots. Cut roots with sharp pruning instruments; do not leave jagged edges.

4.4 TREE CANOPY ALTERATION

A. Approval: Unauthorized pruning of trees on the job site is prohibited. Pruning shall be accomplished only upon the authority of the Arborist.

B. Prune remaining trees affected by temporary and new construction. Prune remaining trees to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during the Contract period as recommended by arborist.

- C. Pruning Standards: Prune trees according to the ISA pruning guidelines, the latest ANSI pruning standards, and the National Arborist Association's "Pruning Standards for Shade Trees."
 - 1. Class I: -Fine Pruning,
 - 2. Class II: Standard pruning.
 - 3. Class III: Hazard pruning.
 - 4. Class IV: Crown-reduction pruning.
- D. Cut branches with sharp pruning instruments; do not break or chop.
- E. Chip all branches removed from trees. Spread material where indicated or as directed by The Owner Representative.

4.5 TREE REPAIR AND REPLACEMENT

- A. Damage Assessment:
 - 1. Damage to trees to remain shall be appraised using the “Guide to Plant Appraisal, 10th Edition.” Monetary fines will be assessed according to extent of damage. Severely damaged trees shall be replaced at no cost to the Owner Representative.
 - 2. The Arborist shall be sole arbiter of description of damage, assessor of fines and/or determination of replacement value.
- B. Repair: Promptly repair trees damaged by construction operations.
- C. Replacement: Remove and replace dead and damaged trees that the Arborist determines to be incapable of restoring to a normal growth pattern.
 - 1. Provide new trees of six (6)-inch caliper size and of a species selected by the Owner Representative when trees over six (6) inches in caliper, measured 12 inches above grade, are required to be replaced or 48” box trees if approved by the Arborist.

4.6 DISPOSAL OF WASTE MATERIALS


- A. Burning: Burning is not permitted on the Owner’s property.
- B. Dumping of paint and other building materials such as concrete is not permitted on the Owner’s property.

MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE

→ ↻ 🏠 🔒 <https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Model-Water-Efficient-Landscape-Ordinance>

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Model Water Efficient Landscape Ordinance

Model Water Efficient Landscape Ordinance



Drought-tolerant plants, mulch, and efficient-irrigation save water while offering habitat for pollinators. DWR/2015

About half of the urban water is used for landscape irrigation in California. Large water savings can be gained by efficient landscape design, installation, and maintenance. New development and retrofitted landscape water efficiency standards are governed by the Model Water Efficient Landscape Ordinance (MWELO). All agencies must adopt, implement, and enforce the MWELO or a more stringent ordinance.

In 2015, Executive Order B-29-15 (EO) tasked DWR with revising the 2010 updated MWELO to increase water efficiency standards for new and retrofitted landscapes through encouraging the use of more efficient irrigation systems, graywater usage, and onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. Updating the ordinance to incorporate these elements will help stretch our limited water supplies. The EO

also required that agencies report on their implementation and enforcement of local ordinances by December 31, 2015. DWR's Water Use and Efficiency branch worked with several affected agencies, interested groups, and the public to prepare the current (2015) updated MWELO to improve landscape irrigation water savings in accordance with the EO.

[2019 MWELO Report Assistance and Forms:](#)

Contact Us

Phone: [\(916\) 651-9676](tel:9166519676)

Email: WELO@water.ca.gov

Events

- ▶ [Travis Air Force Base Career Attendance](#)
Representatives from the California Department of Water Resources (DWR) will be on site for a Career Fair at Travis Air Force Base on Tuesday, February 25, 2020, from 10:00 AM to 1:00 PM. This is a great opportunity for DWR employees to meet with potential employers and discuss career opportunities at DWR.
Start: Tue 25 Feb 2020, 10:00 AM
End: Tue 25 Feb 2020, 1:00 PM
- ▶ [Salton Sea Community Meeting](#)
The State's Salton Sea Marine Resources Division is hosting a community meeting on Wednesday, March 4, 2020, from 6:00 PM to 8:00 PM. This is a great opportunity for community members to provide input on the Salton Sea Marine Resources Division's ongoing work.
Start: Tue 25 Feb 2020, 6:00 PM
End: Tue 25 Feb 2020, 8:00 PM

THE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE IS A STATE MANDATORY ORDINANCE IN EFFECT FROM 1996 TO INCLUDE RESIDENTIAL OR COMMERCIAL LANDSCAPES 500 SQUARE FEET OR MORE. THIS IS TO PROVIDE A DROUGHT TOLERANT AND FIRE SAFE LANDSCAPE.

AVOID LANDSCAPES THAT ENCOURAGE FIRES



MALIBU FIRE 1993

Although some of these Eucalyptuses seem to be eligible to keep, you may want to consider on removing these Eucalyptuses due to the high fuel content in them. There were loud explosions heard due to Eucalyptus blowing up in this Malibu fire.

After the great Malibu fire, in 1996 the Model Water Efficiency Landscape Ordinance was made. This ordinance is a State Mandated Ordinance for any new landscapes over 500 square feet to use drought tolerant plants and plants that have low fuel content so they do not burn readily.



Australia Fire 2019/2020

A lot of Australia's forests were burning in this fire. See the Eucalyptus trees in the picture above. Eucalyptus trees are considered flammable dead or alive.

RAINWATER ONLY SEMINAR



I have attended this seminar on January 2016 that is available for you to watch on Youtube and have made my own style of “Rainwater only” at my home and rental homes with no supplemental irrigation. If 51 percent of our water is used in the landscape and we go “Rainwater only” we will be in good shape.

Rainwater Only Concept

-At my own residence in 2017 I have achieved “Rainwater only” on my greenbelt replacing my grass lawn with lush *Lippia nodiflora* ground cover and changing my dead soil into living soil. This allows roots to grow deep and becoming drought tolerant.

The greenbelt is on one hydrozone which is a separate water valve from the rest of the landscape.



-The process of using irrigation to water landscapes involves energy to pump water therefore releasing emissions in the air.

-You do not have to have a cactus/succulent landscape as we have many colorful lush drought tolerant flowering plants to choose from.

-The best products I have found to achieve living healthy soil is from Green As It Gets Products, Greenasitgets.com.





“Rain Water Only” for four years (from 2018). Soil was treated with GardenMax and GroundBreaker and irrigated for one year. Torrance, California. Plant selection are chosen by regions. No supplemental irrigation is needed. [Home Page - Water Use Classification of Landscape Species \(WUCOLS IV\) \(ucanr.edu\)](http://ucanr.edu)



Specializing in establishing trees, Soil Science, monitoring soil moisture, troubleshooting, and tree appraisals/inventories.

DANE S. SHOTA CERTIFIED ARBORIST HAS CONSULTED ON:

ARMAGEDDON – A TOUCHTONE RELEASE

BERTH 93 – PORT OF LOS ANGELES

BOEING – LONG BEACH

CABRILLO BEACH - SAN PEDRO

DALEVS. L.A. CITY

DEFENSE FUEL REGION WEST- REMEDIATION OF MTBE IN SAN PEDRO

ECHG PARK LAKE – LOS ANGELES

HUNTINGTON BEACH – PYTOREMEDIATION

GORDON GIBSON CONSTRUCTION-SANTA MONICA

GUASHI WINERY - ONTARIO

L.A. CITY HALL

L.A. CITY VS. L.A. COUNTY

LITTLE CO. OF MARY HOSPITAL - TORRANCE

LOYCLA MARYMOUNT COLLEGE – WESTCHESTER

LOEWS BEACH HOTEL – SANTA MONICA

NORWALK TANK FARM-REMEDATION OF MTBE & 1,2 DCA TOXICITY

PALOS VERDES HOA

PASADENA TOURNAMENT OF ROSES CORPORATE BUILDING – PASADENA

PEGASUS SCHOOL – HUNTINGTON BEACH

PORT'S O' CALL- SAN PEDRO

RONALD REAGAN FEDERAL BUILDING – SANTA ANA

SAMS CLUB- FOUNTAIN VALLEY

ST. REGIS MONARCH BAY-DANA POINT

STUART LITTLE-THE MOVIE

THE WATERFRONT BEACH RESORT- A HILTON HOTEL HUNTINGTON BEACH

TOYOTA TRUCK RFD DIVISION – DOWNEY

TRI-POINTE HOMES

WALT DISNEY CONCERT HALL – LA

WAYTARERS CHAPEL – PALOS VERDES

WESTFIELD SHOPPING CENTER – CANOGA PARK

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