

ADOT Vegetation Management Guidelines – Cutting Trees and Shrubs

1.0 Purpose of Cutting Trees and Shrubs

Removing trees, shrubs and other plants, such as tumbleweeds, from within the right-of-way that interferes with the safe operation of the highway system is an important element of vegetation management. The reasons to cut or remove trees and shrubs include, but are not limited to, the following:

- Keeping the Recovery Area clear of fixed hazards
- Maintaining sight distance at intersections, crossroads, and along curves
- Removing trees and brush that obscure traffic signs, signals, and hazard markers
- Preventing encroachment of trees and brush into guardrails, shoulders, distress lanes, drainage features, and right-of-way fence
- Removing trees that are at risk of falling on the roadway due to high winds or unstable soil
- Preventing snow drift and reducing ice on the roadway
- Reducing fuel risk for seasonal wildfires
- Removing vegetation in conjunction with herbicide or pesticide treatment (see Herbicide Use chapter for more information)
- Removing and/or trimming trees, shrubs and groundcovers in overgrown landscape areas which need thinning for irrigation inspection, repair functions, and litter removal
- Selectively pruning shrubs and groundcovers in landscape areas to increase the density of plant barriers and promote health of native vegetation
- Removing trees and shrubs that are unhealthy or dead due to traffic damage, lightning, disease, or other problems

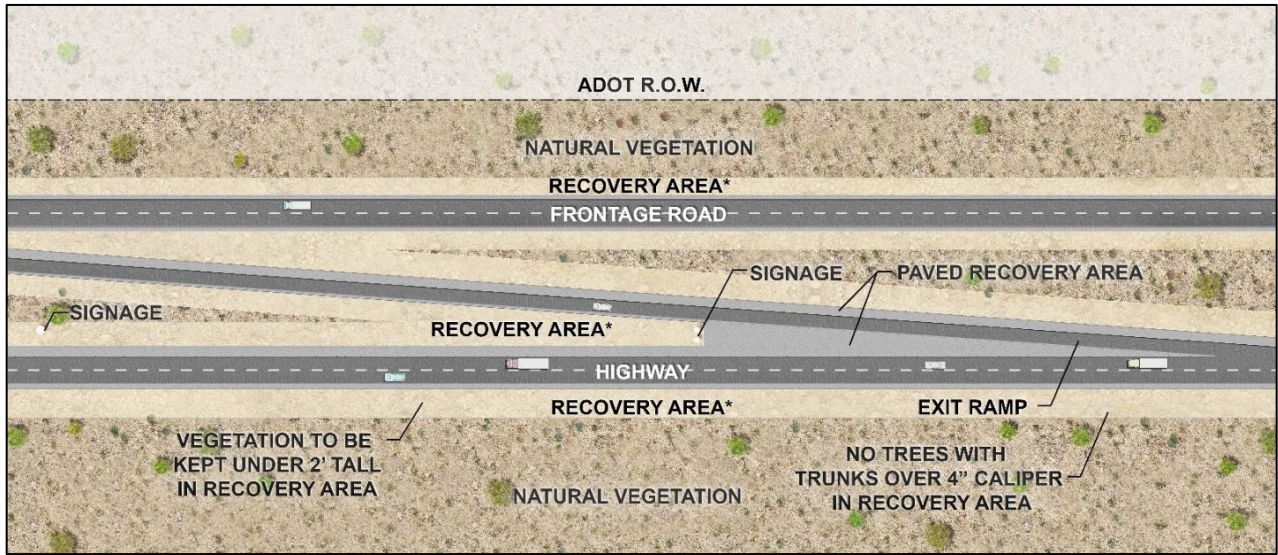
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| 1.0 | PURPOSE |
| 2.0 | PLANNING |
| 3.0 | COORDINATION |
| 4.0 | BEST PRACTICES |



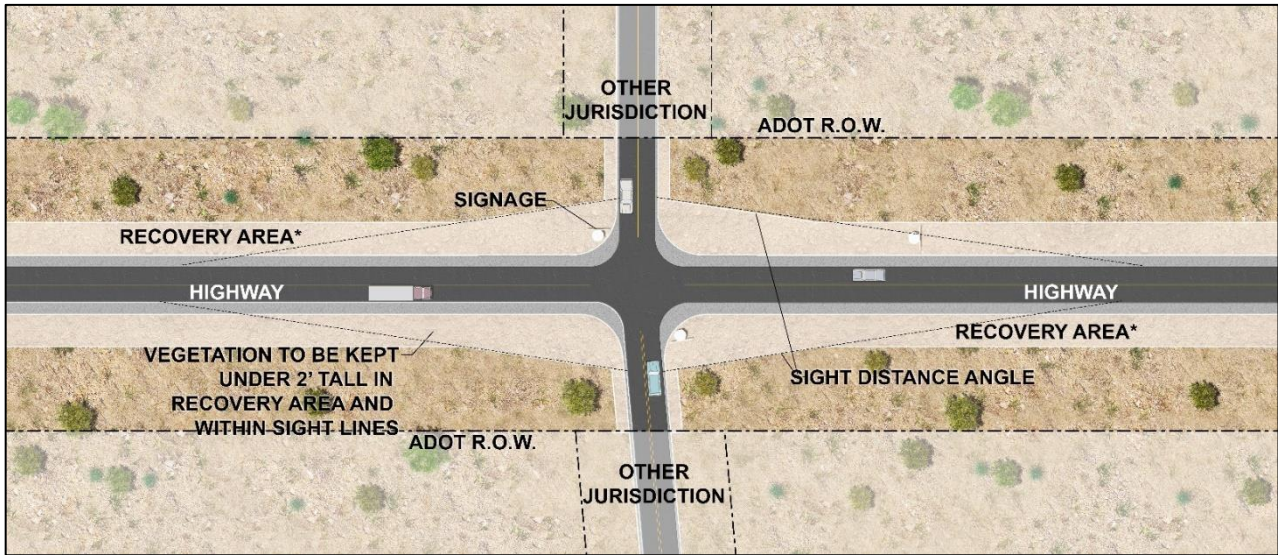
ADOT workers cut large tree branch

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Removing vegetation from the recovery area is important for roadway safety. The diagrams below illustrate recovery areas along a frontage road and at a highway intersection. For additional information see the [ADOT Roadway Design Guidelines](#).



Recovery area along frontage road



Recovery area at highway intersection

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2.0 Planning to Cut Trees and Shrubs

Seasonality

The removal of trees and other plants can generally occur at any time of the year, except:

- When soils are excessively wet: this could result in soil compaction or rutting from maintenance vehicles
- When plants are blooming: because removal may upset members of the public as well as reduce available food sources for pollinators
- During bird nesting season (March 1st through August 31st): the Migratory Bird Treaty Act (MBTA) is a federal law that prohibits the injuring, endangering, harming, or killing of migratory birds, including eggs and nestlings. Trimming trees and bushes must be avoided during the nesting season to avoid incidental take. For more information regarding the MBTA, please refer to the [MBTA Guidelines](#) on the ADOT Biology/404 webpage or speak with an ADOT biologist for potential concerns.

If plants require pruning rather than removal, the activity must be scheduled for the appropriate season relative to the plant species. For example, deciduous trees (trees that seasonally drop leaves) and conifers (such as pines and firs) must be pruned during the winter when they are dormant. Trees in the low desert areas can be pruned lightly at any time during the year, but heavier pruning must be restricted to the cooler months. Regardless of tree type, no more than 25% of biomass must be removed per year.

Selective pruning of shrubs and groundcovers in a landscape to promote regrowth must be done just prior to the beginning of the growing season, which would be late winter through late spring, depending on elevation.

Training

All ADOT personnel participating in vegetation removal should receive appropriate training in the safe use of chainsaws, chippers and the boom axe as well as the proper techniques for pruning.

3.0 Activity Coordination

Intra-agency Coordination

The District Environmental Coordinator (DEC) must be contacted prior to vegetation cutting operations to determine the appropriate clearing limits.

Roadside Development must be consulted if the proposed vegetation cutting occurs along a parkway, historic, or scenic route.

COORDINATION

 WHO TO CALL

Maintenance Supervisor
District Environmental Coordinator
Design Landscape Architect – ADOT
Roadside Development

Coordinate with the herbicide contact to schedule simultaneous herbicide treatments to prevent regrowth of the cut vegetation.

The DEC must be contacted if the vegetation proposed for cutting is rooted within drainages, washes, and/or riparian areas to evaluate whether or not a 404 permit is needed, and to confirm the presence/absence of sensitive wildlife.

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Contact the District Maintenance Supervisor to determine an appropriate location to place the brush piles that will need to dry in place for six months minimum, or determine the location to haul cut brush for disposal. When feasible, the brush may be chipped and dispersed nearby at a maximum depth of two (2) inches.

Interagency Coordination

Contact the local Forest Ranger District to obtain approval for removing trees on ADOT right-of-way within National Forest lands.

Prior to cutting trees or large cacti on ADOT right-of-way on National Park Service or US Fish and Wildlife Refuge land, coordinate with the park or refuge superintendent's office.

Coordinate with the appropriate Tribal representatives prior to cutting trees and shrubs in the right-of- way within Tribal lands.

Environmental Concerns

Consult with the DEC prior to cutting trees and shrubs to determine if protected species occur within the work area.

For updated contact information, please refer to the Mowing Chapter, Section 3.0 page 6.

4.0 Best Practices for Cutting Trees and Shrubs

General

The following best practices apply to vegetation removal, whether involving selective pruning or total plant removal:

- Restrict cutting to the recovery area only
- Place safety devices and signs around the perimeter of the work area
- Maintenance of cutting equipment is recommended on an as-needed basis
- Personnel are required to wear personal protective equipment
- Workers should use proper pruning techniques, as demonstrated in the diagram on page 16
- Cut only the amount of vegetative material that can be cleaned up each day

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Urban Landscape Areas

The following best management practices are appropriate for urban areas:

- Tree branches shall be trimmed to a minimum four (4) feet above the ground for inspection and litter removal
- Tree branches four (4) feet or more above the ground must be retained, to reduce wind throw, shade the root system, and provide more vegetative mass for photosynthesis
- Palm fronds shall be trimmed to a minimum height of 10 feet above the ground for fire prevention
- Weeds must be placed in designated areas for pickup and picked up before the end of the shift
- Brush piles are not allowed in urban areas or urban interfaces



ADOT employee with proper PPE using chainsaw to remove large limb

Rural Areas

Vegetation removal in rural areas typically involves cutting plants to ground level and then treating the stumps/stems with the appropriate herbicide, and include following these best practices:

- If not removing the entire tree, limbs must be cut close to the trunk to prevent unsightly stubs
- Saw cut brush and trees; limb, lop, and buck stems
- Cut stumps close to the ground, with a maximum height of four (4) inches
- Treat stumps with herbicide within 10 minutes of cutting, or wait until the plants re-sprout and then re-treat, depending on plant species
- Limbs, trunks, stems and slash are to be cut into lengths no longer than six (6) feet
- Chip material and scatter to a maximum depth of two (2) inches
- Trimming debris piles are not allowed in non-attainment air quality zones, and scenic vistas
- If trimmings are not chipped on-site, load trimmings on truck or trailer and secure load for proper disposal; should vegetation need to be left temporarily, place it in piles outside of recovery areas
- Remove limbs from large trees and pile slash; haul away large trunks for disposal
- Remove tumbleweeds without disturbing the soil unless work order has been approved to apply a pre-emergent herbicide in the area



ADOT employees clearing vegetation from guardrail area

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Cutting Brush in ROW

