

Vegetation Management Options

What are we managing for where?

Note: Options recommended by Parks & Recreation Commission at 1/12/2012 meeting

1. Vision for hilltop eucalyptus forest and understory (West of Taft St.) (Units EGHT, ESHT, ETHT)

1a. No vegetation management.

Result = Eucalyptus trees with mix of understory. Note: Risk of fire not addressed; additional dead material will build up at faster rate as trees drop dead wood. Annual grasses will take over native grasses and forbs. Understory shrubs/trees likely to remain.

1b. Minimal high-risk vegetation management (fire and physical hazards).

Result = Eucalyptus trees will continue to age and be removed as determined by a scaled-risk assessment. Fire management for ignition prevention and reduce dead material on ground. Note: Eucalyptus may or may not re-generate on the hillside. Native grasses and forbs will likely be outcompeted by annual grasses.

1c. Long-term management to retain Eucalyptus overstory + mixed understory.

Result = Manage for existing eucalyptus forest and understory mix, incorporating actions to reduce risk of fire and protect native species. Manage at current tree density for fire safety and mixed understory.

1d. Long-term management to slowly remove eucalyptus leaving existing understory vegetation type (grassland, toyon, oak, north coastal scrub).

Result = Slow conversion from eucalyptus as trees age and are removed when needed, incorporating actions to reduce risk of fire and protection of native species. Remove eucalyptus seedlings, resprouts and young trees – do not allow forest to expand.

1e. Long-term management to retain Eucalyptus where they are thriving and slowly remove where they are not.

Result = Manage for existing forest where thriving on hilltop. Slow removal of eucalyptus on hilltop as they age allowing understory to dominate. Incorporate actions to reduce risk of fire and protect native species.

2. Vision for vegetation in new parklands between Taft and Jackson (Units: EGJT, EOJT, GOW)

2a. No vegetation management.

Result = Eucalyptus trees may continue to expand and shade out grasslands. Note: Risk of fire not addressed. Invasive plants such as broom and pampas grass may spread to dominate understory and take over grassland. Oak woodland may continue as is or compete with eucalyptus for dominance.

2b. Minimal high-risk vegetation management (fire and physical hazards).

Result = Eucalyptus trees will continue to age and be removed as determined by a scaled-risk assessment. Fire management for ignition prevention, to reduce dead material on ground and to remove fire ladders. Note: Boundary, number, and density of Eucalyptus will expand. Invasive non-native species likely to dominate with loss of native grasses and forbs.

- 2c. Long-term management to retain Eucalyptus overstory + mixed understory.
Result = Manage for existing forest and understory mix, incorporating actions to reduce risk of fire and protect native species. Manage at current tree density (reduce density as needed by removing small trees) for fire safety and mixed understory.
- ✓ 2d. Long-term management to maintain vegetation diversity. Eucalyptus Oak Woodland area (EOJT) and Grassland Oak Woodland area (GOW) manage to slowly remove eucalyptus allowing existing understory vegetation to dominate. Eucalyptus Grassland area (EGJT) manage to retain Eucalyptus overstory + grassland understory.
Result = Maintain existing species mix in center area (EGJT). Protect oak woodland on north and grass oak woodland on south from being shaded out by eucalyptus; safer vegetation types from fire protection perspective; more diverse habitat for wildlife.
- 2e. Long-term management to slowly remove eucalyptus leaving existing understory vegetation type (grassland, toyon, north coastal scrub).
Result = Slow conversion from eucalyptus as scaled risk assessment indicates tree removal, incorporating actions to reduce risk of fire and protection of native species. Remove eucalyptus seedlings, resprouts and young trees – do not allow forest to expand boundaries.

3. Vision for uses in new parklands between Taft and Jackson

(Units: EGJT, EOJT, GOW)

- ✓ 3a. Discourage human use. Maintain as open space preserve for wildlife.
Result = Reduce vegetation management needed for ignition prevention – continue to monitor for health and invasive non-native species.
- 3b. Accommodate human use (e.g. provide trail and steps to connect Jackson Street to Taft Street).
Result = Need to manage for ignition potential along trail or other access points in addition to monitoring for health and invasive non-native species.

4. Vision for oak woodlands

(Unit: OW)

- 4a. No vegetation management.
Result = Trail access may become overgrown or blocked by storm-felled trees. Fire ladders at edges with shrub or grasslands may result in crown fire if adjacent areas ignite. Young oak thicket may result in poorly shaped trees. Non-native invasive groundcover or shrubs may continue to take over large areas of understory reducing habitat value.
- 4b. Minimal high-risk vegetation management (fire and physical hazards).
Result = Address fire hazards and storm damage. Young oak thicket may result in poorly shaped trees. Non-native invasive groundcover or shrubs may continue to take over large areas of understory reducing habitat value.
- ✓ 4c. Long-term vegetation management for protection and enhancement.
Result = Healthy oak woodland with diverse understory providing rich habitat for wildlife. See also management of non-native invasive species for understory health.

5. Vision for “big meadow” grasslands in Creekside Park

(Unit: G)

- 5a. No vegetation management.
Result = Grasses will grow tall. Shrubs and invasive plants will succeed into meadow. Narrow trail with limited visibility. Fire, security and safety concerns not addressed.
- 5b. Minimal high-risk vegetation management (fire and physical hazards).
Result = Over long term shrubs and trees may encroach and make meadow smaller.
- 5c. Long term management to enhance meadow.
Result = Grasses will be retained; shrubs and trees maintained at 2011 boundaries.

6. Vision for management of riparian areas

(Unit: R)

- 6a. No vegetation management.
Result = Fire, flooding, safety and security concerns not addressed. Non-native invasive shrubs will continue to take over large areas reducing habitat value.
- 6b. Minimal high-risk vegetation management (fire and physical hazards).
Result = Address fire hazards, flooding, safety and security concerns. Non-native invasive shrubs will continue to take over large areas reducing habitat value.
- 6c. Long-term vegetation management for protection and enhancement.
Result = Healthy riparian area with diverse understory providing rich habitat for wildlife. See also management of non-native invasive species.

7. Vision for management of invasive non-native species

(All Units)

- 7a. No vegetation management.
Result = Invasive non-native species may take over areas and damage existing vegetation. Many species have high fire hazards and low habitat values.
- 7b. Minimal high-risk vegetation management (fire hazards and prevent pioneering species).
Result = May not be enough to keep invasive non-native species from taking over areas. Annual monitoring for early detection and rapid response of invasive species required with establishment of IPM thresholds.
- 7c. Long-term management for fire hazards, to prevent pioneering species, and to contain and reduce harmful and damaging invasive species.
Result = Reduce invasive non-native species that are harmful and damaging to the environment. Requires annual, or more frequent, monitoring for early detection and commitment of rapid response for removal of invasive species with establishment of IPM thresholds. Reduce invasive, non-native species located in high value habitat areas first with goal of eradication of individual species or in small areas as feasible.

Vegetation Management Options Costs

1st year costs

low initial	high initial
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1. Vision for hilltop eucalyptus forest and understory

1a. No management	\$0	\$0
1b. Minimum management*	\$ 37,100	\$ 105,700
1c. Long term management to retain Euc+ mixed understory*	\$ 79,450	\$ 136,600
1d. Long term management to slowly remove eucalyptus *	\$ 82,650	\$ 165,000
1e. Long term management to retain & remove eucalyptus*	\$ 122,650	\$ 264,800

*Does not include cost determined by scaled risk assessment of annual eucalyptus tree removal

2. Vision for vegetation in new parklands between Taft and Jackson

2a. No management	\$0	\$0
2b. Minimum management*	\$ 18,450	\$ 31,400
2c. Long term retain Eucs + mixed understory*	\$ 29,650	\$ 54,700
2d. Long term management slow remove eucalyptus*	\$ 30,850	\$ 57,100
2e. Long term management retain some/ remove some eucalyptus*	\$ 37,250	\$ 68,400

*Does not include cost determined by scaled risk assessment of annual eucalyptus tree removal

3. Vision for Use of new parklands between Taft and Jackson

3a. Open space preserve (no human use)	\$0	\$0
3b. Accommodate Human Use	\$ 8,100	\$ 44,200

4. Vision for Oak Woodlands

4a. No management	\$0	\$0
Subtotal 4b. Minimum management	\$ 4,600	\$ 9,200
Subtotal 4c. Long term management	\$ 11,600	\$ 24,200

5. Vision for Big Meadow (Grassland) in Creekside Park

5a. No management	\$0	\$0
Subtotal 5b. Minimum management	\$ 3,300	\$ 5,400
Subtotal 5c. Long term management	\$ 4,900	\$ 7,800

6. Vision for Management of riparian areas

6a. No management	\$0	\$0
Subtotal 6b. Minimum management	\$ 5,000	\$ 18,000
Subtotal 6c. Long term management	\$ 24,900	\$ 53,000

7. Vision for Management of Non Native Species

7a. No management	\$0	\$0
Subtotal 7b. Minimum management	\$ 10,000	\$ 35,000
Subtotal 7c. Long term to contain at 2011 levels	\$ 31,000	\$ 73,500

Project Administration/ Contracting/ GIS	\$ 8,000	\$ 18,000
Education, signage and awareness program	\$ 10,000	\$ 15,000

Subtotal - All Minimum Management + admin	\$ 86,450	\$ 222,700
Subtotal - Majority Support from Oct 2011 + Jan 2012 PRC discussion	\$ 121,250	\$ 248,600
Subtotal - Long Term Mgmt. (1e, 2e,4c, 5c, 6c,7d) +admin + use + education	\$ 258,400	\$ 568,900