

Control of Blue Gum Eucalyptus in Coastal California Workshop  
Coastal Training Program  
Elkhorn Slough National Estuarine Research Reserve



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**EUCALYPTUS  
CONTROL CHOICES**

Option 1: Cut trees, treat stumps,  
and remove debris

Option 2: Kill trees standing, and  
let nature recycle debris

**EUCALYPTUS CONTROL CHOICES**

Option 1: Cut and remove trees

Techniques:

- PULLING
- FELLING

Option 2: Kill trees standing

Techniques:

- GIRDLING
- DRILLING
- FRILLING
- INJECTION
- BASAL BARK TREATMENT

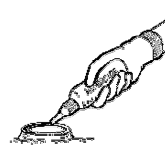


**FELLING**

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STUMP TREATMENT



Herbicide must be applied to cambium **WITHIN ONE TO TWO MINUTES** after cut to prevent stump sprouting.

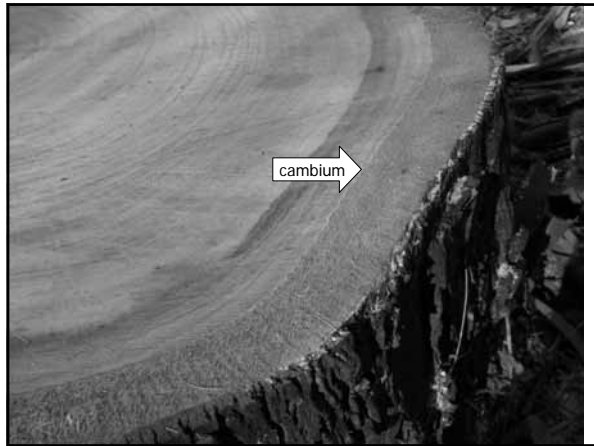
Recommended Herbicides

- For direct cambium contact
- (stump treatment, girdling, drilling, frilling and injection)
  - Roundup (glyphosate) at 50%, in water
  - Garlon 3A (Triclopyr- amine) at 50%, in water
- For basal bark application
  - Garlon 4 (Triclopyr- ester) 15% in Penevator (or other) basal oil.

-Not recommended: Imazapyr (Arsenal)



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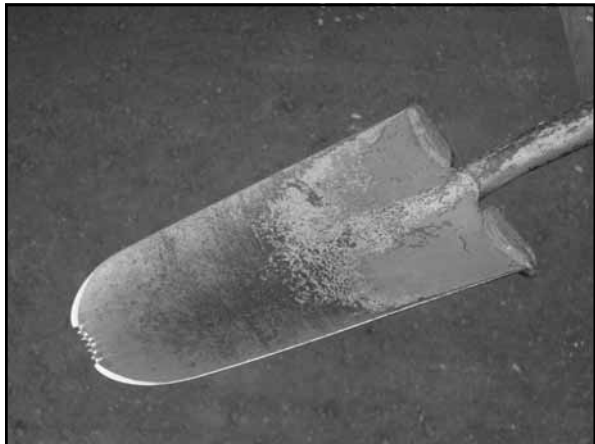


Agency Removal (CDF)	
<b>+</b>	<b>-</b>
<ul style="list-style-type: none"><li>■ Usually least expensive option</li></ul>	<ul style="list-style-type: none"><li>■ High risk factor</li><li>■ Requires constant supervision</li><li>■ May not have necessary equipment</li><li>■ May not do difficult felling</li><li>■ Can only do sawing</li><li>■ Crews may be called away at any time</li></ul>

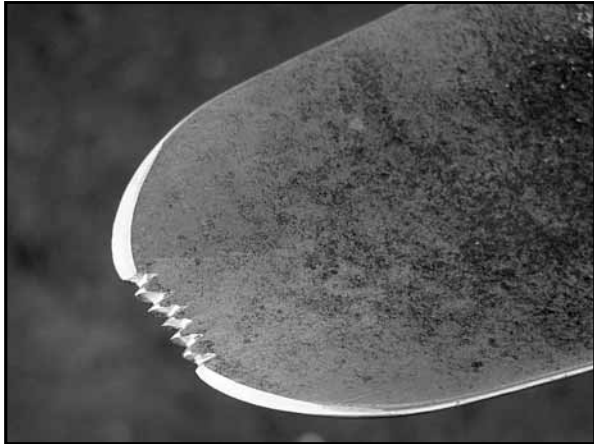
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Contract Removal	
<b>+</b>	<b>-</b>
<ul style="list-style-type: none"><li>▪ Minimal supervision required</li><li>▪ High level of expertise</li><li>▪ Proper equipment</li><li>▪ All needs of project can be met</li><li>▪ Work done correctly and on time</li><li>▪ Performance bond</li><li>▪ Risk of accidents reduced</li></ul>	<ul style="list-style-type: none"><li>▪ Higher Cost</li><li>▪ Choice of contractor can have a major bearing on how well the work will be done.</li></ul>



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**DISPOSAL**

Off-Site

- Lumber
- Pulp
- Mulch
- Firewood
- Other uses ?
- Landfill

On-Site

- Chip and use as mulch
- Stack & Burn
- Leave to decompose

**DISPOSAL**

Off-Site

- Lumber
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Skid-steer Loader



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Photo courtesy Caterpillar

**Stump Grinder**

The stump grinder is great at economically removing tree stumps from agricultural settings. Loader-mounted grinders are popular in landscaping and golf course applications.



**GIRDLING**

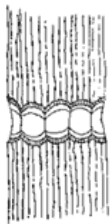


Figure 1



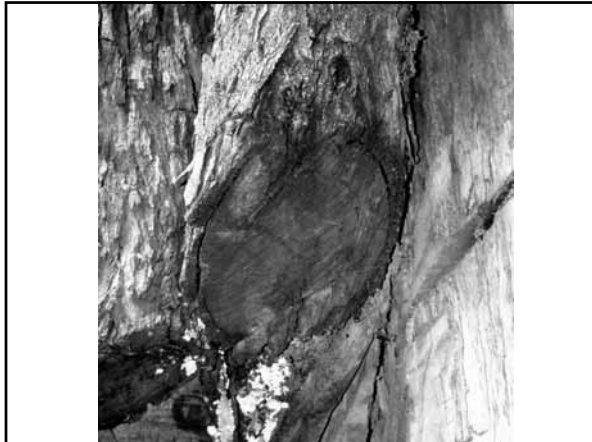
Figure 2



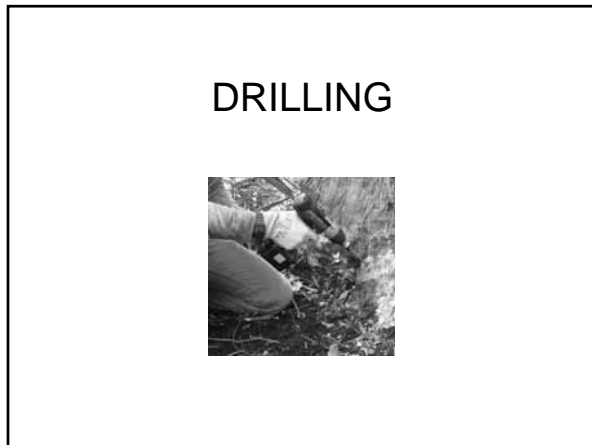
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"The Ringer"



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INJECTION



"E-Z-Ject Lance"

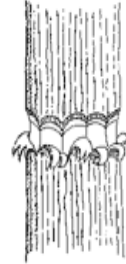
A black and white photograph showing a person using a power drill to inject a substance into the ground. The person is wearing a plaid shirt and a hard hat. The drill is being used to drive a lance into the soil. The background shows a wooded area.

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"Woody 4 Stem Injector"

FRILLING



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SUMMARY	
Option 1: Remove Trees	
<p>+</p> <ul style="list-style-type: none"> <li>▪ Removal phase of project can be completed in shortest time</li> </ul>	<p>-</p> <ul style="list-style-type: none"> <li>▪ Significantly higher cost</li> <li>▪ Increased risk of injury or damage</li> <li>▪ Revegetation often needed, further increasing costs</li> <li>▪ Instant and dramatic visual impact to trigger adverse reaction</li> <li>▪ Potential impact on native species from felling and removing large trees</li> <li>▪ Disturbance regime is triggered, potentially increasing follow-up costs and project duration</li> </ul>



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SUMMARY Option 2: Treat Trees	
+	-
<ul style="list-style-type: none"> <li>■ Lowest cost</li> <li>■ Minimal visual impact                             <ul style="list-style-type: none"> <li>■ Visible change occurs slowly</li> <li>■ No stumps</li> </ul> </li> <li>■ Minimum ecological impact                             <ul style="list-style-type: none"> <li>■ Trees remain to provide habitat</li> <li>■ No disturbance to alter succession, trigger type conversion, or encourage exotic species</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Long term project</li> <li>■ If trees must be removed later, dead wood is harder to cut</li> <li>■ In time, possible increase in incidence of falling limbs</li> </ul>

