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## Best Practices for Invasive Species Management in Garry Oak and Associated Ecosystems: **Orchard-grass (*Dactylis glomerata*)**

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Assess the site characteristics and your available resources to help you decide where to take management action, what actions to take. These decisions should be made within the context of the overall restoration objectives for the site (and according to the overall restoration plan for the area or site, if one exists).

### *a) Deciding where to take action*

Consider the following two factors when prioritizing where to take action.

**Factor 1: Conservation Value.** High priority should be placed on the control or removal of invasive grasses in the areas of highest conservation value, such as where threatened or endangered species occur. **Factor 2: Preventing Spread.** High priority should be placed on preventing further spread of this invasive grass. Contain the invasion first, and then take action to reduce the "footprint" of the invasion once it is contained. For any invaded area, start with the satellite patches on the periphery and move towards the centre.

Note: Be particularly careful in depressions and seeps - these areas are very sensitive. Only take action in these areas under the guidance of an expert.

### *b) Deciding what action to take, and when*

Circumstances	Method	When	Notes or Caveats
Isolated plants, patchy areas of grass (usually occurring on thinner soils), and small areas of grass on deeper soils	Cut the root crown	Any time for initial removal; re-treat before seed set	<ul style="list-style-type: none"> <li>• Cut just below ground level, using a hook knife or other suitable tool</li> <li>• This method causes less soil disturbance than pulling</li> <li>• Repeat treatments should occur before the plant sets seeds, which occurs in late summer</li> <li>• Plant native Garry oak ecosystem grass plugs in the resulting hole (in the spring, or in the fall after the rains start again)</li> </ul>
Large areas of grass growing in deep soil	Mow	Early to mid-July (after native wild-flowers have bloomed)	<ul style="list-style-type: none"> <li>• This method is appropriate for areas where some native plant species are also present</li> <li>• Seed with native plant species after each mowing, and repeat (mowing then seeding) several times per year, and for several years' duration</li> <li>• Some mowers allow good power as well as precision for avoiding native species (e.g. Field and Brush Mower, from DR Power Equipment)</li> </ul>

Circumstances	Method	When	Notes or Caveats
Deep-soil sites	Mulch with oak leaves	In the fall	<ul style="list-style-type: none"> <li>• Use Garry oak leaves if possible</li> <li>• The mulch layer should be 3-4 inches thick</li> <li>• Re-seed or plant with native species</li> </ul>
Areas with <b>no native plant species</b> present	Plough	Any time	<ul style="list-style-type: none"> <li>• Follow this method by planting or seeding with native species</li> </ul>
Areas with <b>no native plant species</b> present	Cover with landscape fabric or weed fabric	Any time	<ul style="list-style-type: none"> <li>• Leave the fabric in place for one to two years</li> <li>• After fabric removal, plant or seed with native species</li> </ul>
Patchy areas of grass (which usually occur on thinner soils) or small areas of grass on deeper soils	Selective flaming	In the wet season or shoulder seasons (to avoid fires)	<ul style="list-style-type: none"> <li>• This method should only be done under expert advice</li> <li>• Burn clumps one-at-a-time with a roofing torch, and repeat two or three times during the season</li> <li>• This method causes less soil disturbance than pulling</li> <li>• Re-seed the site or plant plugs of native plant species</li> <li>• This method is appropriate for areas where some native plant species are also present</li> </ul>

(Research on the use of POAST is providing promising results and this may become a Best Practice in the future.)

In deciding which method(s) to choose, also consider:

- Your budget to acquire the necessary tools and equipment for the methods chosen,
- The need to comply with Workers Compensation Board regulations, and
- The number and skill level of the people that will be assisting you.

Control methods should be followed by a planting or seeding treatment in order to speed up re-establishment of native species; otherwise you may simply get more invasive grasses or other invasive species establishing at the site. Consult with someone knowledgeable about this first; ensure that your plant and seed stock originate from sources that follow ethical guidelines; and take genetic issues into consideration.

It is advisable to monitor the treated area afterwards to ensure that the native species that have been seeded or planted successfully establish.

### ***c) Deciding how to dispose of dead plant material***

With any mechanical removal method, for most invasive plant species you must also think about what to do with the plant material that you have cut. This is less of an issue with orchard-grass, as it does not re-sprout from stems or leaves. However, large amounts of dead grass material present the potential for an increased nitrogen load to the soil, and should be removed for composting or disposal off-site. Take care to avoid seeds being left behind. It is also advisable to remove the thatch by either raking it up or burning it.

### ***d) Recognizing uncertainty***

In making these decisions, there will be things you are unsure about. This is normal, and should not cause undue concern. The important thing is to be *aware* of the things you are most uncertain about, document them, and plan your actions in a manner that will help you learn and reduce this uncertainty.

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