



APRC Integrated Pest Management Update 2019



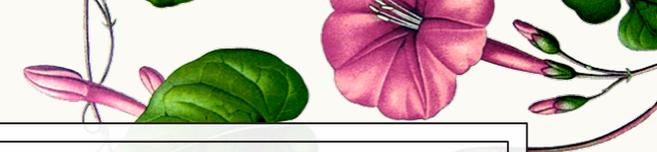
APRC Practiced Alternatives to Chemical Synthesis Herbicides Pros and Cons





Healthy Urban Forests

The backbone of any IPM Program



Mulching

PRO

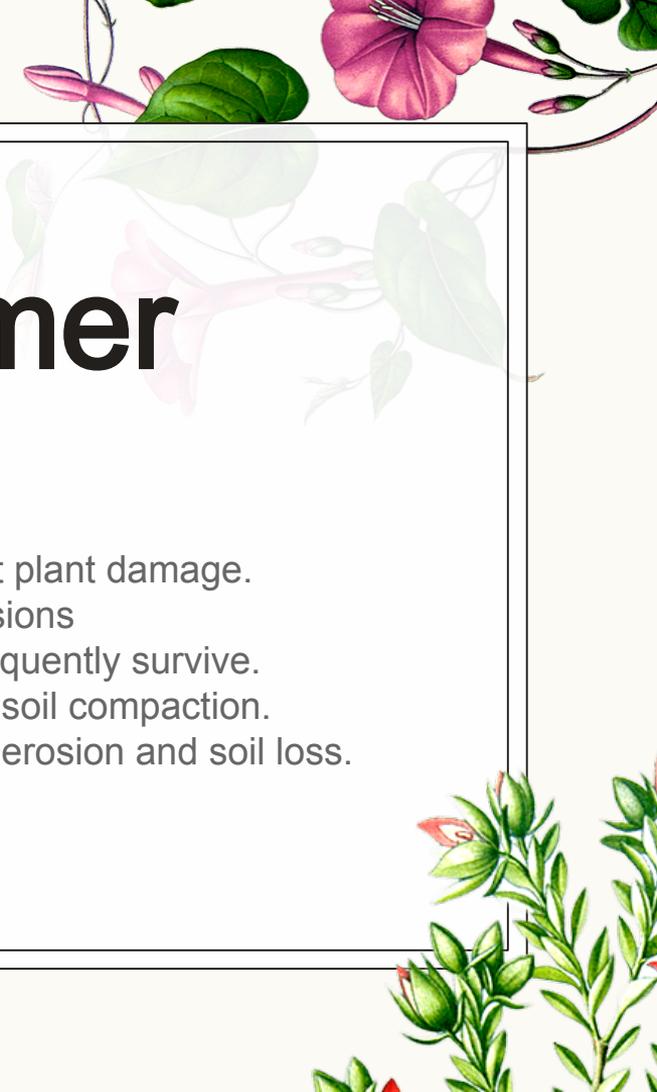


- Building of Soil Structure
- Moisture retention
- Moderating soil temperature
- Weed germination prevention
- Upon decay humus deposit
- Reduces the likelihood of tree damage from “weed whackers” or the dreaded “lawn mower blight”.
- Gives planting beds a uniform, well cared for look.
- Simple and inexpensive

CON

- Mulch Build-up
 - © Tree wells, spillage at hardscapes, and burying valve boxes and plants.
- Weed wacking
- Potential for disease spread through wood chips.
- Soil pH changes
- Anaerobic “sour” mulch can kill young plants (and smells bad).
- Does not control perennials well.
- Can limit other control techniques.





Mechanical Trimmer

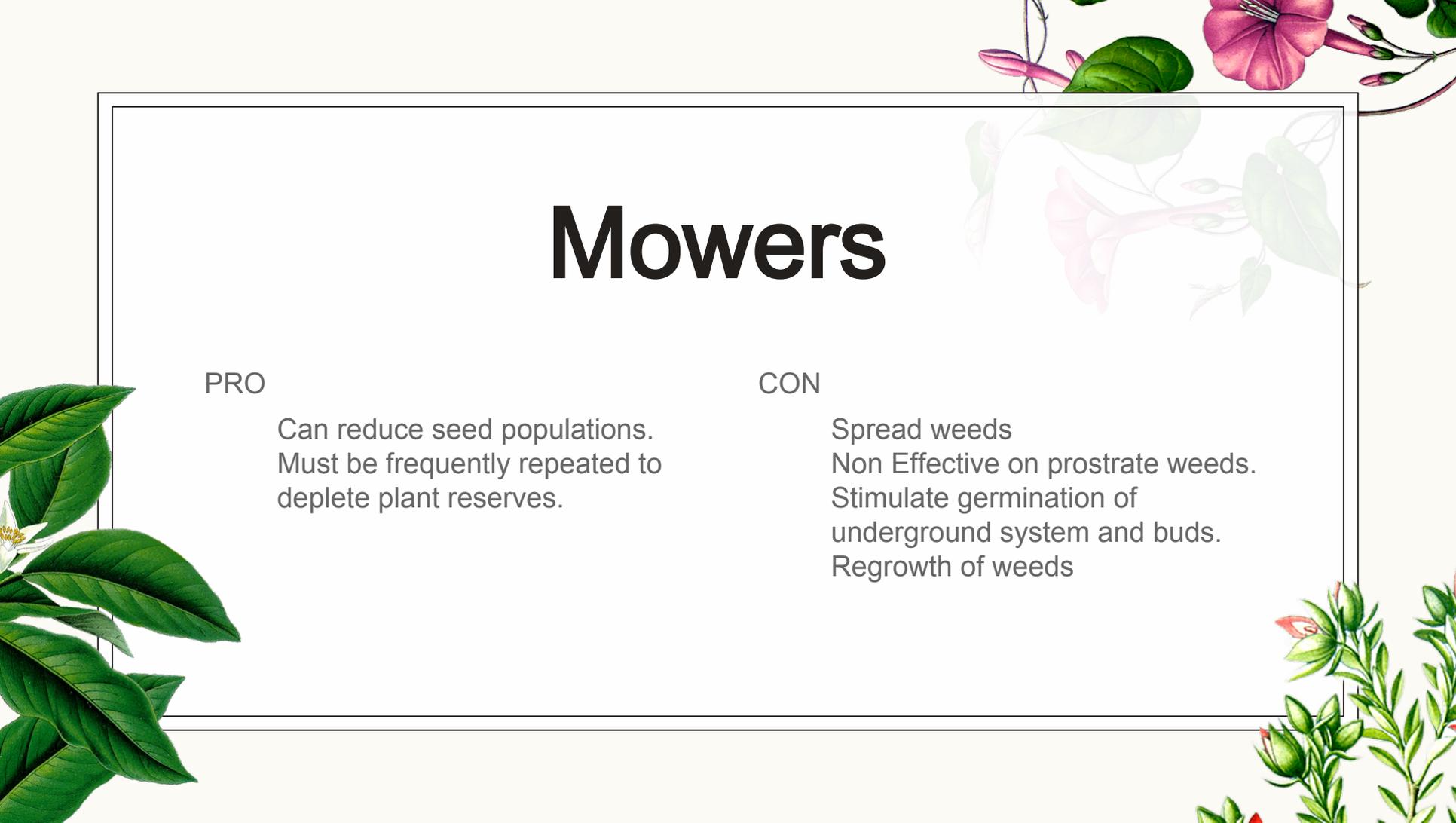


PRO

Effective on herbicide resistant weeds.
Efficient for large areas if done frequently.

CON

Non target plant damage.
CO₂ emissions
Weeds frequently survive.
Increases soil compaction.
Increases erosion and soil loss.



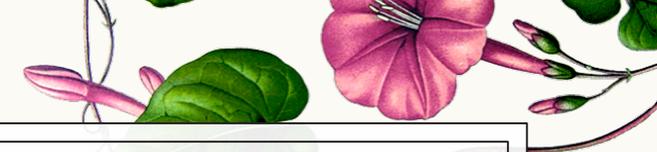
Mowers

PRO

Can reduce seed populations.
Must be frequently repeated to
deplete plant reserves.

CON

Spread weeds
Non Effective on prostrate weeds.
Stimulate germination of
underground system and buds.
Regrowth of weeds



Hoeing/Handpulling

PRO

Best suited for annuals

CON

Effectiveness depends on root removal.
Laborious and time consuming.





Smother crops - Living mulch

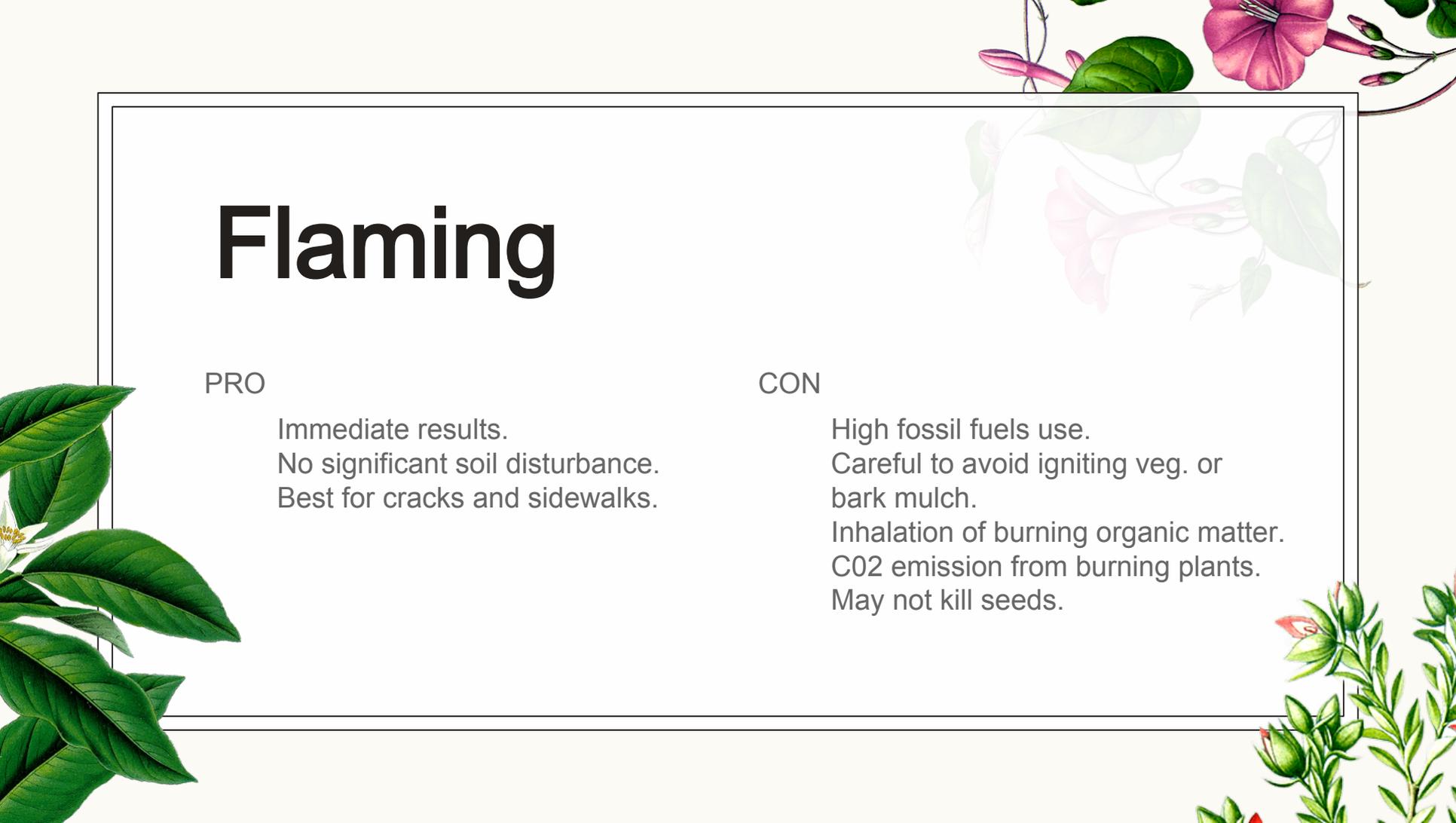


PRO

Can be applied as densely planted pollinator beds.
Mostly mechanical labor/lawns.
If not monoculture provide lots of habitat.

CON

Expensive and time consuming to plant- as pollinator beds.
Healthy organic lawns require lots of inputs including c02 to maintain.



Flaming

PRO

Immediate results.
No significant soil disturbance.
Best for cracks and sidewalks.

CON

High fossil fuels use.
Careful to avoid igniting veg. or bark mulch.
Inhalation of burning organic matter.
CO₂ emission from burning plants.
May not kill seeds.



Solarization

PRO

- Improves Soil
- No chemical residues
- Improves biological organisms

CON

- Requires high sunlight and low wind.
- Uses single use plastics.



Volunteers

*2018/2019 Volunteer hours 6,014
approx \$145,178 value*

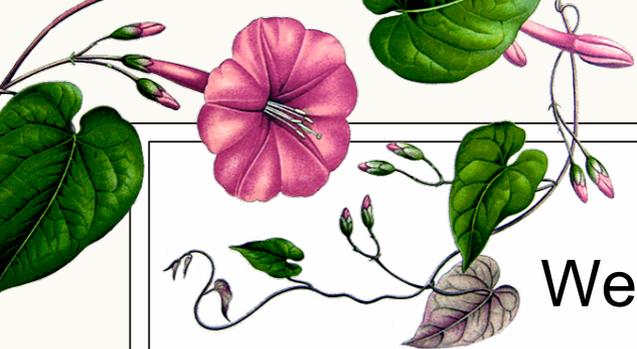


Adopt - A- Park

1. Skate Park True South Solar & Pickled Planet
 2. Railroad Park Darex
 3. Garfield Park- CrossFit Inconceivable
 4. Lithia Park Upper Sunday Afternoons
 5. Lithia Park Middle- Medford Water Polo Club
 6. Dog Park- Friends of Dog Park
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OMRI Listed Products Tested

1. Suppress® Herbicide EC (Warning)
 - a. Caprylic Acid (47%) and Capric Acid (32%)
2. BurnOut® (Danger)
 - a. Citric Acid 24% and Clove Oil 8%
3. AVENGER® (Caution)
 - a. D-limonene (Citrus oil) 70%
4. AXXE® (Warning)
 - a. Ammonium Nonanoate 40%
5. Final-SarT O (Warning)
 - a. Ammoniated soap of fatty acids 22%



Weeds of primary concern on APRC Lands

Armenian (Himalayan) blackberry — *Rubus armeniacus* (*R. procerus*, *R. discolor*)

Scotch Broom (*Cytisus scoparius*)

Butterfly bush — *Buddleja davidii*

English Ivy

Field bindweed — *Convolvulus arvensis*

Japanese Knotweed — *Fallopia japonica* (*Polygonum*)

Poison hemlock — *Adonis aestivalis*

Puncturevine — *Tribulus terrestris*

St. Johnswort

Bull Thistle— *Cirsium vulgare*

Tree of heaven — *Ailanthus altissima*

Yellow nutsedge — *Cyperus esculentus*

Yellow starthistle — *Centaurea solstitialis*



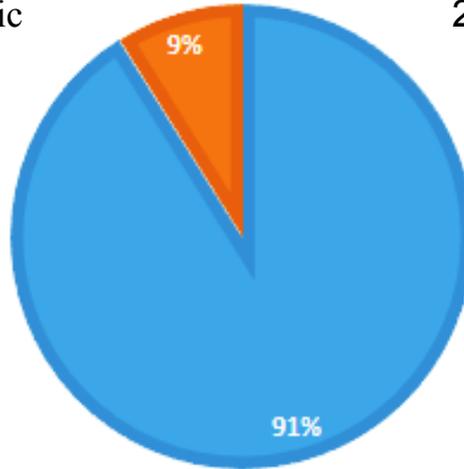


APRC HERBICIDE USE 2018/2019

■ Organic Herbicide Use ■ Chemically Synthetic Use

2,720 oz organic

244.5 oz synthetic





Chemically Synthetic Herbicide Use Under Special Exemptions

Boulevard entryway:

Safety of staff exemption

2015/2016- 36 oz glyphosate

2016/2017- 61 oz glyphosate

2017/2018- 60 oz glyphosate

2018/2019- 16 oz glyphosate

NMP Sports Playing Fields:

Safety of players exemption

2015/2016- 130oz glyphosate

2016/2017- 75 oz glyphosate

2017/2018- 50 oz glyphosate

2018/2019- 90 oz glyphosate

Oak Knoll Golf Course:

Playability exemption

2015/2016- 58 oz glyphosate

2016/2017- 37.5 oz glyphosate

2017/2018- 105 oz glyphosate

2018/2019- 138.5oz glyphosate





New Innovations

- Oak Knoll - Audubon Credential
- Ashland Creek Park - Fleur de Lawn®
- Organic Land Management Program Test-sites
- Composting Program
- Propagation Program

