Appendix 1. Treatment Establishment Guidelines

Bloom Sequence of FRP Species

<table>
<thead>
<tr>
<th>Species</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<td>Phacelia</td>
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<td>Buckwheat</td>
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<td>Ammi majus</td>
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<td>Wild Carrot</td>
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<td>Alyssum</td>
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Sowing Rates, Depth and Timing

<table>
<thead>
<tr>
<th>Species</th>
<th>Location</th>
<th>Rate</th>
<th>Depth</th>
<th>Sown</th>
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</table>
| **Purple Tansy**  
*Phacelia tanacetifolia* | (1) Sow Phacelia by itself to alternate alleys OR  
(2) Sow Phacelia with LOW DENSITY overwinter legume/grass cover crops, sown to alternate alleys. In spring every other alternate alley is mowed after flowering (April/May) and then sown to annual Buckwheat.  
Take caution not to sow Phacelia too deep. Lightly cover all seed with roller or brushes. | 2 lbs/ac. | 1/8 - 1/4” | Oct 15 |
| **Sweet Alyssum**  
*Lobularia maritima* | Prepare seed bed with under vine cultivator (see notes on following pages). Seed must be sown on either side of vine row to cover entire berm. | 4 lbs/ac. | 1/8 – 1/4” | Oct 15 |
| **Wild Carrot**  
*Daucus carota* | Strip-tiled in center of permanent cover/ no-till alternate alleys. Seed can be mixed with rice hulls to facilitate sowing. Take caution not to sow Daucus too deep. | 0.5 lbs/ac. | 1/8 – 1/4” | Oct 15 |
| **Ammi majus** | If used, mix with Wild Carrot and sown both species simultaneously. | 8 lbs/ac. | 1/8-1/4” | Oct 15 |
| **Buckwheat**  
*Fagopyrum esculentum* | Sown into every other alternate alley of Phaceliat/cover-crop following spring mow and incorporation (i.e., sow to every 4th alley). | 100 lbs/ac. | 1/4-1/2” | May 1 |
Appendix 1 (continued). Treatment Establishment Guide

October

- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop

Vine rows

Phacelia tanacetifolia
Is sown with LOW DENSITY alternate row overwinter cover crop

**Caution not to sow this seed too deep and if mixed with cover crop then sow cover at a LOW DENSITY.

Phacelia tanacetifolia
Rate: 2 lbs/ac.
Depth: 1/8 – 1/4”

Sweet Alyssum (Lobularia maritima) is sown at a high density underneath every vine row. Prepare seed bed with under the vine cultivator. Sow Alyssum on both sides of the vine row in order to seed the entire berm.

Sweet Alyssum
Rate: 4 lbs/ac.
Depth: 1/8”

Wild Carrot (Daucus carota) and Ammi majus are strip-plowed in center of perennial cover: no-till alternate rows

Wild Carrot
Rate: 0.5 lbs/ac. (~1 seed/inch)
Depth: 1/8-1/4”

Ammi majus
Rate: 8 lbs/ac.
Depth: 1/8-1/4”

March/April

- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop
- Wild Carrot + Ammi majus
- Phacelia + overwinter cover crop

Phacelia tanacetifolia begins to bloom ~March 15

**If necessary, 50% may be mown for frost protection (i.e., mow every other alternate row).

**Do not mow lower than 6”

Sweet Alyssum (Lobularia maritima) begins to bloom ~March 15 and will continue to bloom pending soil moisture and irrigation levels.

Wild Carrot (Daucus carota) and Ammi majus
establishing, vegetative growth

**May be mown, but no lower than 6”
**DO NOT MOW AFTER MAY 15
May

Sown to Buckwheat

Wild Carrot + Ammi majus

Phacelia + overwinter cover crop

Sown to Buckwheat

Phacelia + overwinter cover crop

Every other alternate row of Phacelia tanacetifolia + cover crop mown, incorporated, sown to Buckwheat - May 1

Buckwheat (Fagopyrum esculentum)
Rate: 100 lbs/ac.
Depth: 1-2"

Remaining rows of Phacelia tanacetifolia + cover crop left in place to finish bloom

**Mow these remaining rows ~ June 1

Wild Carrot (Daucus carota) and Ammi majus vegetative growth continues

**May be mown, but no lower than 6" **DO NOT MOW AFTER MAY 15

June

Buckwheat blooming

Wild Carrot vegetative + Ammi majus blooming

remaining Phacelia + overwinter cover crop mown

Buckwheat blooming

remaining Phacelia + overwinter cover crop mown

Buckwheat begins to bloom ~ May 15

Remaining rows of Phacelia tanacetifolia + cover crop mown ~ June 1

Ammi majus begins to bloom ~ June 1
Wild Carrot (Daucus carota) vegetative growth continues

**DO NOT MOW AFTER MAY 15
June – September

- Wild Carrot blooming
- Phacelia + cover crop previously mowed
- Dead Buckwheat mowed
- Leave these rows alone

Buckwheat (*Fagopyrum esculentum*) finishes blooming ~June 15

Sweet Alyssum (*Lobularia maritima*) continuous bloom pending soil moisture/irrigation

Wild Carrot (*Daucus carota*) begins to bloom ~June 15 and continues until ~Oct 15

**Dead Buckwheat may be mown if desired**
### Alternate Treatment Options

Growers unable to implement the full experimental treatment as outlined may trial one of the following alternate options.

<table>
<thead>
<tr>
<th>Option #</th>
<th>Fall (Oct. 15)</th>
<th>Spring (May 1)</th>
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| 1        | *Phacelia* sown to alternate rows (with or without cover crop depending on your practices)  
*Arum* + *Daucus* (sown to alternate rows) | No additional spring management.  
Mow cover crops as usual. |
| 2        | *Phacelia* sown to alternate rows (with or without cover crop) | Mow every other row of cover crop in April.  
Sow Buckwheat to these rows.  
(i.e., Buckwheat sown every 4th row-middle) |
| 3        | *Alyssum* sown at high density (4lbs/ac.) underneath vine row. | Mow cover crops as usual.  
Sow Buckwheat to alternate rows. |
| 4        | *Alyssum* underneath vine row. | Mow cover crops as usual |
| 5        | *Phacelia* + cover crop (alt. rows)  
*Alyssum* underneath vine row. | Mow every other row of cover crop in April.  
Sow Buckwheat to these rows  
(i.e., Buckwheat sown every 4th row-middle) |
| 6        | *Phacelia* + cover crop (alt. rows)  
*Arum majus* (alt. rows) | No additional spring management |
| 7        | *Phacelia* + cover crop (alt. rows)  
*Arum majus* (alt. rows) | Mow cover crops as usual.  
Sow Buckwheat to alternate rows. |
| 8        | *Phacelia* + cover crop (alt. rows)  
*Alyssum* underneath vine row  
*Arum* (alt. rows) | Mow cover crops as usual.  
Sow Buckwheat to alternate rows. |
| 9        | *Phacelia* + cover crop (alt. rows)  
*Alyssum* underneath vine row  
*Arum* + *Daucus* (alt. rows) | Mow cover crops as usual.  
Sow Buckwheat to alternate rows. |

**Options #3, 4, 5 have choice of sowing *Alyssum* underneath vine row in the early spring rather than fall.**