

Pollinator Corridors and Irrigation Modernization



Hood River
WATERSHED GROUP



United States
Department of
Agriculture

Natural Resources Conservation Service



Oregon State
University



Agenda

1. Welcome and Introductions
2. Pollinator Pipeline Corridor Pilot Project
3. Question and Answer Session

Objective: Discuss the Pollinator Pipeline Corridor Pilot Project, provide updates, reflect on lessons learned

Farmers Conservation Alliance

Farmers Conservation Alliance (FCA) is a nonprofit organization that is dedicated to the modernization of irrigation systems for the benefit of agriculture, the environment, and community.



An aerial photograph of a forest landscape. The top and bottom portions of the image show dense forest with trees in various stages of autumn color, including green, yellow, and red. In the center, there is a large, rectangular area of clearcut forest, appearing as a light brown, open field. Two small figures of people are visible in this clearcut area, providing a sense of scale. The text "What is a pollinator corridor?" is overlaid on the left side of the image, pointing towards the clearcut area.

What is a pollinator corridor?



Pollinator Corridor Site
Pre-Project – December 2019





Knapweed, thistle, yellow sweet clover, plantain, cheat grass



Project Overview

2020 – Consultant reports (Humble Roots Nursery, BFI Native Seeds) & pre-project monitoring

Summer of 2020 - Site prep: herbicide treatment and weedy debris clearing

Spring 2021 – Site prep: herbicide treatment and debris clearing

Fall of 2021 – Seeding and plantings

Spring & Summer 2022 – Maintenance: spot spray, watering, clearing

Annually – Deploy pollinator monitoring traps (May – September) & net surveys

Annually – Monitor germination and growth rates of plants seeded and planted

2024 – Develop methodology & BMPs





Plant List:

72 - 2x5 *Agastache urticifolia* (Nettleleaf giant hyssop)
175 - 3x5 *Asclepias fascicularis* (Narrowleaf milkweed)
100 - 3x5 *Asclepias speciosa* (Showy milkweed)
72 - 2x5 *Campanula rotundifolia* (Harebell)
150 - 3x5 *Eriogonum compositum* (Arrowleaf buckwheat)
100 - 3x5 *Eriogonum elatum* (Tall buckwheat)
100 - 3x5 *Eriogonum niveum/strictum* (Strict buckwheat)
108 - 2x5 *Eriogonum umbellatum* (Sulphur buckwheat)
144 - 2x5 *Eschscholzia californica* (California poppy)
32 - 4x6 *Helianthus nuttallii* (Nuttall's sunflower)
32 - 4x6 *Illiamna rivularis* (Streambank hollyhock)
75 - 3x9 *Lomatium columbianum* (Columbia desert parsley)
75 - 3x9 *Lomatium dissectum* (Fernleaf biscuitroot)
72 - 2x5 *Monardella odoratissima* (Western mountain balm)
100 - 3x5 *Penstemon euglaucus*
100 - 3x5 *Penstemon fruticosus*
100 - 3x5 *Penstemon richardsonii*
100 - 3x5 *Penstemon subserratus*
75 - 3x5 *Potentilla gracilis* (Slender cinquefoil)
72 - 2x5 *Sidalcea oregana* (Oregon checkermallow)
150 - 3x5 *Solidago elongata* (Goldenrod)

Seed Mix:

Grass Mix - seeded @ 8 lbs/acre
30% Blue Wildrye
40% California Brome
20% Idaho Fescue
10% Bottlebrush Squirreltail

Forb Mix - seeded @ 5 lbs/acre
5% Oregon sunshine
4% Western yarrow
20% Broadleaf lupine
10% Blanketflower
10% Lewis' flax
5% Showy milkweed
5% Showy fleabane daisy
2% Fireweed
20% Common sunflower
20% Barestem biscuitroot











Plant Monitoring

- DSL Routine Monitoring Guidance for Vegetation
- Right of Way Pollinator Habitat Scorecard
- Xerces Habitat Assessment Guide – Natural Areas





Lessons

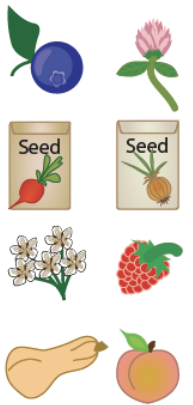
Restoration of existing pipelines versus establishing habitat immediately following piping

Feasibility for district to incorporate into annual maintenance; maintenance staff with capacity, equipment, and spray license

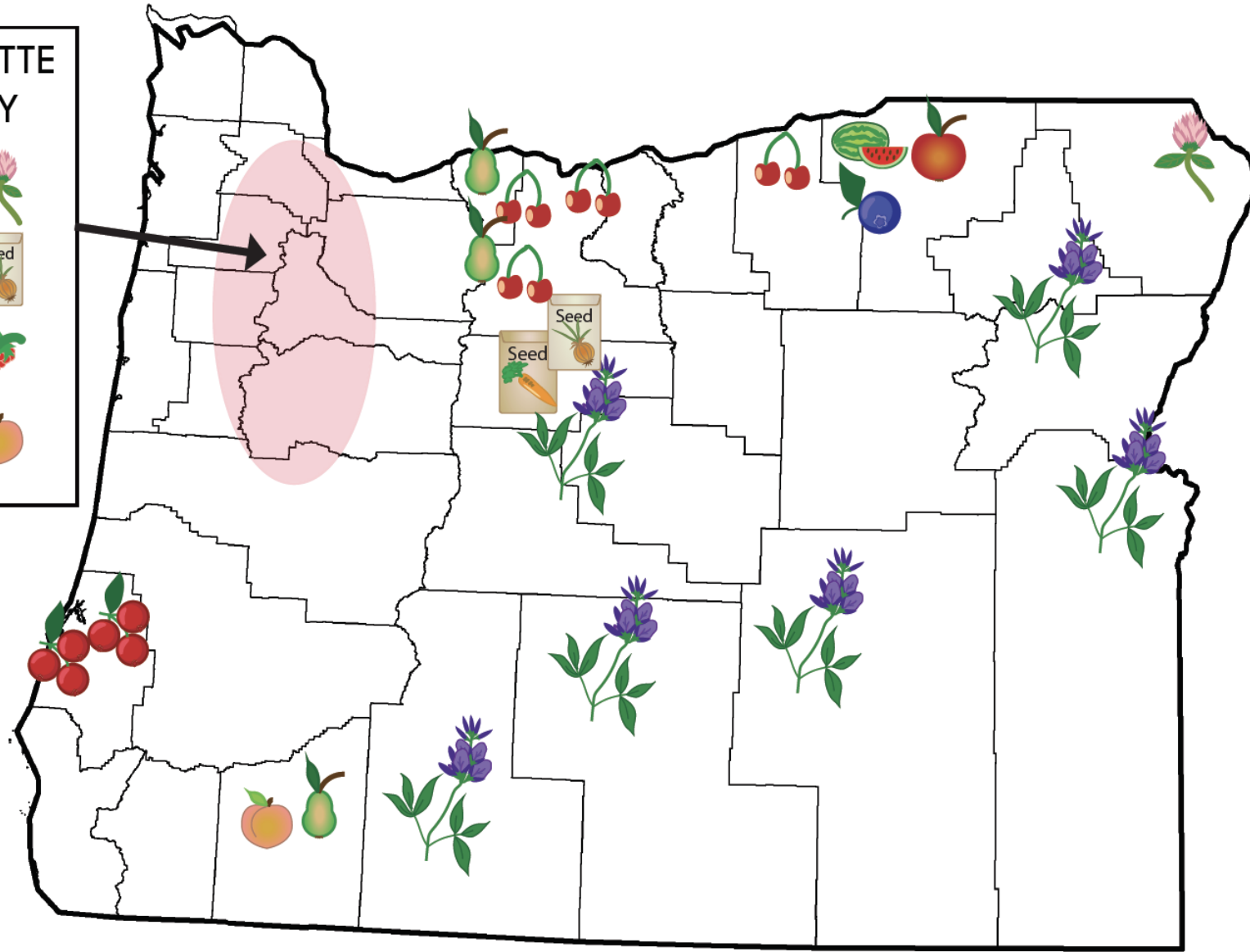
Seeding methods: harrow seeding versus broadcast seeding

Funding: incorporate into infrastructure upgrade funding

WILLAMETTE VALLEY



Willamette Valley icons: blueberry, pink flower, two 'Seed' packets, white flowers, raspberry, pear, orange.



Honey Bee
photo Oregon Dept Ag









DEE

THE *WILD*

WORLD OF
OREGON BEEES

Oregon has A LOT of bee species, and they vary:

- Size
- Appearance
- Behavior
- Effectiveness as pollinators
- Floral choices



700+
species



Bees Require ...

A suitable nesting substrate from which they can access adequate **forage** over the course of individual or colonial **life spans**.





***Eriophyllum lanatum* & *Lupinus* spp.**



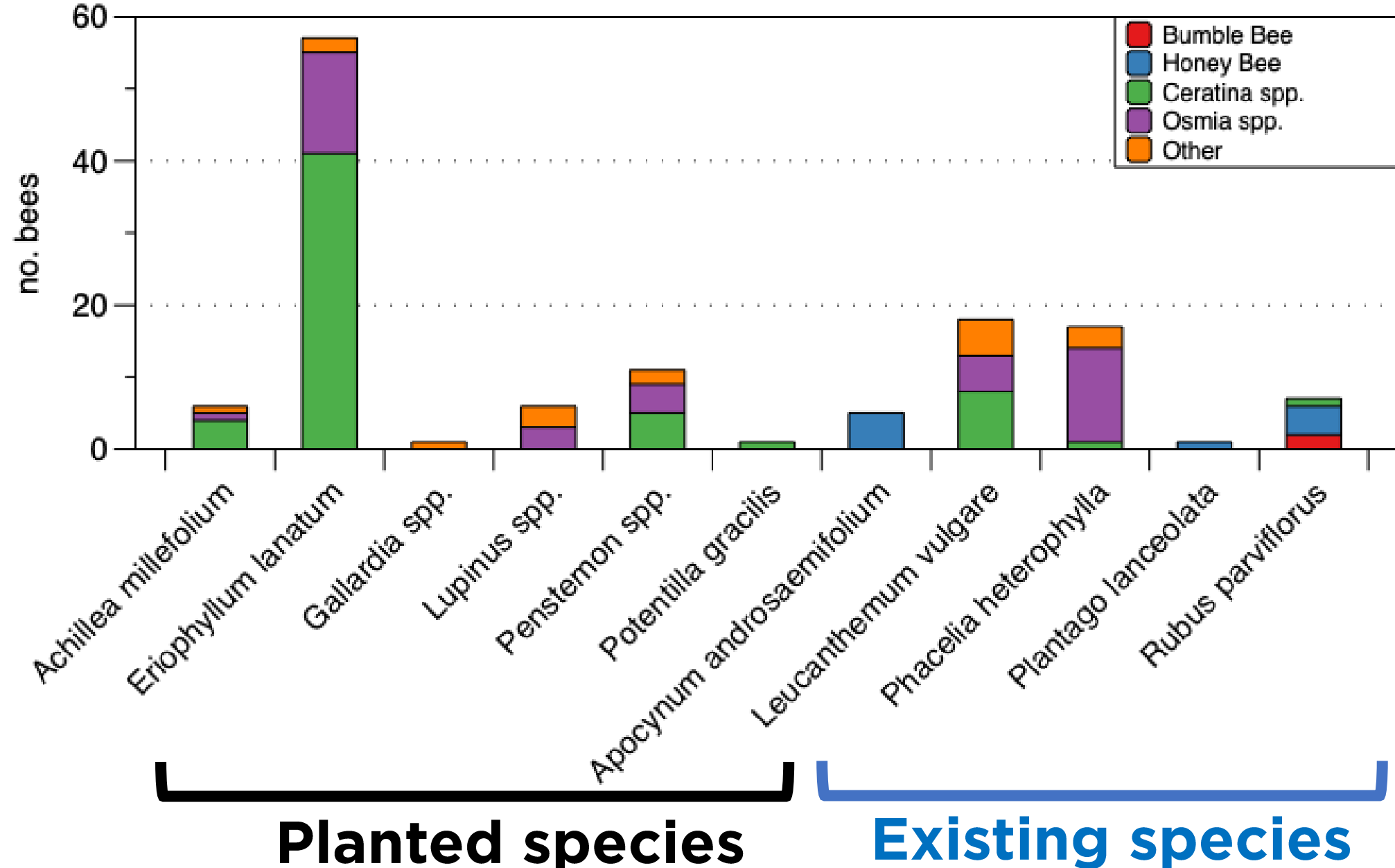
***Eriogonum* spp.**



***Solidago* spp.**

BEE VISITATION ON RESTORED VS EXISTING PLANT SPECIES

June 5, 2023





***Small carpenter bee
Ceratina spp.***



Phacelia heterophylla



Penstemon davidsonii

Questions?

Thank you for joining us!

Alix Daniels, Hood River Watershed Group

alix@hoodriverwatershed.org

Dr. Andony Melathopoulos , Oregon State University

andony.melathopoulos@oregonstate.edu

Les Perkins, Farmers Irrigation District

les@fidhr.org

Kristin Alligood, Farmers Conservation Alliance

Kristin.Alligood@fcasolutions.org