Lewis River Hydroelectric Projects
Terrestrial Coordination Committee (TCC)
Meeting Agenda

Date & Time: **Wednesday, April 10, 2019**
9:00 a.m. – 3:00 p.m.

Place: **Merwin Hydro Control Center**
105 Merwin Village Court
Ariel, WA 98603

Contacts: **Kendel Emmerson (503) 813-6040; cell 503-703-7734**

Time	Discussion Item
9:00 a.m.	Welcome ➢ Review Agenda & 3/13/19 Meeting Notes ➢ Review and Accept Agenda & 3/13/19 Meeting Notes
9:15 a.m.	➢ Land Acquisition Update (Confidential) ➢ TNC Update (Confidential)
9:30 a.m.	Study/Work Product Updates ➢ Pollinator information ➢ Upper Hanley-Curry Meadow ➢ Dr. Margaret Wild Tour
9:45 a.m.	Safety[1] orientation for site visit to 2018 completed harvest areas in Management Unit 15
11:00 a.m.	Arrive at 2018 timber harvest areas in Management Unit 15 – Comb Over, Mullet, Higsly I, II, and III
12:00 p.m.	**Lunch**
2:00 p.m.	Next Meeting's Agenda Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro.html
3:00 p.m.	**Meeting adjourn**

1 Please bring rain gear and sturdy walking shoes for hiking in the forest (expect muddy conditions). No hard hats needed for this tour.

PacifiCorp will have 2 vehicles for transportation of up to 4 additional passengers.

PLEASE BRING YOUR LUNCH

Join by phone

(503) 813-5252 [Portland, OR] (US)	English (United States)
(855) 499-5252 [Toll-Free] (US)	English (United States)

Conference ID: 631927

FINAL Meeting Notes
Lewis River License Implementation
Terrestrial Coordination Committee (TCC) Meeting
April 10, 2019
Merwin Hydro Control Center & Field Tour

TCC Representatives Present: (7)
Kendel Emmerson, PacifiCorp
Summer Peterman, PacifiCorp
Kim McCune, PacifiCorp
Peggy Miller, WDFW
Eric Holman, WDFW
Amanda Froberg, Cowlitz PUD
Erik White, Cowlitz Indian Tribe

Calendar:

May 8, 2019	TCC Meeting	Merwin HCC

Assignments from April 10, 2019	**Status**
Emmerson/Peterman: Report WDOT pollinator information to the TCC at the May 8, 2019 meeting.	**Complete 5/8/19**

Parking Lot Items	**Status**
Emmerson/McCune: Contact PacifiCorp's properties department to discuss further TNC detail and report to the TCC at the next meeting.	**In progress**
Emmerson: Email Dr. Margaret Wild about a field tour and elk management discussion sometime this summer.	**In progress**

Kendel Emmerson (PacifiCorp) called the meeting to order at 9:10am. Emmerson reviewed the agenda and asked the TCC if there were any changes/additions. No additions were requested.

The TCC reviewed the March 13, 2019 meeting notes and they were approved with minor clarification changes from Peggy Miller (WDFW) at 9:15am.

Public Comment Opportunity:
None

Land Acquisition Update (CONFIDENTIAL)
Title review is ongoing. No additional update at this time.

Additional detail around this topic is considered confidential and proprietary and not for public viewing.

Other (CONFIDENTIAL)
TNC – no additional update

Pollinator Information along transmission lines and Mitigation Funds (10.3.3)
PacifiCorp emailed a pollinator presentation to the TCC titled, "EPRI Power-in-Pollinators Initiative" given by Andy Bidwell with PGE (**Attachment A**) on March 20, 2019 and the content provided some interest but PacifiCorp wanted to know much more. Summer Peterman (PacifiCorp) researched the topic in detail and had the following questions for the TCC:

- How much follow up do the TCC want?
- How much do we want to spend of the mitigation funds (current balance $19,135.89)?
- Do they want to till, planting, spray, rake?
- What seed mix do they want to use… shrubs, flowers, (no grasses in it)?
- How much does the TCC want to spend on testing or just go for it?

Peterman noted that the transmission personnel wants the pollinator application to be inexpensive and simple if they are to proceed in a cooperative effort with the TCC. Peterman also mentioned that if the TCC is interesting in the intensive survey the efforts could be contracted out. The TCC discussed that there are three different areas that could possibly work: 1) Unit 6 between transmission pole 9/12 and 8/12, 2) Upper Hanley-Curry Meadow transmission line and 3) Unit 3 between transmission pole 4/16 and 3/16. PacifiCorp will look at these areas prior to the May TCC meeting and report their findings. Larger areas could be addressed in a variety of ways then apply the pollinator knowledge gained to other WHMP lands.

Upper Hanley-Curry Meadow
Emmerson informed the TCC attendees that the expense for the research survey in Upper Hanley-Curry Meadow was quoted at $11,000 (worst-case scenario). The TCC discussed a variety of different applications rather than proceeding with an expensive survey, mowing and maintaining as a meadow. The TCC discussed planting back to shrubland using rosehip, red currant, salmonberry and trailing blackberry as a few considerations to convert from permanent forage to shrubland habitat. Some areas could be mowed thus creating permanent meadow elsewhere within Upper Hanley-Curry Meadow. The wetland area could be planted with spirea and willow as another consideration.

Peterman will contact Washington Department of Transportation regarding their roadside management to benefit pollinators and ask them what their site prep entailed and report to the TCC. PacifiCorp will walk the meadow and suggest areas good to plant back or leave as a meadow. Emmerson suggested considering a few different plots with drill seeding and will inquire with internal PacifiCorp staff if drill seeding is permitted.

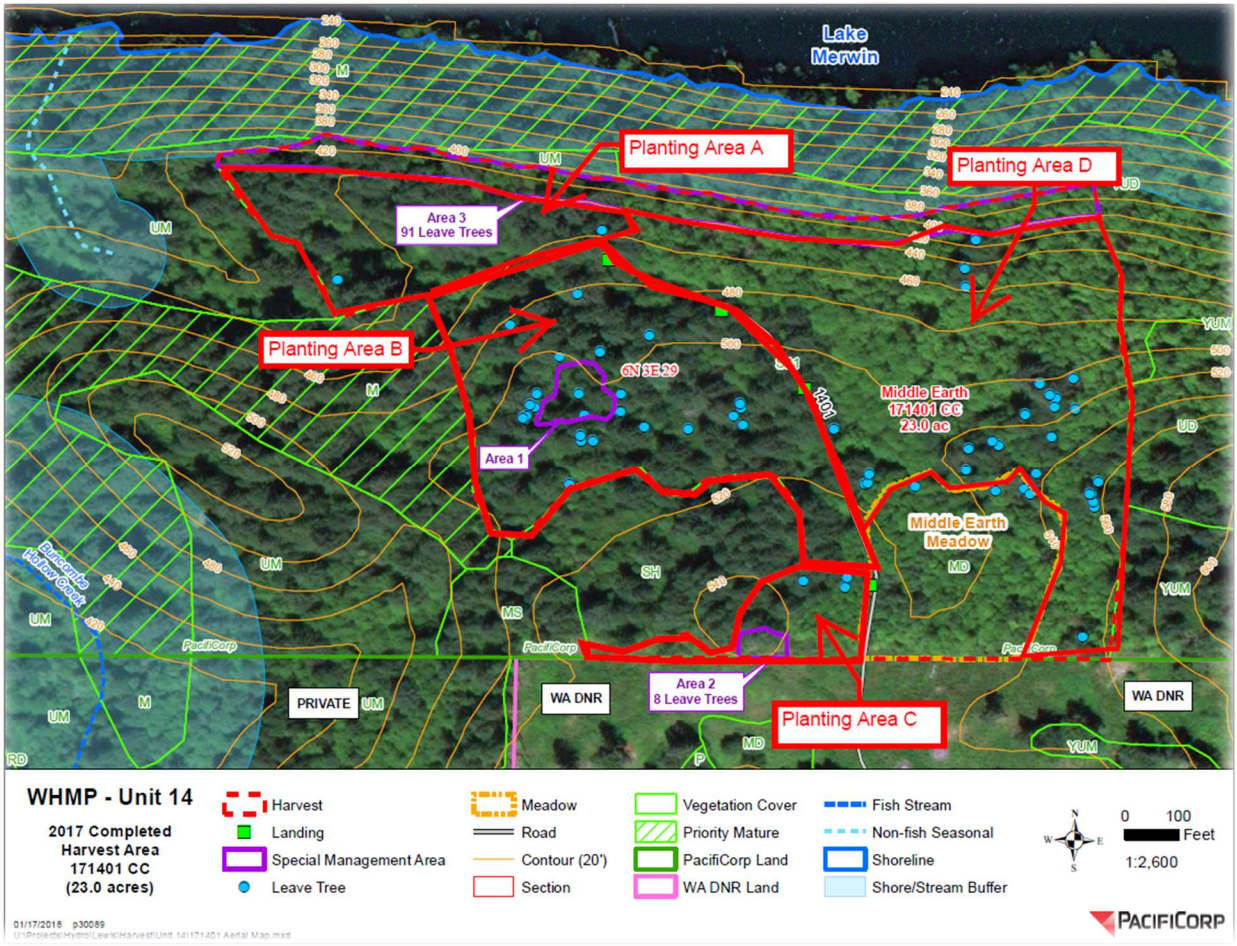
The TCC agreed to table the topic until we see what is successful (what can be seeded and what can be mowed)?

Dr. Margaret Wild Tour
Dr. Wild contacted Emmerson via email on March 21, 2019. Wild indicated that she would be interested in learning more about the elk management on PacifiCorp lands and perhaps sometime this summer would work.

The TCC agreed that PacifiCorp would be in contact with Dr. Wild in June 2019 and to place this as a parking lot item.

Tour Safety Briefing

Emmerson informed the TCC tour attendees that we will not be viewing Unit 14 (Middle Earth) - 2017 Harvest Area today as DNR is conducting considerable logging and processing rock. The log truck traffic will be very heavy. However, Emmerson informed the TCC that PacifiCorp did not receive all of the big leaf maple ordered in time so once the maple was received it was placed in the Higsley II (Unit 15).



Middle Earth (171401CC) Planting Plan

Timber harvest area is 23 acres timber harvest and the estimated planting area is 20 acres due to the meadow and leave areas. Acres below are estimated.

Planting Area A (4 acres): This area is low bench that is shaded by adjacent timber. This area was upland mix prior to harvest. It will be planted to 250 trees per acre (TPA) with mix of 70% western hemlock (175 TPA) and 30% western red cedar (75 TPA).

Total Trees = Western Hemlock 700, Western Red Cedar 300

Planting Area B (5.5 acres): This is area is the upper bench and north-facing slope and was comprised of upland mix prior to harvest. This area will be planted to conifer at 250 trees per acre and will consist of 70% Douglas-firs (175 TPA), 10% Western Red Cedars (25 TPA), and 20% Western Hemlocks (50 TPA).

Total Trees = Douglas-fir 963, Western Hemlock 275, Western Red Cedar 137

Planting Area C (0.5 acre): This area is south of the shrubland and was a mix of hardwoods and conifers prior to harvest. This area will be planted with deciduous at 250 TPA and will be primarily red alder and few scattered bigleaf maple.

Total Trees = Red Alder 125 and Bigleaf Maple 5

Planting Area D (10 acres): This is the eastern ½ of the harvest area and was comprised of young upland deciduous stand prior to the timber harvest. This will be planted with 250 TPA with primarily red alder (90%) with the remaining 11% comprised of scattered planting of black cottonwood, bigleaf maple, pacific dogwood, cascara, and bitter cherry.

Total Trees = Red Alder 2,250 planted throughout Planting Area D

Bigleaf Maple 50 planted scattered throughout Planting Area D

Black Cottonwood 50 planted in NE corner this area has moist soils

Pacific Dogwood 50 planted in the partial shade of the leave tree areas or timber harvest boundary.

Cascara 50 planted scattered throughout Planting Area D.

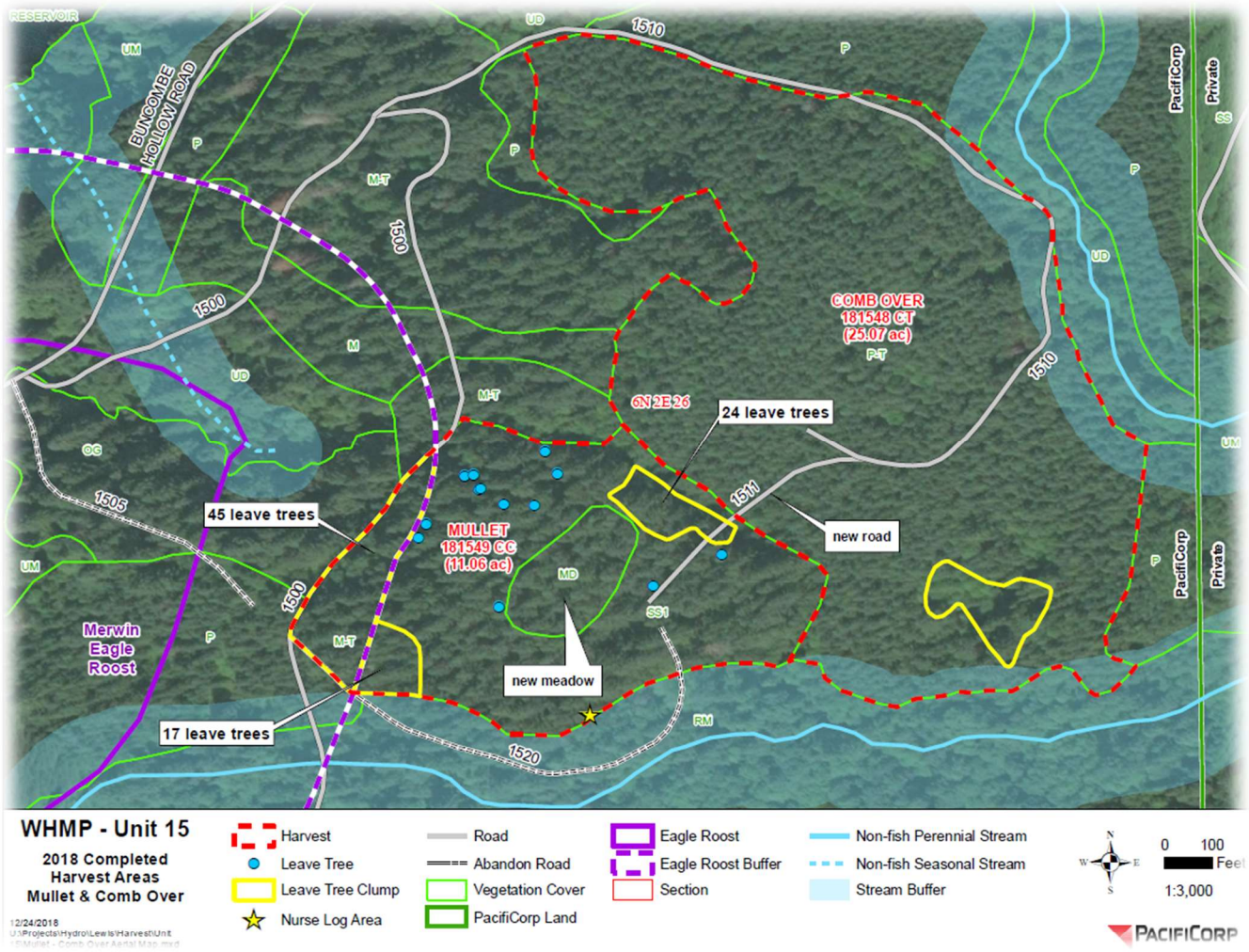
Bitter Cherry 50 planted scattered throughout the Planting Area D

Estimated cost for hardwoods $1880.20. Prices from WACD Plant Materials Center 2019 availability.

Red Alder= 2375 x $0.64= $1520	Bitter Cherry= 50 x $1.36 = $68
Cascara = 50 x $1.36 = $68	Black Cottonwood = 50 x $1.25= $62.50
Bigleaf Maple = 55 x $1.47 = $80.85	Pacific Dogwood = 50 x$1.47 = $80.85

Emmerson cautioned the TCC attendees to be watchful of log traffic and muddy conditions and tripping hazards in Unit 15 (Comb Over, Mullet, Higsley I, II, & III). No hard hats required.

Depart for Field Tour 10:30am



Unit 15 – Mullet & Comb Over 2018 completed harvest

Unit 15 – Mullet & Comb Over 2018 completed harvest

Mullet 181549CC 11 acre

- Timber harvest areas was commercial thin in 1995. Appeared to be a thin-from-below.
- Timber harvest area had a pockets of root rot that was retained because was a mix of snags and red alder
- Northern buffer was within the bald eagle roost buffer, so many leave trees were retained in this buffer
- Leave trees near meadow had nice shrub mix and nice nurse log
- The 1520 road was abandoned and blocked below

Botanical Name	Common Name	% by Weight
Dactylis glomerata	Orchardgrass	15
Lolium perene multiflorium, tetraploid	Annual Ryegrass	15
Lolium perenne	tetraploid perennial ryegrass	40
Trifolium repens var Dutch	Dutch White Clover	15
Sanguisorba minor	Small burnett	5
Vicia sativa	Garden vetch	10

Replanted in March at 250 per acre with 2500 Douglas-fir and 250 Western Hemlock = 250 TPA

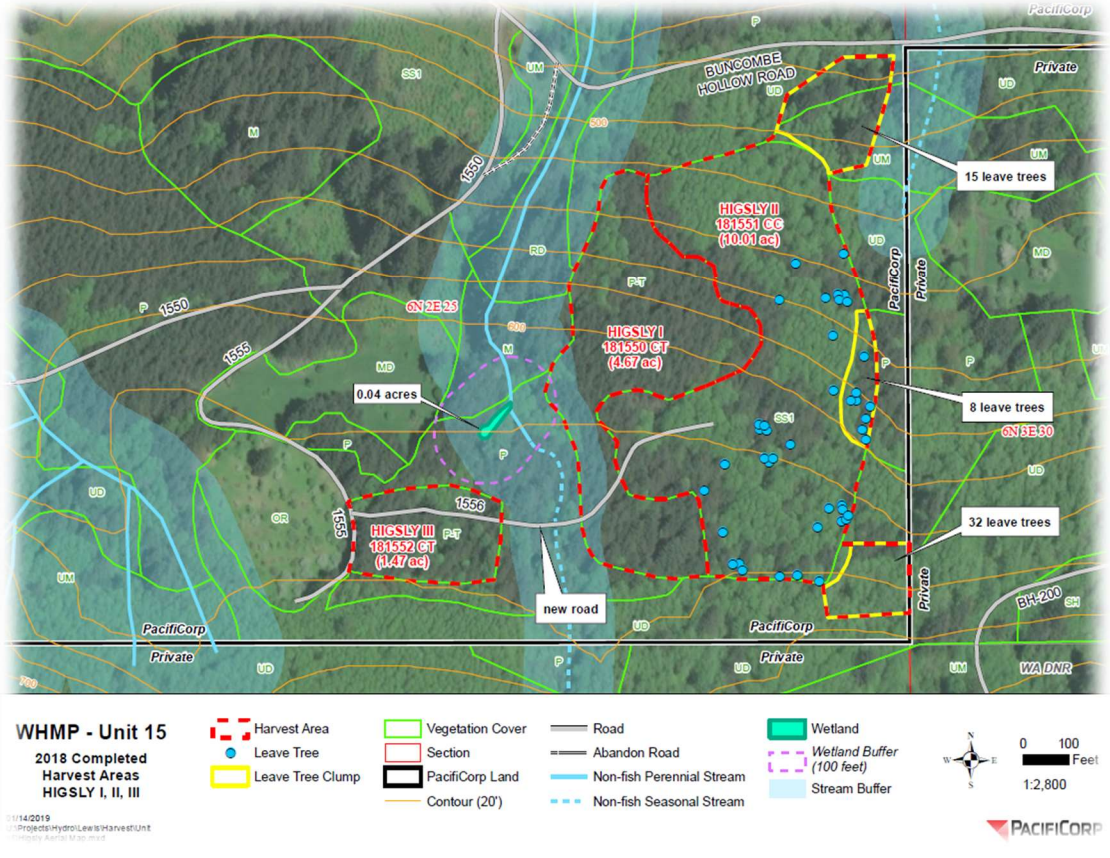
Combover181548CT 25 acre

- Timber harvest area was clearcut in 1987 Clearcut
- 2018 harvest was commercial thin 250 TPA to 75 TPA or removed 40% volume
- SMA area in south

Botanical Name	Common Name	% by Weight
Lolium perene multiflorium, tetraploid	Annual Ryegrass	20
Vicia sativa	Garden vetch	15
Elymus glaucus	Blue Wildrye	25
Lolium perenne	tetraploid perennial ryegrass	40

Unit 15 – Mullet & Comb Over abandoned road

Unit 15 - 2018 completed harvest



Unit 15 – Higsly II 2018 Completed Harvest

Unit 15 – Higsly II 2018 Complete Harvest

Unit 15 Mullet 2018 Completed Harvest

Higsly II 181551CC 10 acre

- Area may have been a result of significant blow down in 1983/1984 wind storm.
- Total of 89 leave trees many in pockets along the east border.
- Timber harvest allowed the removal of long term ATV trespass. The eastern border will be surveyed and marked this year.

Botanical Name	Common Name	% by Weight
Dactylis glomerata	Orchardgrass	15
Lolium perene multiflorium, tetraploid	Annual Ryegrass	15
Lolium perenne	tetraploid perennial ryegrass	40
Trifolium repens var Dutch	Dutch White Clover	15
Sanguisorba minor	Small burnett	5
Vicia sativa	Garden vetch	10

Hardwood areas are planted closer to 400 TPA and planted in the southern half and conifers are at 250 TPA planted in the northern half. This was to mimic what was on the ground prior to harvest.

Replanted in March at 309 trees 1550 red alder , 90 bigleaf maples, 110 black cottonwood, 450 western red cedar, 210 western hemlock, and 220 Douglas-fir = 263 TPA

Higsly I and III 181550CT Combover181548CT 25 acre

- Originally part of the 13 acre 1984 clearcut (THA 841523CC).
- Harvested in March and planted in May with 640 Douglas-firs per acre.
- Commercially thinned from below from 240 TPA to 85 TPA or 50% of the volume.

Botanical Name	Common Name	% by Weight
Lolium perene multiflorium, tetraploid	Annual Ryegrass	20
Vicia sativa	Garden vetch	15
Elymus glaucus	Blue Wildrye	25
Lolium perenne	tetraploid perennial ryegrass	40

Agenda items for May 8, 2019

- Review April 10, 2019 Meeting Notes
- Land Acquisition Update (Confidential)
- TNC Update (Confidential)
- Study/Work Product Updates
- Review Oak Sites

Next Scheduled Meeting

May 8, 2019
Location: Woodland Police Station, Council Chambers

Attachments:

- April 10, 2019 Meeting Agenda
- EPRI Power-in-Pollinators Initiative, Andy Bidwell (PGE)

Adjourn 2:30pm

Assessing Opportunities for Pollinator Habitat Management

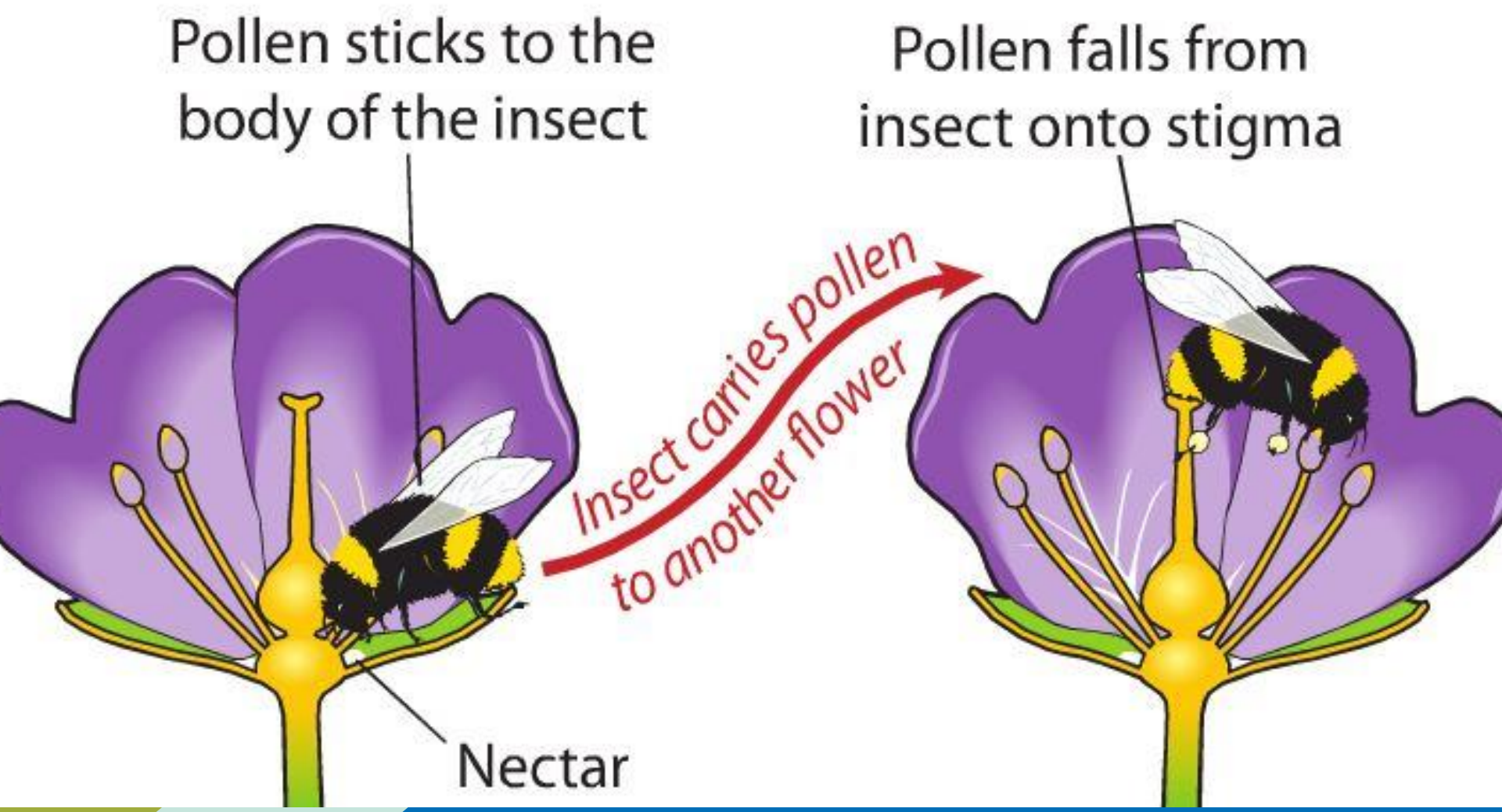
PGE and the EPRI Power-in-Pollinators Initiative

Andy Bidwell
Senior Wildlife Biologist
Portland General Electric

Presentation Summary

- Pollinators
- Importance and status of pollinators
- Reasons for electric utilities to consider pollinator habitat management
- EPRI Pollinator Initiative
- Potential pollinator habitat management opportunities

Insect pollination



Native bees - effective pollinators

Why Concern for Pollinators?

- ~85% of plants require pollination for food
- More than 30% of all food we eat relies on pollination by insects
- Also fiber, medicine, and fuel
- Deteriorating health of honey bee colonies – pollinate $15 billion worth of crops annually
- Decline of native pollinators

Pollinators in Decline

~3,600 native bee species in north America

~40% may be at risk of extinction

- Habitat loss, pesticides, disease, climate change

Reasons to Consider Pollinator Habitat Management

- Ecosystem/economic services – Pollination
- Sustainability
- Regulatory risk – rare species
- Mitigation opportunities
- Public relations
- O&M cost reductions
- Employee engagement

Regulatory Risk

Fenders Blue Butterfly within PGE's Service Territory

- Jobs in certain locations may include seasonal restrictions and disturbance minimization practices.

Electric Power Research Institute (EPRI)

Power-in-Pollinators Initiative

- GIS Prioritization Tool
- Webcasts with Experts
- Annual Workshop
- Make a Difference for Pollinators
- Coordinate National Pollinator Week
- Metrics for Outcomes
- Pollinator Database to Tell Your Story

Value

Hone in on high-value opportunities, develop shared tools, and identify industry-level collaborations that make a difference

Jessica Fox
jfox@epri.com

The first research forum designed for power companies and pollinators.

Pollinator Habitat Needs

Open habitat with Nectar and Pollen sources – rule of thumb (3-in-3, at least three flowering species available during three seasons)

Nesting and Overwintering Habitat

Dispersal Corridors

Powerline ROW = Pollinator Habitat

- Managed as open habitat
- Dispersal corridors

- Minimize harm
- Enhance priority habitats

Powerline ROW & Pollinators

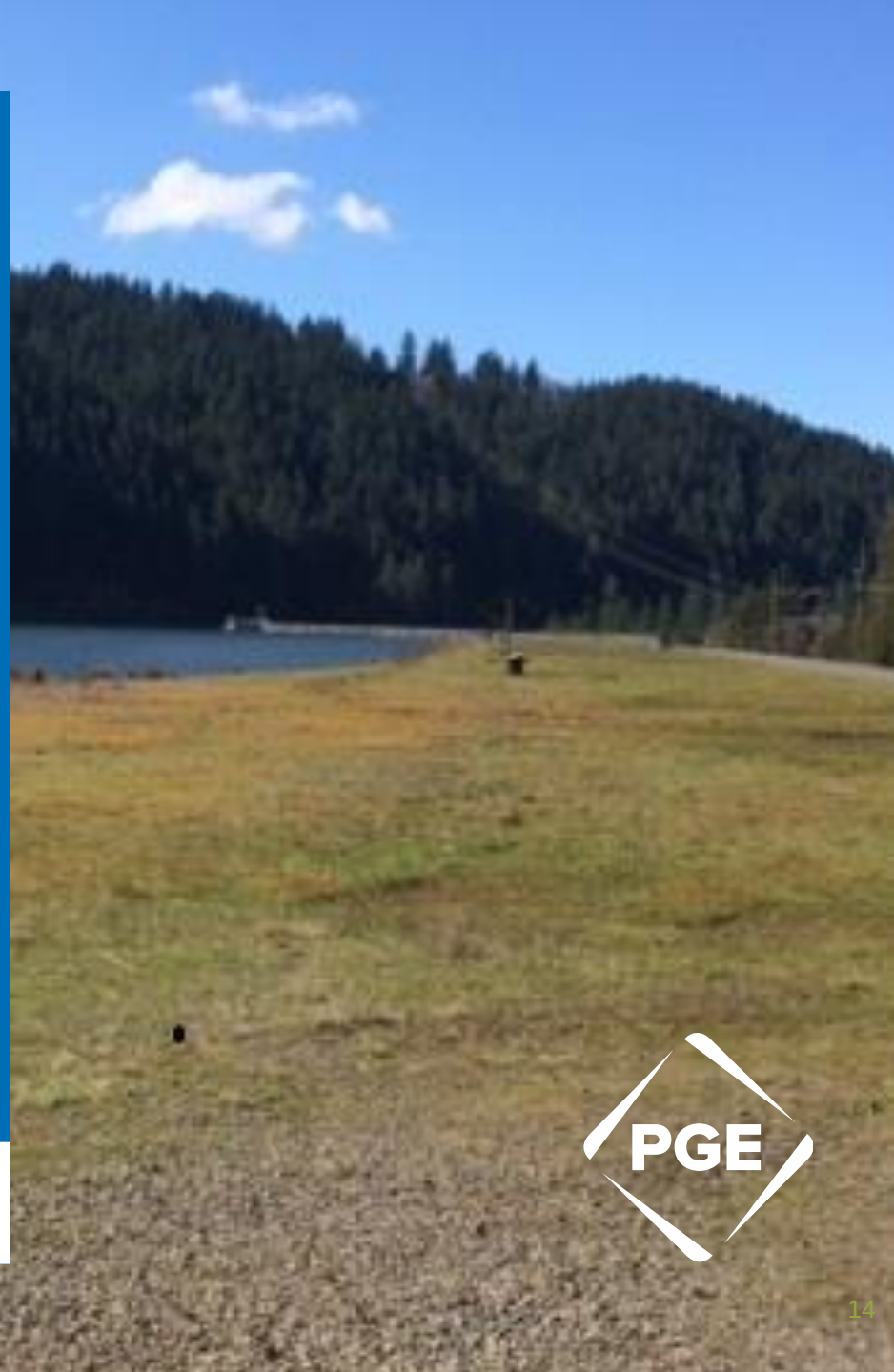
- Public agencies
- Landowners
- Conservation groups

Facility/Corporate Sites & Pollinators

- Lawn alternative
- Wildlife Habitat Certification
- Reduced maintenance costs
- Employee engagement

Dam/Recreation Sites & Pollinators

- Dams maintained free of woody species
- High public visibility



Pollinator Management Opportunities

Solar Sites

- Mitigate high land use
- Enhance adjacent landowner acceptance, especially agriculture
- Enhanced public perception

Substations & Pollinators

Pollinator Habitat Management

Resources

- Xerces Society
- Pollinator Partnership – National Pollinator Week
- Join EPRI Pollinator Initiative
- nrcs.usda.gov/pollinators

Thanks to:

- Portland General Electric R&D Program

Presentations by:

- Scott Black – Xerces Society
- Jessica Fox – EPRI