Pollinator Best Management Practices

Regional Working Group Meeting

August 3, 2017 | Hosted at Metro Regional Government, Portland Oregon
Facilitated by Janelle St. Pierre, and Portland Parks & Recreation
& Jalene Littlejohn, Samara Group LLC

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Background

Participants from across the Portland Metro region and the State of Oregon that are involved in various pollinator working groups and projects were invited to this meeting to work on developing a framework that gathers the collective wisdom on key components for creating pollinator habitat across multiple scales and types of projects. The group also investigated community engagement and other key concerns for pollinator projects. The information gathered will be used to create a shared resource that will help identify needs and direct future efforts for pollinator habitat projects.

Ultimate product we are working towards: tangible network & resources that will help you do your work on the ground.

framework (n.)

- A structure for supporting or enclosing something else, especially a skeletal support used as the basis for something being constructed.
- a real or conceptual *structure* intended to serve as a support or guide for the building of something that expands the structure into something useful.
- a set of tools, libraries, conventions, and best practices that attempt to abstract routine tasks into generic modules that can be reused.

Meeting Agenda

- Developing Framework discussion including answering these questions:
  - What resources do you use to implement each project component?
  - How does scale make a difference in decisions you make, or resources you need?
  - Successes / Challenges
  - What do you need to be more successful?

- Metro area project review including:
  - What projects are you working on?
  - Location
  - Primary goal of the project
  - Benefit for pollinators
- Discussion for Session 2: Designing for community engagement

Meeting Synthesis

By Janelle St. Pierre

We had participation from a variety of different organizations and individuals. This led to a robust and varied conversation with many directions. Here are some threads that ran through a lot of the conversations that can be used to help consider some possible next steps for action. The next step is to see if there are working groups that are interested in forming to follow-up on aspects of the four conversation threads.

Conversation Threads

Pollinator Project Processes:

- Context matters: how do we look at individual projects and how they fit into the landscape on the site level and to other projects and habitat opportunities?
- Projects need to consider the whole life cycle for the target pollinators. We need to consider what species we are managing for and the habitat requirements.
- There are a lot of questions around herbicide impacts to pollinators. What are the impacts of site preparation techniques and the amount of area we are impacting during the process?
- We need to consider what weeds are beneficial and can be tolerated on the landscape in terms of both resources required to do a project, and impacts to pollinators during project implementation.
- Pollinator projects are not minimal site prep or low maintenance process. A guide or roadmap is needed to document accessible technical resources for a wide variety of project implementers.

Research and Monitoring:

- There are several monitoring protocols available. It would be helpful to have a regionally standard protocol that is flexible enough to address different questions. There are several groups currently in the process of testing monitoring protocols.
- Training standards are needed on both the professional and community science level
- There is a lot of public interest, we just need to figure out the best mechanisms to harness this energy. Eco blitzes are an option that is accessible for the public.

Tools for Community/ Public Engagement:

- There is a need to design basic educational programs for the range of different pollinators.
- To get more projects on the ground there needs to be more accessible and simple materials for landowners that help people envision what is possible.
- Need to find a balance between aesthetics, habitat elements, and maintenance to design landscapes for pollinators that are appealing/ accessible to the public.
- Need to reach out to the landscaper community to provide different options for managing properties.
- Need additional messaging that pollinators are important and to change the perception of the messiness of pollinator landscapes.
- Need to look at who is at the table and who should be at the table. How do we reach out to a broader and diverse audience and create opportunities for everyone to be engaged?

- Agencies often have public interfaces that provide an avenue for people to express priorities. An example is Ask ODOT.

Sharing Knowledge:

- There was a lot of expertise at the meeting. We are a resource for each other. Check out all the amazing projects that participants listed.
- Tours! There is a strong desire to set up site tours to share information between implementers and with the public.
- Examples of project that are accessible to the public: Oregon Zoo, and multiple community orchards. Pollinator projects are currently being implemented in Portland Parks and the City of Wilsonville
- Several tools are under development that will help share knowledge. It would be good to make sure this information is widely distributed when it is available.

Connections

There are several resources and connections that already exist that are good starting points to build on. Here is a list of some connections as a starting point. The full list of projects has more details.

Project Resources:

- Xerces Society is working on an update to Pollinator Friendly Parks.
- A new handbook: Conserving Oregon White Oak in Urban and Suburban Landscapes. This compliments the Meadowscaping Handbook. The Willamette Valley Wildlife Garden Making Guide is an additional resource.
- Oregon State University is working on a new resource: SolvePestProblems.org
- Center for Food Safety will host the Wild Bee ID (formerly the Wild Bee Gardens app).
- The Oregon Flora Project is working on a web portal for native plant gardening.
- Backyard Habitat Certification Program/ Portland Audubon is working on an online map of local nurseries that provide safe plants for pollinators. Beyond Pesticides also has info on plant resources.
- East Multnomah SWCD is working on sustainable landscape practices with Home Owner Associations and Community Development Corporations
- ODOT is testing seed mixes and maintenance along highways.

Research and Monitoring:

- Portland State University: students research projects and the campus orchard. Work in the Natural History Museum to create connections of pollinators.
- Oregon Department of Agriculture and Oregon State University are working on a Bee Atlas and monitoring program associated with the Oregon Bee Project.
- West Multnomah SWCD is working with a variety of partners on a pollinator monitoring community science program.

Food/Farm Resources:

- Many of the project resources are also community engagement tools
- There are a number of organizations that are working with the farm, honey bee, and food/ medicine side of pollinators including Bee Friendly Portland, Oregon Bee Coalition, Urban Bees and Gardens, and Mickleberry Gardens. Clackamas SWCD has a demonstration farm.

- Xerces Society and the Oregon Bee Project are working on pollinator friendly farm practices

Meeting Content & Notes

Developing the Framework Discussion

When you are developing a pollinator habitat project from start to finish, what are the project components that you are planning for? What are the components that go into your pollinator habitat projects?

Tables were arranged in the following categories for small group discussion followed by a large group report and discussion:

- Design & Resources
- Site Evaluation & Prep
- Implementation Materials
- Monitoring
- Maintenance & Adaptive Management

Design and Resources		
Key Objectives or Resources	**Successes +**	**Challenges △**
• Creating accessible resources for planting and implementation • Create practical info about pesticides and herbicides as they impact pollinators • Support successful backyard or community sized habitat sites • Design with maintenance in mind • Provide nest sites and whole life cycle needs of pollinators • Evaluate landscape context and increase overall education and awareness • Maximize seasonal window (availability and quality) • Maximize quality • Species and genetic diversity • Appropriate ecoregion	• Backyard habitat provides roadmap for individuals, increased interest and curiosity by public • Some recent resources that are relevant and easy to understand • Partnership development • Including pollinators in design as priority/ objective • ***Increased interest & developing resources**	• Education • Lack of research re: specific plants • Site prep • Standard cultural aesthetic expectations • Water resource management • Managing expectations • Troubleshooting unsuccessful projects • Maintenance- what resources are available to help • Political will/support • Resources $$ • Negative image of bees • Availability of plant materials • Project timeline and timing

• Avoid systemic insecticides or toxics (on plant materials) • Preserve, enhance, and create habitat • Design with maintenance in mind • Design with aesthetics in mind for pollinator protection • Discuss and allow multiple benefits (edibles) food source for wildlife and people • ***Provide nest sites and whole life cycle needs of pollinators** • For urban / high visibility sites- take local context into account. To create positive impact, may need to make it more manicured or styled than if it's out of sight. "Start where your audience is". • Remember that low maintenance does not equal no maintenance • Habitat connectivity • ***Evaluate landscape context** • Consider climate adaptations • Increase education and awareness (public outreach and training) • Cost • Design basic education program awareness and support of pollinators/habitat from a food security objective		• Matching plant species and habitat to need and target pollinators • Foot traffic and vandalism • Need to (or should) consider planting for different types of pollinators: bees, wasps, flies, moths, birds, bats. o Different shapes, types, colors, etc. of flowers • Opportunity to educate all about importance of native plants for native pollinators for native insect eating birds, etc. Benefits at all levels possible. • Holistic ecosystem approach very important. • Also opportunity for educating plant materials providers on sustainable growing practices, reducing herbicide/pesticide use, etc. • Striking balance between large $ / resources / area opportunities vs. ability to move quickly/ timely/flexibly. • Small partners=fewer resources but more flexibility & fewer constraints/red tape
How Does Scale Impact your Decisions?		
• Home and community scale • Cost • Resources • Capacity of organizations • Objectives and overall goals of project • Diversity and richness of species		
Useful Resources	**Needed Resources**	**Questions**
• Meadowscaping handbook • Plants for pollinators in Oregon from NRCS	• Research on which plants are shown to support	• What information is out there and what info is

• Xerces Society Website Meadowscaping • ***Maintenance in mind**	abundance and diversity, including bloom time • Info on which weeds support pollinators where removal impacts them • Maps showing past and current pollinator projects in surrounding areas • Funding • Political will • ***Research-based resources**	missing to help people get resources they need • Do we have to write a question? • What thresholds should we be tracking for pollinator health and connecting • ***Which weeds support pollinators? How to manage**

Site Evaluation and Prep		
Key Objectives or Resources	**Successes +**	**Challenges △**
• What is already present at site? • Think about the end while at the beginning-what maintenance is needed? • Do you have resources for your goal? • Who owns the land? • What is the ultimate goal of site? • Long term viability of project • Site evaluation- is it the right spot for a habitat project?	• Find the right landowner partnership • Solarization site prep on a smaller site • More site prep= more success	• Limitations of site-shade • Weed species present that make end goal impossible • Resource limitation: • Funding (short term and long term), ability to use herbicide or not • Neighboring properties you can't control • Cost of plants/seed- size of site • *** What are your start vs. end resources?** • ***What is your palette?** • ***What do you want to do with it?** o **Site prep** o **Goals**
How Does Scale Impact your Decisions?		

- Resource, Techniques, Maintenance, Methods
- What does site look like now

Useful Resources	Needed Resources	Questions
• Meadowscaping Guide-Mark, Ted, etc... • Oak Naturescaping Guide • NRCS Tech. Notes (Kathy Pendergrass) • Heritage seedlings- Lynda Boyer • Colleagues	• More guidance on best practices of seeding • Scale dependent • Seed sources, weed free and cheap • Fall plants (bare root) • ***How to properly seed- What are best methods?**	• How to avoid collateral damage on existing pollinator populations • How to decide if the end will be successful from the start? • What do you need to consider before you start?

Implementation Materials

Key Objectives or Resources	Successes +	Challenges △

• Plant/seed Sourcing Advanced notice/ availability
  o Neo-nics/ persistent systems
  o Genetic integrity and diversity (local genomes)
  o Plant health
• Mulch- especially on public lands
• Labor: volunteers, techs
• Equipment and tools
• Storage and signage
• Documentation, media sharing successes
• Weather protection
• Timing
• Understand there may be failures (plants die)
• Assess readiness
• Level of acceptance for non-native plants
• Plan for year-round functionality (food resource/habitat/nesting)
	• Metro's Native Plant Center
	• Material collection, storage, growth, community engagement
	• Institute for Applied Ecology: restoration/ research
	  o Research on BMPS= success
	  o Keeping track learning from mistakes- monitoring
	• Friends of trees
	• Model of volunteering organization.
	• Wilsonville project
	• TBD in a couple years!
	• Baltimore Woods - Depave meadows
		• Integration with professional landscaper community
		• Plant availability is flooded with poisonous plants
		• Pollinator friendly confusing and unregulated greenwashing potential
		• ***Aesthetics & disconnect between mainstream & habitat**
		• Thinking beyond flowers
		• Nesting overwintering
		• Design and maintenance
		• Plant materials hard to find what you want when you want it (Fall)
		• Unclear what might be most successful

• Educational component
• ***How does project fit larger context/year round habitat multi-function?**
• ***Plant sourcing:**
  o **Native,**
  o **Genetics,**
  o **Propagation/ management,**
  o **Quantity/quality**
• ***Systemic insecticide issues- impact what plants?**
	• Basket slough, Cooper Mt., Fernhill wetlands
	• ***OK to experiment with plant palette**
	• Functional & beautiful
	• Locate sites next to other habitat
	• ***Opportunity to build on diverse partnerships (new, creative)**
	• More plant material available
	• Shrubs, trees are easy
		• Weeds: ag, noxious
		• Late season appearance
		• Funds for continued maintenance
		• Herbicide & perception of risk
		• Neighbor use of insecticides
		• Protecting from mower

How Does Scale Impact your Decisions?		
• Different scales require different partnerships • Project size drives plant material selection (seed, plugs, etc.) • Labor to install and maintain		
Useful Resources	**Needed Resources**	**Questions**
• Meadowscaping handbook • NRCS tech note • Neo-nic free nursery list • Native plants for Willamette Valley yards • Stay tuned for online version • OFP • Xerces- books/handouts • Oregon flora plant selection tool • Pollinator partnership	• Case studies • Network of professionals for troubleshooting • Statewide IMP pest resource • Make more habitat • More native plants	• How will methods of site prep affect pollinators, both in short and long-term? • Is there a minimum size? • Are we creating sinks rather than sources? • Balancing natives & non-natives?

Monitoring		
Key Objectives or Resources	**Successes +**	**Challenges △**
• We need to know what pollinators so we can protect/preserve/manage	• Ceartinas nesting in hollow stems- advanced knowledge for best	• Public perception / comfort level

• Need to know how our management practices affect pollinators • Comparable data/regionally • Communication • Training- time sensitive • Educating public	practices for pollinator habitat • PSU- educating groups, student involvement, how to manage for bees/ raising bees/ habitat • Port of Portland- Govt. Island- multiple years of surveys- implementation more than one type of monitoring • Increase public interest • Exciting for community / coalition volunteers in groups • Hooked up with extremely enthusiastic groups • ***Excited volunteers** • ***Public involvement: high levels of engagement**	• Professional only?/ Volunteer expertise • Monitoring nesting sites different than monitoring bees • How can we standardize protocol or share info • Training- how to train volunteers and staff? • Time sensitive • How to protect monitored environment • Fragmentation of habitat • Climate change • ***Public involvement: level of training required to get people on board**
How Does Scale Impact your Decisions?		
• Different foragers have different foraging patterns/ scale of movement		
Useful Resources	**Needed Resources**	**Questions**
• Equipment sharing	• Annual training program for volunteers and or staff (train the trainer program) • Funding • Protocols standardization but with tiers/based on research question o Opportunity to look at other monitoring needs for plants and nesting sites • Database to share • Equipment microscopes especially co cooperation with colleges • Nest monitoring • ***Training is needed and important** • ***Standard protocol that is flexible for question**	• Broad baseline-diversity

Maintenance & Adaptive Management		
Key Objectives or Resources	**Successes +**	**Challenges △**
• Do not harm • ***Buy in from maintenance staff** • Staff & public education	• Use of drifts of one or two species helps aesthetics and maintenance • ODOT test plots- demo pollinator habitat • Provide resources for more than pollinators - birds to crickets	• Aesthetics - expectations of tidiness • ***Mowing - practice is ingrained - shift with pollinator habitat** o **Noxious weed control** o **Looks like people care** • Teaching tolerance of weeds on restoration sites • Keeping cost down • Long-term management after initial installation • Weed management • Companion plantings? • Tolerate bare ground
How Does Scale Impact your Decisions?		
• Choice of tools		
Useful Resources	**Needed Resources**	**Questions**
•	• Seed mixers for various settings i.e. roadways, etc. • ***BMPs for working around pollinators** • BMPs for mowing	• ***Which noxious weeds might be beneficial?**

Working Towards Next Steps: Large Group Report & Discussion

What did you learn?
• Wild bee gardens (ID) app- Fall 2017 • State bill for bees • Xerces bee monitoring

- Native thistles effort
- Bee Better Certified
- OSU- bee database (PNW)
- Portland stormwater manual → habitat for ecoroofs
- Dedicated group
- Xerces survey at Government Island + powerlines
- ODOT's got it goin' on!
- Metro and Portland looking at changing grass practices
- Check out Gabriel Park! Forest Park! Willamette Park!
- Parks' project trips!
- Backyard- Clackamas Co. (4000+ yards)
- Oregon Flora Tools- web portal
- St. John's Landfill
- The Oregon Bee Project (Buzz!)

What does this all mean?	Now What Do We Do?

• A lot of success! Impressed with knowledge in room.
• New concept: assess your space & beyond
• Question can dictate your practices
• Levels of training
• Night pollinators / risk
• Plant for different pollinators
• Need to figure out how to share the collective information
• Assess what is in your space and then beyond to the larger landscape
• Resource question: what level of species ID do you need to get down to? Need to train to the level we need to design to
• Education need to be a key component in all these topics
	• What working groups can arise from notes/needs?
	  o Form specific groups to fit identified needs.
	• Place to put existing resources
	  o Accessible, data/info
	• Field trips, visits, "see"/look
	• Utilize the amazing knowledge of the people that are already in the room
	• Think broader for what groups we can reach out to- opportunity to build relationships
	• Centralize database for different resources
	• Training for different groups
	• Resources for landowners- need to create something simple that is accessible like a recipe book (need for non-technical resources)
	• How can practices be applied in other projects?
	• Relationship-building
	• Agency certification for pollinators
	• Communication re: training & resources
	• public/non-technical resources
	• Agency-wide pollinator/native standards/BMPs: non-standard partnerships: oil, gas, utilities, highways, etc.
	  o Facilities maintenance, roads, HOAs
	• Business/economic tie-in: opportunities to educate large nurseries on native species and restoration market, and to support small local farmers and nurseries

	• BMPs for roadside pollinator habitat at Xerces.org • Bee Better Certified has pollinator habitat standards (beebettercertified.org)

Further Discussion

- Pollinator = positive
- Advocate for each other i.e. use tools like Ask ODOT to generate support
  - Other organizations?
- Reminder about language- is it accessible to a broader audience?
- Use the agency resources to create good political capital
- How are parts of Oregon different?
  - Shared obligation to seek understanding
- Who is and is not at table? Who should be at the table?
- Outreach multi-pronged: brainstorm out-of-box- need to go to groups and talk to them

Metro Area Project Review

Participants worked individually and then in small groups to fill out a worksheet about their projects and then discussed in small groups of 2, then 4 and finished with a large group discussion with the following questions:

ONE:

- What projects are you working on
- Where is it?
- Primary goal of the project?
- How does that benefit pollinators?

TWO:

- Summary of projects, types, location
- Similarities, Differences

FOUR:

- Introduce your projects - theme (1 min each)
- How does the community interact with your project?
- How do people perceive the pollinator work you are doing?

ALL:

- Tell us something you learned that you hadn't known or was surprising:
    - Project
    - Engagement

Project Review Worksheets

Name Affiliation Role	Project	Location	Primary Goal	Benefits to Pollinators
Stefanie Steele Portland State University Undergrad student → PSU invertebrate museum	1. PSU pollinator survey PSU apiary bee task force 2. Student sustainability center	1. PSU: invert museum SBI 2. PSU: comm. Orchard SW 12th	1. Survey native bees- evaluate species/genus diversity- Provide & manage habitat 2. Survey native bee species	1. See what pollinators are here to better manage 2. Historical record can be gathered
Matthew Shepherd The Xerces Society Communications Director	1. Propagation & use of native thistles (guidelines) 2. Bee monitoring workshops 3. Bee better certified 4. Rewrite of pollinator-friendly parks guidelines 5. Urban pollinator toolkit	1. Available from Xerces 2. Cooper Mt. Native Park for WMSWCD 3. Nationwide beebettercertified.org 4. Will be on Xerces website 5. -	1. Encourage use of thistles in restoration 2. Train volunteers 3. 3rd party certification for farms and food supply 4. - 5. Training of community volunteers, etc.	1. Thistles are excellent pollinator flowers 2. Monitor habitat projects 3. More habitat, protected from pesticides 4. - 5. Expansion of habitat to urban areas

Marshall Johnson Portland Parks & Recs Ecologist / P.M.	1. Powerline Pollinator Project (BPA/PGE) in Forest Park	1. North Forest Park powerline corridor	1. Replace non-natives with beneficial pollinator species	1. Habitat, food resource. corridor/habitat connectivity
Mark Wilson	1. Meadow Handbook / Oak Conservation Handbook 2. Oak Workshop Host Sites 3. Sellwood pollinator patches 4. Honey prairie 5. Prairie/Oak working group	1. - 2. Clackamas Co. 3. PDX 4. Sellwood 5. PDX	1. Education & Design 2. Backyard habitat for Oak habitats 3. Pollinator habitats 4. Design 5. Education	1. Micro-habitat 2. Micro-habitat 3. Micro-habitat 4. Micro-habitat 5. Micro-habitat
April Johnson Garden Ecology Owner	1. Malden Court Community Orchard 2. Beyer Court Rain Garden 3. PFTP Community orchards pollinators court 4. Sou'wester 5. Private property in NE	1. Lents Neighborhood, Portland 2. Lents 3. PDX 4. Seaview, WA 5. PDX	1. Community garden/skills demo 2. Rainwater catchment & pollinator education 3. - 4. Natives/edibles 5. Increasing neighborhood education/pollinator habitat	1. Pollinator habitat & education 2. Habitat 3. Pollinator habitat & education 4. Pollinator forage & habitat 5. Pollinator habitat
Janelle St. Pierre Portland Parks Ecologist	1. Gabriel Park pollinator meadow 2. Woods Park pollinator meadows 3. Portland pollinator collective	1. SW PDX 2. SW PDX 3. Portland Metro area	1. Create a 1 acre meadow of native species 2. Small forested meadow 3. Organize community discussion	1. Native pollinator meadow- upland 2. Native pollinator meadow-wet(ish) 3. Education, support, engage people doing pollinator work

Carl Grimm Metro Planner	1. Oregon Zoo wildlife garden 2. Oregon flora native plant gardening web portal 3. Solvepestproblems.org (osu)	1. OR zoo 2. World wide web 3. WWW based out of Corvallis	1. Teach/demonstrate wildlife habitat gardening on home scale 2. Inspire & inform gardeners & landscapers to grow native plants 3. Promote urban IPM in Spanish and English	1. Nectar; nest sites; larval food sources; informed public 2. Nectar; nest sites; larval food sources; informed public 3. Solve pest problems and reduce or eliminate unnecessary use of pesticides
Nikkie West Audubon Society of Portland Backyard Habitat Program Manager	1. Backyard habitat certification program 2. Interactive online map of local nurseries 3. Oak prairie working group 4. Greening schoolyards task force	1. 4000 + properties; 1000 acres region-wide 2. - 3. Conceptual regional 4. Conceptual regional	1. Provide technical assistance, incentives & encouragement to participants that want to garden sustainably 2. Native plant availability; info on neo-nics 3. Develop long-range plan for regional oak prairie habitat enhancement & protection 4. Create regional plan & funding for school yard habitat enhancements	1. Encourage, provide resources for and track meadowscapes & general pollinator habitat 2. Less poisonous plants on the landscape 3. - 4. Lots of future opportunities! PPS is the 2nd largest landholder in Multnomah Co.
Susan Hawes Portland Parks & Rec Stewardship Coordinator	1. Habitat restoration 2. Community science surveys 3. - 4. Trail work	1. Many, but ex: planting & plant care 2. Many, but ex: pollinator surveys @ Powell Butte 3. - 4. Many, but ex: trail brushing @ Powell Butte	1. Healthy habitat 2. Community education & useable data 3. - 4. Trail safety	1. Increasing native species & pollinator support (amount & diversity) 2. Finding out which pollinators are currently using/benefitting from the site will help us better manage the site for pollinators 3. - 4. Benefits or challenge: cutting nettles along trail- affecting pollinator support species negatively?

Whitney Bailey EMSWCD Senior Urban Conservationist	1. HOA landscaping retrofit- mowing → sustainability 2. Local CDC, developing sustainable landscaping practices 3. Community gardens 4. Rain gardens	1. Gresham 2. Portland 3. All over 4. All over	1. Reduce water use, increase birds & butterflies, reduce maintenance 2. Reduce water use, increase birds & butterflies, reduce maintenance 3. Introduce more sustainable watering practices & pollinator habitat/plant, IPM practices 4. Capture stormwater runoff from urban properties with native plants as primary material	1. More food/host plants, reduced chemicals on landscape 2. More food/host plants, reduced chemicals on landscape 3. More food/host plants, reduced chemicals on landscape 4. More native plants=more habitat
Sarah Kincaid ODA Entomologist	1. Bee atlas 2. Flagship farms 3. Bee education 4. NHBS 5. OBP	1. Statewide 2. Statewide 3. Statewide 4. Statewide 5. Statewide	1. Train the trainers, generate data, survey state 2. Increase habitat BMPs/monitoring, networking 3. Educate the public about Oregon bees 4. Survey HB for pathogens 5. Networking, educating, highlighting	1. Increase knowledge, baseline data 2. Increase knowledge, provide better habitat, pollinator friendly practices 3. Public engagement, changes in behavior 4. Baseline data 5. Increase resources, share resources, research

Celeste Ets-Hokin Outgrowing Hunger Pollinator Educator	1. Vance Park pollinator garden 2. Giving talks on native bees for city of Gresham 3. “Wild Bee Gardens” app is being transferred to the Center for Food Safety- “Wild Bee ID”, free app	1. Vance Park, Gresham 2. Gresham 3. -	1. Develop pollinator garden as community outreach & education resource 2. - 3. -	1. - 2. - 3. -
Andony Melathopoulos OSU Ext. Specialist	1. Oregon Bee OBP project 2. PNW 591 3. OR Bee Atlas 4. PNW enhancing urban pollinators 5. Community bee collections 6. Solve pest problems 7. Bee ID training 8. Residential beekeepers	1. OR 2. OR 3. OR 4. OR 5. OR 6. OR 7. OR 8. OR	1. Tie statewide efforts network 2. Clear info on pest & pollinators 3. Coordinate historical & new bee records 4. Tie together resources: plant, pest, pollinators 5. Make collections for community groups 6. Integrate pest, pollinators, plants 7. Higher level ID expertise in state	1. Coordination 2. Less exposure 3. Track pollinators- build capacity 4. Education 5. Education 6. Education 7. More sampling, less backlog 8. -
Raine Lee Rialto Oregon Bee Coalition Founder/Organizer	1. Oregon bee coalition	1. Gresham based but will serve all of Oregon	1. Habitat improvement throughout OR; Bee City campus/USA certifications; network with key stakeholders in each county/city in OR; focus on urban habitat; education & outreach; design templates	1. Increased habitat for seasons; connectivity improvement to create nectar/pollen trails; healthier & thriving pollinators

Michele Shapiro Tanner Springs Park Volunteer Coordinator	1. Tanner springs park volunteer recruitment 2. Enhancement at Tanner 3. Weed removal at tanner 4. Education of public on prairies 5. Education of public on urban parks	1. NW Pearl 2. NW Pearl 3. NW Pearl 4. NW Pearl 5. NW Pearl	1. Stewardship 2. Diversity for wildlife 3. Success of plantings 4. Stewardship 5. Support financial & stewardship	1. - 2. Year round life cycle habitat 3. - 4. - 5. -
Monica Gunderson SOLVE Program Coordinator	1. Riverplace 2. St. Luke Lutheran church 3. Community trail SW Dolph Ct. - Molly Welch 4. Community trail SW 25th Andrea Wall 5. Linnton- Rob Lee Ma Olsen's Garden 6. Westridge Elementary - Calliope Saban 7. Pollinator parkways - Sherrie Pelsma 8. Maddax Woods 9. Mary S Young park 10. Burnside Nature Park	1. SW Naito & Lincoln, PDX 2. SW Vermont & 45th, PDX 3. SW Dolph Ct., PDX 4. SW 25th & Capitol Hwy, PDX 5. Linnton - Hwy 20, PDX 6. Lake Oswego 7. NE 76th, sidewalk medians 8. West Linn 9. West Linn 10. West Linn	All: Community projects: engage neighbors & create habitat	All: Increasing habitat

Kate Forester Herrera Landscape Architect	1. Countyline levee setback 2. D Ave. green street 3. Carli creek 4. Grand connection pedestrian corridor vision 5. Taichung rail to trail corridor	1. King Co., WA 2. Lake Oswego, OR 3. Clackamas Co, OR 4. Bellevue, WA 5. Tarchung, Taiwan	1. Build new 1.5 mile levee to allow white river to flood & improve habitat 2. 11-block green street to treat stormwater before it reaches tualatin river and road improvements 3. Large floodplain, wetland, and stream restoration project with large SW facility 4. Pedestrian corridor 5. -	1. Remove invasive vegetation and replace with diverse native plant palette 2. Add abundant rain gardens that all have focus of adding pollinator forage along corridor 3. Restored oak savanna, floodplain forest, emergent wetlands. Diversity and abundance of habitat created 4. Create more green space and habitat- especially native from East Rail Corridor to Lake Washington
Elaine Stewart Metro Ecologist	1. West Bliss Butte 2. PPR/BPA (pollinator powerlines) 3. St. Johns landfill	1. Clackamas co. 2. Forest Park 3. North Portland	1. Eventually establish forest but provide habitat for pollinators early 2. Improve pollinator habitat in power line corridors 3. Prairie creation	1. Floral resources for 1-20 years 2. Full life needs met. 3. Full life needs met.
Weston Miller OSU Extension Master Gardener Program	1. Solvepestproblems.org 2. Improvised garden 3. LGL in SE Portland 4. NWREC	1. Online (planned resource) 2. Food innovation center 3. - 4. -	1. Education 2. Demonstration 3. Demonstration 4. Demonstration	1. Extensive pollinator health info for underserved audiences in english & spanish 2. Flowers 3. Flowers 4. Flowers
Brian Lacy Urban Bees & Gardens	1. Community bee program 2. Flying tree hives 3. School-based bees 4. Bee trees	1. Metro area 2. Global 3. Metro→ national 4. Metro	1. Bees in every neighborhood 2. Broadly adopted 3. Change child/admin thinking 4. Save them	1. Better habitat & mating options 2. Ideal man-made hive habitat 3. - 4. More natural homes

Jen Davis Bee Friendly Portland Founder/Director	1. Bee Friendly Portland	1. SE Portland, online, and at Bee Friendly portland FB	1. Education, advocacy for pollinators	1. We work to education the public & farmers on best practices to attract, support, and protect pollinators
Susan Masta Portland State University Biology Professor, Curator of Museum (includes insects)	1. My garden pollinator habitat & monitors 2. PSU bee survey of campus 3. PSU student training to ID & curate insects 4. PSU museum of natural history outreach 5. Gabriel Park pollinator monitoring	1. My yard- SW PDX 2. PSU 3. PSU 4. PSU & beyond 5. Gabriel Park	1. Biodiversity maximized 2. What native bees live on campus 3. Excite students about insects 4. Educate public on pollinators 5. What native bees live there?	1. Nesting, feeding successfully 2. Use to make/give informed advice to landscape maintenance 3. Will protect what we love 4. Will protect what we love 5. Use to make/give informed advice to landscape maintenance
Nicole Ahr Clackamas SWCD Conservation Specialist	1. Private property Tualatin River 2. Oak naturescaping/meadowscaping/BHCP 3. SWCD-owned farms 4. Oak CIS projects	1. Along Tualatin River- West Linn 2. Urban/suburban Clackamas County 3. Beavercreek, OR 4. Molalla River watershed + Rock Creek watershed	1. Filter nutrients/riparian erosion control buffer 2. Native habitats/education 3. Demo pollinator habitat (hope to monitor too) 4. Restore/conserve oak habitat	1. Native pollinator patch/garden- Native riparian buffer 2. Native pollinator plantings 3. Native plantings- excellent educational resources for landowners 4. Restore pollinator habitat

Morgan Henry Portland Parks & Rec Intern	1. Restoration 2. Restoration 3. Restoration 4. Restoration	1. Powell Butte 2. Johnson Creek Park 3. Errol Heights 4. Springwater Trail	1. To keep the plants maintained 2. Continuing care of plants	1. The more plants & flowers that survive the more area the pollinators have to use
Michael Ahr WMSWCD Project Manager	1. Brad 2. Laura 3. April 4. Dorinne	1. Forest edge 2. Forest edge 3. Forest edge 4. Forest edge	1. Aesthetics, pollinators 2. Aesthetics, pollinators 3. Weed management (blackberry) 4. Weed suppression, maintain a view	1. Multiple species of flowers- monitoring shows much diversity in pollinator groups that use it 2. - 3. Pollinators are using the habitat before pollinator plants installed 4. Same as above: pollinators love the forest edge.
Madelyn Morris Mickelberry Gardens Owner/Land Manager	1. Private property- 1 acre garden 2. Small garden adjacent to business 3. Lynchview Park- public park 4. Headwater farm (future)	1. Outer SE PDX 2. Gresham 3. Outer SE PDX 4. Gresham	1. Habitat, beauty 2. Beauty, education, habitat 3. Benefit to community- community engagement 4. Medicinal herbs- farming	1. Habitat, nest sites, forage 2. Forage 3. Habitat (hopefully) 4. Pollinator hedgerow, balancing farming with forage & nest sites
Sharon Selvaggio NW Center for Alternatives to Pesticides Healthy Wildlife & Water Project Director	1. Bee stewards- Wilsonville 2. Bee stewards- Oregon City	1. Wilsonville 2. Oregon City	1. Habitat, city integrated pest management, community education, student monitoring/education 2. Community education	1. 2 acres city/school land, community education & engagement 2. Community awareness of pollinator conservation issues and techniques

Bob Marshall ODOT Roadside Developer Program Leader	1. Preacher Slide 2. Sage Hen rest area 3. Pilot program 4. Johnson Creek volunteers	1. Ashland @ 3000' 2. Burns area 3. Coast @ Lincoln Co. 4. SE Portland	1. Stabilize landslide 2. Remove lawn & replace with natives 3. Facilitate volunteers on ODOT R.O.W. 4. Rehabilitate urban stream	1. Forbes in seed mix 2. Native plants with forbes 3. More plants 4. -
Magnus Bernhardt ODOT-Region 1 Landscape Architect / Coordinator / Lead	1. US26: 185th to Cornell reforestation 2. I-5 Iowa St. viaduct mitigation 3. Upcoming projects: I-5, I-205, US26	1. US26: 185th to Cornell 2. I-5 Iowa St. viaduct 3. I-5, I-205, I-84, US26 west	1. Roadside urban forest-naturalization, reduce mowing 2. Habitat-pollinator 3. Test seed mix maintenance	1. Habitat- allow existing herbaceous plants to pollinate 2. Remove invasives, develop multi function landscape 3. Pollinator habitat-meadow
Katie Hietala-Henschell Xerces Society Conservation Biologist	1. Pollinator survey post-restoration 2. Pollinator surveys in powerline corridor 3. Urban pollinator work 4. Species fact sheets	1. Government Island 2. Forest Park 3. Portland Metro area 4. OR & WA	1. Provide habitat 2. Monitor if planting work with treatment vs. control comparison 3. Engage local community 4. Locate/compile info on rare/threatened species	1. Provides intact habitat within city limits 2. Utilizes potential habitat 3. Raises awareness for pollinator protection and increases habitat 4. Makes info available and provides management

Designing For Community Engagement

Following the project review, the group was offered an opportunity to choose a list of pressing issues, questions or topics within which they wanted to dive deeper in small group discussion.

“What is a topic area that you would like to investigate more?”

In the interest of saving time, the larger group was asked to report out on one success and one key challenge from their small group discussions.
1 success, 1 challenge

Topics Included the following:

- Diverse Partners
- Education
- Engaging Volunteers in Monitoring
- Engaging with Nursery & Industry: Landscaping / Design
- Engaging with Landscape Managers & Developers

Diverse Partners

Key Objectives or Resources	Successes +	Challenges △

• Intentionality with the work
• Cultural competency
	• SW 82nd Greening Jade initiative- daily connection to nature
	• Green Lents- Rose city CDC- green streets as a place to connect to nature
	• Connect SW PDX- demographic info- CELs, CDLs
	• Xerces training PDX parks youth program
		• How to reach diverse communities
		• Workforce development
		  o Leadership level
		  o Professional level
		• Capacity for relationship building with POC
		  o Culturally specific organizations

How Does Community Engagement Impact Your Objective?

Useful Resources	Needed Resources	Questions
• Metro- DEL resources • DEL facilitators • Intertwine	•	•

Education

Key Objectives or Resources	Successes +	Challenges △

• Appreciation for pollinators → care more → tolerate messiness
  o General public
  o Management
  o Staff
		• Reaching diverse audiences
		• Store shelves & ease of use with pesticides

• Reconcile conflicting land use in landscapes = transients living in landscapes/habitats • Importance for planting for wildlife and food resiliency • Pollinators are more than honey bees… there's a wild world out there • Codify requirements for development o Like street trees; storm water • Incentives program		

How Does Community Engagement Impact Your Objective?
•

Useful Resources	**Needed Resources**	**Questions**
• Xerces • Online • Federal HWY administration o Funding?	•	• Sponsor maintenance of habitat (a la adopt-a-HWY_) • Pressure from the outside • Ask ODOT • Adopt a habitat

Engaging Volunteers in Monitoring

Key Objectives or Resources	**Successes +**	**Challenges △**
• Education, informing the public about pollinators • Tapping expertise in the community • Increasing capacity (staff doesn't have time…)	• Volunteer turn out: public interest in pollinators is huge • "Ecoblitzes" increase volunteer interest in being involved in future other habitat restoration projects	• Level of expertise of both volunteers & staff doing the trainings • Accessible language, making projects accessible

How Does Community Engagement Impact Your Objective?
• Increased support for parks and natural areas (i.e. supporting bond measures) and with voting/words of thank you - both monetarily

Useful Resources	Needed Resources	Questions
• There are existing protocols • ID booklets, ID websites, etc. • Training and taking advantage of already established trainings (i.e. ODA, Xerces)	• Outreach tools (web-based, flyers, etc) • Monitoring protocol • Materials needed to ID specimens (ex: catching bees & cooling them for easier ID)	• How to recruit for projects if you need specific expertise?

Engaging with Nursery & Industry

Landscaping / Design

Key Objectives or Resources	Successes +	Challenges △
• Specify non-treated seeds • "BMPs" for large landholders to use when contracting with maintenance folks	• NCAP neo-nic free nursery list • Increased interest in "pollinator" plants & natives	• Current neo-nic labeling is very deceiving • Nursery standards aren't necessarily habitat friendly • We're not reaching the large-scale landscape professional outfits/companies

How Does Community Engagement Impact Your Objective?

- Engaging the public = influence of consumer habitats = economic driver for changes
- Lots of opportunities to reach diverse communities within landscape professionals

Useful Resources	Needed Resources	Questions
• NCAP- biocontrol video & 3 workshops with nursery industry	•	• Statewide neo-nic legislation?

Engaging with Landscape Managers & Developers

Key Objectives or Resources	Successes +	Challenges △
• Top down and bottom up approach (e.g. work through city council/ planning commission, but also work with education of people on ground) • Give people options • Provide workshops with follow-up • Tell them why	• Go to their meetings • Meet them where they are- birds & butterflies, not bees • Remove the guesswork • Build relationships • Build public demand • Financial incentives	• BMP sounds too regulatory o "be a friend to pollinators" option • Language & education barriers • Low wages of people on ground • PDV is not all of Oregon or the PNW

How Does Community Engagement Impact Your Objective?

•

Useful Resources	Needed Resources	Questions
• Public education = public pressure • NCAP nursery biocontrol video • Landscape contractors board	• Create a "LEED" certified program for habitat options	

More Projects Now

Key Objectives or Resources	Successes +	Challenges △
• Bring pollinators into all of your veg management projects • Make the scale accessible • Multi-generational involvement in projects	• Bee task force working with garden task force @ PSU • Mulch less • When to do yard clean up • Existing projects allow people to be more comfortable with them - and see pollinators	• Labor intensive projects- lots of maintenance • Neighboring property uses are not compatible with projects • Existing resources can be overwhelming • Need more large community projects as examples that are

		accessible - maybe at colleges • Funding • Lack of cross-pollination / sharing resources
How Does Community Engagement Impact Your Objective?		
• Need sufficient resources to meaningfully engage the community- <u>multiple times</u> - essential for project buy-in and long-term maintenance / project success		
Useful Resources	**Needed Resources**	**Questions**

• Recognition for projects - similar to BHCP (levels)	• Need an easy intro to pollinator habitat
	• More public example
	• Project with good signage
	  o That cover all communities
	• Landscape examples
	• Easy how-tos, 1 pagers, etc.
		• How do we demonstrate tangible benefits of these projects?
		  o Food security, aesthetics, what is the hook for each group?

Meeting Attendees

First Name	Last Name	Affiliation
Celeste	Ets-Hokin	Outgrowing Hunger
Jen	Davis	Bee Friendly Portland
Marie	Hepner	Samara Group
Jalene	Littlejohn	Samara Group
Brian	Lacy	Urban Bees & Gardens
Emily	Dang	Portland Parks and Recreation
Susie	Peterson	Backyard Habitat Certification Program/ Columbia Land Trust
Nathan	Schulte	Portland Parks and Recreation
Nikki	West	Backyard Habitat Certification Program/ Portland Audubon
Kate	Forester	Herrera
Morgan	Henry	Portland Parks & Recreation
Katie	Hietala-Henschell	Xerces Society
Janelle	St. Pierre	Portland Parks & Recreation
Madelyn	Morris	Mickleberry Gardens
Bob	Marshall	Oregon Department of Transportation
Matthew	Shepard	Xerces Society

Gaylen	Beatty	Metro
Nicole	Ahr	Clackamas Soil & Water Conservation District
Sarah	Kincaid	Oregon Department of Agriculture
Michael	Ahr	West Multnomah Soil & Water Conservation District
Gail	Massoll	Friends of Tanner Springs
Kathy	Pendergrass	USDA Natural Resource Conservation Services
Marshall	Johnson	Portland Parks & Recreation
Susan	Hawes	Portland Parks & Recreation
Raine Lee	Ritalto	Oregon Bee Coalition
Susan	Masta	Portland State University
Carl	Grimm	Metro
Sharon	Selvaggio	Northwest Center for Alternatives to Pesticides
Andony	Melathopoulos	Oregon State University
Michele	Shapiro	Friends of Tanner Springs
Magnus	Bernhardt	Oregon Department of Transportation
Weston	Miller	Oregon State University Extension
Elaine	Stewart	Metro
Mark	Wilson	Consultant

Kyle	Spinks	Tualatin Hills Parks & Recreation District
Monica	Gunderson	Solve
Stefanie	Steele	Portland State University
Colleen	Mitchell	City of Portland Bureau of Environmental Services
April	Jamison	Garden Ecology
Whitney	Bailey	East Multnomah Soil & Water Conservation District
Rose	Madrone	Film maker