

Zoom: PSC Virtual Training 2026: ADGU-2374 - info@pollinator.org

Participant: Wordly [W] English (US)

[>> W] Is our final live session together.

[W] So this is module seven on expanding our impact on the agenda.

[W] Tonight I will kick things off with some slides on B houses.

[W] Then Maddie will talk about some tips on communicating about pollinators.

[W] After that I'll provide some habitat and outreach examples from current pollinator stewards, and we will then have a special guest presentation from star steward Anya Peters, who will talk about some of the incredible work that she's done, using what she learned through the PSC program.

[W] And then after that, we will finish the session with some review on the next steps to certification and a final Q and A period.

[W] And as always, we have our housekeeping slide for tonight.

[W] So the recording for this session will be posted on the course information page by Friday.

[W] And all those recordings will be available until the end of the year.

[W] So December 31st 2026.

[W] Closed captioning is available, which you can enable in your controls.

[W] Please put questions in the Q&A box and we'll try to answer as many as we can at the end of the session.

[W] You can scan the QR code or use the links that we sent for translation services for tonight's webinar.

[W] You can always contact us at stewards@pollinator.org if you have any questions, especially if we didn't get to your question.

[W] Later tonight, please engage in respect and kindness with each other in the chat.

[W] And you can write down in point form or 1 to 2 sentences.

[W] The key takeaways from tonight's training.

[W] So that it's really easy to complete the step one form.

[W] When we send that to you.

[W] Later this week.

[W] And just a reminder, here's the course information page in case you haven't been able to log into it yet.

[W] There's the URL.

[W] We will follow up this webinar with an email with this link as well.

[W] There's the username and password that you can use, and all the webinar recordings will be posted to the course information page.

[W] Okay, so now let's get to know tonight's speakers.

[W] So Maddie Dong is the communications coordinator at Pollinator Partnership.

[W] Maddie is a lifelong naturalist who grew up in the San Francisco Bay area.

[W] After receiving a Bachelor of Science in Natural Resources, Policy and Management and a minor in sustainability from Oregon State University, she began her career at Pollinator Partnership, specializing in environmental communications and outreach.

[W] Maddie is ecstatic about engaging her community in pollinator issues and building community capacity for conservation initiatives.

[W] Welcome, Maddie and Anya Peters is a dedicated land steward, a 2024 PSC graduate and a certified Penn State Master Gardener.

[W] She applies her expertise in permaculture design through her business, Hedgerow Collective.

[W] Anya specializes in helping clients establish native plants and pollinator habitats, creating sustainable ecosystems that enhance local biodiversity and ecological resilience.

[W] Her thoughtful approach to restoring natural balance empowers communities to combat habitat loss and species decline, transforming ordinary spaces into vibrant sanctuaries where diverse plant and animal life can flourish together.

[W] Welcome, Anya.

[W] All right, everyone.

[W] So now I'll kick off tonight's presentations, and we'll start off with bee houses, which I know is a really popular topic that I know many of you wanted to learn more about.

[W] So let's get into it.

[W] So we'll go into the uses, the do's and the don'ts.

[W] So here are a couple examples of some of the houses that we might see that we can purchase at the big, the big box stores today.

[W] And there's just so many different designs for these bee houses that sometimes it can be a bit overwhelming or a bit confusing.

[W] On trying to select the right one.

[W] So I'm hoping that over the course of these next, you know, over the next 10 or 15 minutes or so, I can really provide you with the information that you need to decide if you want to build a bee house or what to look for when you are shopping around for one.

[W] Okay, so why do we want to build these houses as well?

[W] It could provide more nesting for pollinators.

[W] It can support pollination to a certain extent.

[W] For the most part, they're very educational and they're fun.

[W] If you're building your own and they can be used for conservation.

[W] But I put a question mark there because there's some nuance to it, and we'll get into it in a little.

[W] Bit.

[W] So why not be houses?

[W] Well, they can be harmful if not properly designed.

[W] If they're not maintained, they can really be, you know, a space that can build up pests and pathogens which aren't good for our bees.

[W] Usually they're put in a place that isn't providing pollinators with enough food, and they can be a hot spot for invasive species.

[W] So the pollinators that we're attracting when we build bee houses aren't the honeybees that a lot of people think that, you know, bee houses attract.

[W] We're actually attracting solitary bees, most likely leafcutter bees.

[W] Also mason bees and carpenter bees.

[W] But for the most part, we'll see our leafcutter bees visiting our bee houses.

[W] So I wanted to share this high resolution, high resolution picture of a leaf cutter bee, which would be the main visitors.

[W] And just to show you how incredible these bees are, because we really do want to track this type of bee to our our habitat, because they're just super cool and incredible pollinators.

[W] So you can see here the leafcutter bees, they have huge mandibles or jaws, which they use to cut those perfect semicircular holes and leaves.

[W] And they'll take those leaf bits back to their nests to insulate their nesting cavities.

[W] And like we learned from Doctor Laura Moran earlier in the course, leafcutter bees belong to that hairy belly bee category.

[W] When you're trying to identify bees and they carry most of their pollen on the underside of their abdomen.

[W] So usually when you see leafcutter bees visiting flowers, they're doing a funny little dance on on the flower, trying to push all that pollen onto their abdomen to bring back to their nest.

[W] And just as a recap, to go over how leafcutter bees nest, so that leafcutter bee will bring the leaf bit to their nest, as well as the pollen they've collected on their abdomen, they'll create a pollen ball, which they will lay inside that cavity, and that pollen will act as the main source of nutrition for that single egg that's laid on that one.

[W] Pollen ball.

[W] Once that egg hatches and the larva develops, they'll use all that pollen and the pollen ball as their main source of food and develop as adult bees.

[W] And then once they become adults, they'll leave that cavity and take on the world.

[W] And because these are native bees that were attracting, like we've said many times in this course, native bees know what to do with the native landscape.

[W] You know, they've evolved, they've co-evolved with these native plants over tons and tons of years.

[W] And so if we leave out natural, natural materials such as stumps or bramble or sticks, the leafcutter bees and other native bees that will are cavity nesting will use these

materials naturally to make their home, and especially if we're planting native plants, you know, the native bees will see these plants and they know what to do.

[W] A lot of these plants have pithy stems, so they're able to actually nest inside those branches and twigs.

[W] And this is the best way to provide bees with habitat and places of shelter.

[W] So maybe over building a bee house or buying bee houses.

[W] Our main recommendation is to, you know, always plant more native habitat for native pollinators.

[W] And this will provide them not only with lots of nectar and pollen for food, but lots of nesting and overwintering opportunities as well.

[W] So habitats over everything.

[W] But if you do want to build a bee house as maybe something that's educational or fun, or to maybe observe the bees a little bit more closely, I'll go into a few key aspects that you must look for.

[W] If you do want to go the bee house route.

[W] And so probably the most important aspect is making sure that the depth of the tubes or tunnels in the bee house are at least 15cm deep, which is about six inches.

[W] You want the width to be about eight millimeters or less, which I think is 0.3in.

[W] So very tiny holes because there were attracting small bees.

[W] You know, we're not attracting the large bumblebees or larger pollinators to our bee houses.

[W] These are tiny, you know, small bees that will be visiting.

[W] So we don't need these gigantic cavities.

[W] You want to make sure that they're secured.

[W] So that way that, you know, the house doesn't fall and we keep those be safe and huge emphasis on making sure that the bee house is cleanable.

[W] So that way they don't, you know, get filled with pests and pathogens.

[W] Okay, so what you don't want, and this is a lot of these aspects we don't see in the big box store bee houses.

[W] A lot of them are lacking these main aspects.

[W] So definitely next time when you're out, if you are looking for a bee house, keep an eye out for these aspects because a lot of them don't meet the standards to satisfy a safe house.

[W] So a lot of the times we find that the, the tubes are too shallow.

[W] Now this is important because if the tubes are too shallow, it'll skew the sex ratio for those bees for future generations.

[W] So like I mentioned in our Q&A period last week, the female bees.

[W] So the bees are solitary bees.

[W] So each female is their own queen.

[W] She'll go into the cavity and lay the female bees at the very back, and then the male bees at the front of the cavity.

[W] This is because the male bees, as I mentioned before, are a bit more disposable.

[W] So if this cavity gets predated by a bird or some kind of mammal, those male bees are okay to get eaten.

[W] But the female bees in the box that do all the pollination they need to be kept safe.

[W] So if the tube is too shallow, it'll skew how many male bees versus female bees are laid.

[W] So you want to make sure that tube is at least again, 15cm or 6in in length.

[W] These are solitary bees.

[W] So we don't want too many tubes, you know, or cavities in this bee house because solitary bees, they don't really want to be nesting, you know, around too many other bees.

[W] So not you don't need that many tubes.

[W] Again, you don't want them to be too wide because they're small bees that were attracting.

[W] And a lot of the ones that we do see in big box stores, you're not able to clean.

[W] So year after year you're just accumulating pests and pathogens.

[W] And that's really a death sentence.

[W] If those newbies are nesting in there and then just getting parasitized.

[W] So here's a good example of a bee house.

[W] You can see it's nice and secure.

[W] It's got some overhang protecting it from precipitation.

[W] You can take out these wooden blocks and clean them.

[W] And really cool aspect about these ones too, is that you can observe them when they're being used.

[W] So you can see here as you get further to the back, you can see these, bees developing those larvae.

[W] And this would be a Mason bee using this one here.

[W] Because you can see sand and mud as the partitions between each segment.

[W] And yeah, so a really cool educational tool.

[W] If you do want to learn more about how native bees nest.

[W] Some examples of other bee houses that we've seen on the market that are maybe a better example than some of the other ones.

[W] So like the crown bees are probably a gold standard for the bee house.

[W] You can remove these blocks, the tubes are the cavities are a good depth, nice and secure with like this house, look to it so it keeps it safe.

[W] You want to make sure that the that one side of the cavities is always dark or capped off.

[W] And that's.

[W] So the bees are going in there and it's nice and dark for them.

[W] So you want to make sure that one end is capped.

[W] So if you do have these tubes here bundled together that you can clean or remove, you just want to make sure that you cap them on one end.

[W] And usually materials that we recommend are recyclable materials or pieces of cardboard, things that you can, you know, basically replace the following year.

[W] I've heard that bamboo is not actually a very good material.

[W] I think I just read that pretty recently because it's not porous and it causes bacteria and moisture build up too quickly.

[W] So this is a really cool illustration showing a bee house being used by three different types of bees.

[W] So these are the three bees that I mentioned earlier.

[W] We have the leafcutter bees using this top row here.

[W] Those are all the leaf bits from your your beautiful roses.

[W] In the middle.

[W] We have the carpenter bee and as their name suggests, they're really good at woodworking.

[W] And so the partitions are made of wood.

[W] And then in the bottom here we have the mason.b.

[W] And as their name suggests, a really good.

[W] With mud and dirt and sand.

[W] And those partitions, you can see they're made from that material from mud and sand.

[W] Okay, so like those good designs that I showed, you want to make sure that there's overhang.

[W] So again, protecting the Bee Hotel from any precipitation south facing is best.

[W] Basically, you want the bee house to have as much sunlight and warmth as possible in the morning hours.

[W] And that's so that the bees can get that heat to their wings.

[W] So that way they have they reach that temperature threshold so they can fly out of their nest and visit some flowers, a step that's often forgotten is providing food around the bee house.

[W] Because I've seen a lot of just bee houses on the side of buildings, but then there's just a whole bunch of concrete around.

[W] So making sure that your bee house is placed in an area where flowers are really close by, and that will also improve the likelihood of bees actually using your bee house to nest,

even providing other types of habitat like mud or sandy areas where other types of bees can nest is a good idea.

[W] And again, you want to make sure that it's secured to whatever surface that you're putting your bee house on.

[W] So that way it doesn't fall or shift.

[W] If it gets really windy.

[W] Maintenance is super important.

[W] And just as an example, if you don't maintain your bee house, it becomes a hot spot for things called pollen mites.

[W] So we definitely don't want to be doing this.

[W] The bees that we're attracting to our habitat.

[W] So a quick schedule.

[W] So early spring, you can put out your cleaned and empty bee house.

[W] And basically from spring to summer, you can just enjoy the bee house and see if anything visits late spring summer.

[W] You can see if these are using your bee house.

[W] You can see them hatching, eating pupating.

[W] And then it's the fall and winter time where you can remove those those cocoons you can clean and you can store.

[W] So here's a short checklist that I won't go into because I think I mentioned most of these.

[W] But if you do review the slides later, you can take a look.

[W] And we have a really useful resource on our website, this two pager that goes into pretty much everything that I spoke about tonight a bit more succinctly that you can use as a reference going forward.

[W] I do want to mention with bee houses, just the expectations, because I know oftentimes our houses don't get used or they get used by other types of insects, such as solitary wasps, or they become, you know, a home for beneficial spiders for our gardens.

[W] So just, yeah, I guess changing your expectations that maybe my house isn't going to attract certain types of bees, but it could be useful for bringing in other beneficial insects or spiders.

[W] And maybe one year it doesn't get used, but the next year it does.

[W] And, and if you do enhance it with building that native habitat around it, that'll increase the likelihood.

[W] But at the end of the day, again, building habitats is really good for bee nesting.

[W] And the bee house could be a really cool educational tool to see how bees nest.

[W] Okay.

[W] And with that.

[W] I'll stop there and we'll switch gears a little bit, and I'll pass things over to Maddie, who will talk about communication tips and tricks for us pollinator stewards.

[>> W] Awesome.

[W] Thank you so much, Anthony.

[W] I'm going to just take a quick second to get myself configured.

[>> W] All right.

[>> W] Okay.

[W] We are ready to get started.

[W] Well, I'm just really excited to be here this Tuesday afternoon.

[W] And I'm going to just go into a little bit more detail on how to expand on your amazing impact for pollinators and leverage your knowledge as a certified pollinator stewards to educate and inspire others to take action to support our our fellow wildlife.

[W] So I'll introduce myself again and my name is Maddie Dong.

[W] I'm the communications coordinator for Pollinator Partnership.

[W] I'm based in San Francisco, California.

[W] Coming to you live from our main office on Market Street.

[W] I studied natural resources policy and management at Oregon State, where my passion for community driven conservation initiatives was born.

[W] I've been a conservationist since as early as you can, you know, form thoughts.

[W] And now I get to support Pollinator Partnership doing my dream job, essentially, and at P2, I specialize in science communication and multimedia storytelling, and I lead our communications initiatives like our social media, our website, blog, and strategic outreach for conservation projects.

[W] So overall, I have lots of opportunities for public engagement.

[W] And my goal is always to try to introduce people to pollinators in general and the programs that we have to offer.

[W] So we're going to cover a number of important points today.

[W] One important to communicate importance of communication and outreach.

[W] Some tricks to communicating effectively, challenges to successful conservation communications and use of social media in your outreach.

[W] How to tell a story.

[W] And then we'll go into some examples of what kind of outreach you can participate in.

[W] And I know Anthony will be following up with a really great presentation on with more examples with.

[>> W] That.

[>> W] So let's get started by reiterating your goal as Certified pollinator stewards.

[W] So as you've heard many times, there's these two critical checkpoints in receiving your certification.

[W] One is your step one form.

[W] So just retaining the knowledge.

[W] And number two is your habitat and your outreach action.

[W] And so outreach is a really important part of receiving your certification for a reason.

[W] And so in this presentation, I'm just going to try to help contextualize what it means to share your knowledge and how to do it effectively.

[W] So pollinator outreach is really important.

[W] It allows others to learn about your pollinator conservation efforts and inspires others to act and raises awareness about all the issues that are just important to you.

[W] And I think most importantly, it helps build trust within your community.

[W] And so here's really the meat of this presentation.

[W] So here are some of my top tricks to communicating about pollinators effectively.

[W] And these are all things that I implement in really like everything that I do.

[W] You know, when I'm creating social media posts or maybe an event flier or really anything like that, or designing a web page or something like that.

[W] So we're going to go through this list.

[W] Number one is practice your elevator pitch.

[W] This is something that's going to hook your listener and give a succinct message that serves as the foundation for your outreach.

[W] And here's an example that I'll read out loud.

[W] Pollinators are a diverse group of animals, including bees, birds, and butterflies that pollinate many of our food crops and keep the landscape colorful and healthy.

[W] With blooming flowers.

[W] They are unfortunately facing many factors that impact them, including climate change and habitat loss.

[W] One of the best ways we can help them is by providing them with native habitat, so they have an abundance of pollen and nectar to feed on.

[W] So this statement answers, who are the pollinators?

[W] Why are pollinators important?

[W] What problems are facing and how we can.

[>> W] Help?

[>> W] Next, it's really important to know your audience, understanding your audience is about communicating in a way that resonates with them, and this involves getting a sense of your audience's demographics, needs, interests, and motivations.

[W] And something that I found really important is it's, it's important to assess kind of the level of knowledge that they might already possess about pollinators.

[W] And it helps like not avoid the, or it helps avoid the over explanation and, you know, telling someone what they already know, that's never fun.

[W] That always is kind of like a turn off to me.

[W] But again, being prepared for your audience just shows that you care and it helps build trust.

[W] Let's go over the concept of gateway bugs.

[W] When you're introducing others to pollinator conservation, you know, odds are they'll only know about two species, right?

[W] The monarch butterfly here on the right and the honeybees on the left.

[W] So both are essential pollinators for different reasons.

[W] I'm sure all of you can just name, you know, countless reasons why.

[W] But what these two species do is they serve as these charismatic gateway bugs in the realm of pollinator conservation.

[W] And they capture public attention and just foster awareness about the vital role of pollinators in ecosystems.

[W] And what they do is, is they just they draw people in and they're really powerful symbols for conveying kind of the broader challenges faced by pollinators worldwide.

[W] You know, like our native bees versus our honeybees.

[W] And now that you're a little closer to being certified pollinator stewards, you now know that honeybees and monarchs aren't the only insects making a difference on our landscape.

[W] In fact, there's really a phenomenal diversity of pollinating animals, right?

[W] So I always say start by talking about a familiar subject or pollinator, like a honeybee or a monarch, something that the audience might already know, and then dive into the nitty gritty.

[W] In conservation, there's a lot of stories rooted in tragedy, right?

[W] And so there is a really delicate balance of of avoiding doom and gloom messaging, because if you're hearing negative news all the time, it can really hinder our motivation to change or make a difference.

[W] And so it's important to highlight the successes and make it known that action is worth it for pollinators.

[W] And the people that you're talking to.

[W] And a good rule of thumb is to just stay away from extremes and ultimatums.

[W] Like if you don't plant this particular plant, then you are single handedly going to cause decline of all of your neighborhood flying friends, right?

[W] And I think avoiding doom and gloom can also take the form of acknowledging areas for improvement, right?

[W] So communicating lessons throughout a project, lessons learned throughout a project is really helpful, you know, not only just for the self-reflection, but also to educate, you know, your audience about the challenges faced throughout because you're aiming for progress over perfection.

[W] And I think acknowledging areas of growth and areas for improvement just increases the transparency.

[W] And again, the trust with your audience.

[W] Next, make a call to action.

[W] This is always going to vary depending on exactly what you're trying to communicate, but your messaging should always conclude with asking your audience to do something and communicate how completing that call to action furthers your own goals.

[W] This could be, you know, making a donation, volunteering with a community garden, or committing to implementing a particular practice or something in their home garden.

[W] And it's really important to make these calls to action just clear and simple to avoid the decision paralysis and any confusion.

[W] It's also imperative that your message to your audience is rooted in science and leaves room for collaboration and feedback.

[W] I think the first best practice here is to just stay specific and avoid over generalizations that might lack scientific power saying, you know, like all butterflies are going extinct or even all pollinators are in decline because that's not necessarily true.

[W] And you can always visit an organization's website, you know, for information and facts about pollinators or any, you know.

[W] Likewise, wildlife that's accessible to read and share with others.

[W] Another good tip is, you know, staying on top of the latest science to just do your best to be aware.

[W] I like to we have like Google, the Google news alerts, you can set a couple of keywords and those are really helpful for seeing not only the new science, but like kind of just seeing like the media hits about the topics that you're interested in.

[>> W] Oops, sorry.

[>> W] And lastly, attend webinars or workshops held by organizations to learn more about the conservation issues that you're interested in, just like you're all doing right now.

[W] And like I was saying in my call to action slide, we, you know, want to make sure that these actions are encouraging people to take actions that are realistic and, and attainable.

[W] And so we like to emphasize that small actions make a really big difference because it's true.

[W] You don't have to start a whole nonprofit or host an elite fundraising gala to make an impact.

[W] And, you know, some of these examples are examples of not doing something, which is even easier.

[W] So I'm not going to read all of these, but you can see they, I just think that it's important to provide a range of different kinds of actions depending on your audience at hand.

[W] You know, if you know for a fact that none of these people are going to have like ample space to, to create habitat, maybe a different activity or a different lesson could be learned.

[W] Like with anything successful, pollinator outreach comes with challenges.

[W] You know, limited awareness beyond these common misconceptions, like fear of stinging insects, barriers to accessing resources or locally relevant information.

[W] And it takes time and lots of practice to make an impact.

[W] And not every approach is going to resonate with everyone.

[W] But at the end of the day, meaningful interactions and consistent exposure to your topic at hand are just what matter most.

[W] So addressing fears with clear, accurate information like, you know, half of our native bees can't really sting.

[W] It helps build trust.

[W] And lastly, just it's, it's essential to give people a clear next.

[>> W] Step.

[>> W] Ensuring that they have the tools and the resources that they need to turn their newfound interest into real action.

[W] I like including this example in this presentation.

[W] So this was a project that I worked on last year with some of our P2 staff and external partners, but it's called trope stop.

[W] And so for those of you who aren't already aware about this pest.

[W] A lapse or otherwise known as trope for short, they're an ectoparasite of honeybees that cause colony loss and a lot of the same symptoms as Varroa.

[W] And but they're not yet found in North America.

[W] But we, along with our partners, received some funding to conduct some targeted outreach in the beekeeping community to prepare them for this potential incoming pests that could greatly impact their hives and their livelihood.

[W] And so I bring this up because I think it's a it's a good example of how I just needed to use every tool in my toolbox in order to carry this out effectively.

[W] It's a really good example of just really strategic communication and outreach on this pollinator topic.

[W] And it turned out to just turn out to be tricky because like I mentioned, I don't want to lead with the doom and gloom, but in this case here, you're trying to balance the urgency with also a lot of empathy.

[W] And so what I found helpful was just to prepare as much as I could ahead of time about how I was going to talk about triple A lapse.

[W] So the first thing I did was assess my audience.

[W] And in this case, this was a beekeepers association.

[W] So it was like a monthly club meeting.

[W] And so I assessed my audience.

[W] They they were all beekeepers.

[W] I am not a beekeeper.

[W] They knew a lot more about beekeeping than I did.

[W] So I just tried to tamper.

[W] You know, that part of me that was like, you know, do this, don't do that.

[W] Look on this website, don't look on this website.

[W] And, you know, coming off as, as knowing, you know, more than thou, which is just not the case.

[W] And I made sure to just only present the hard facts about the mites biology and how it has impacted colonies where it is currently found in overall, I just found it really helpful to just approach this with lots of empathy.

[W] I think that's honestly a huge trick that I should I should put in there for next time.

[W] Just a whole slide on empathy.

[W] But I found it really helpful to frame this issue just as something that we can tackle together.

[W] And I consistently, you know, restated where to find more information.

[W] The most up to date information because you just never want to leave your audience hanging.

[W] Next, I'm going to actually, I'm going to talk about where and when I can use these tips.

[W] So we have, you know, we're now you're asking yourself like, okay, I know, what are some tricks I can use for, for communicating pollinator topics, but where can I implement all of these?

[W] So I'm going to take you on a little tour of some, some places and opportunities where you can implement these tricks.

[W] So I'm going to start with social media, but no fear.

[W] I'm not trying to convert everyone into the influencer land, but I think creating and posting on social media is just a really, it's a really popular way to communicate about the topics that you're interested in.

[W] And it's also a really great place.

[W] It's really easy to share things, right?

[W] That's like a huge appeal.

[W] It's so easy to share with your friends this article that you saw or this meme that you thought was relatable, right?

[W] And so, yeah, I just, I wanted to include this as like an option for folks.

[W] If you're, if you're into social media outreach and communication, I think it's a really fun way just to showcase the awesome beauty of, of, of pollinators and habitat.

[W] I found that using high res images and talking specifically about on the ground work to promote pollinator health and habitat have been really, really helpful in just expanding our reach.

[W] And with, with social media, I think it's also important to talk a lot about or to talk about storytelling because it's such a powerful tool that can empower individuals to just make a positive impact.

[W] Right?

[W] And it's really useful when we're talking about beings, you know, other than humans, right?

[W] By weaving the scientific and the cultural narratives together, you can really increase empathy towards bees and pollinators or conservation in general.

[W] And you can kind of think about building a story like we do, like in middle school, there's act one, the setup, act two, the confrontation, and act three, the resolution.

[W] And you can kind of read this example that I have about one of my favorite butterfly host plant relationships, the Fender's Blue Butterfly and Kincaid's lupine.

[W] And what this really serves is, is being able to craft a bigger picture and bridging the gap between unfamiliar topics to more relatable ones.

[W] And I think storytelling can just have the ability to humanize, humanize pollinator issues, making them relatable and tangible to a global audience while also aiding in your trust building efforts.

[W] Outreach events are another awesome way to just get in front of people and talk about pollinators and habitat.

[W] It just kind of promotes a friendly discussion environment, something that I like to do is to start off by asking, asking my audience what they know.

[W] Do they have a garden at home?

[W] Have they seen any bees?

[W] You know, in the early spring yet?

[W] Or in California, we get, you know, monarch butterflies, the Western population.

[W] And so I always ask I always ask kids if they, you know, seen any monarch butterflies this year?

[W] And it's also a really great opportunity to provide, you know, handouts, brochures or any resources that they can take from your table.

[W] And remember you later.

[W] And a tip is you can find a lot of these local events through like your city or municipalities website.

[W] Usually they'll have like an events calendar or maybe a neighborhood forum or even social media too, to find events like this that you could either just attend as, just as an attendee or, you know, as a, as a Tabler or exhibitor.

[W] Gardens and habitat signs are another really great way to implement these tricks.

[W] I think garden and habitat science, they just what they do is they make the habitat more visible and understood.

[W] You don't really have to do anything.

[W] You just stick it there and it it educates visitors year round and, and ideally, they're quick to read at a glance.

[W] And so we have a couple on our website that are totally free for download.

[W] That's definitely an option.

[W] Or you can like join our bee friendly gardening program and you have access to a sign.

[W] I think you guys saw a presentation on BFG earlier, but yeah, garden habitat signs are another awesome way to just expand your impact and pollinator week.

[W] Pollinator week is coming up in June.

[W] It's June 22nd to 28th, and it's just a really great way to concentrate pollinator activities.

[W] And you can add them to our activities map that we have right here, all available on our website.

[W] You can share, download and share the logo or even check out our latest poster that we just announced on Monday.

[W] Community science is another really awesome way to kind of see what else is out there.

[W] And each year, the NAPPCC Pollinator Communications Task Force that I run runs a pollinator week BioBlitz on iNaturalist to just encourage a surge of observations that contribute to scientific research.

[W] And it's a really fun way to just get people outside and playing Pokemon Go with pollinators.

[W] Last year, the BioBlitz collected more than 6000 observations, and that number keeps climbing every year.

[W] So I encourage you to scan that QR code and and take it to this year's BioBlitz and and participate coming up in June.

[W] So that's really all I had for my presentation.

[W] Here are some key takeaways.

[W] Certified pollinator stewards play a really crucial role in disseminating pollinator knowledge that's grounded in science.

[W] Effective communication includes knowing your audience, avoiding doom and gloom messaging, making a clear call to action, and providing realistic examples of positive change.

[W] It's important to meet people where they're at, acknowledge gaps, address misconceptions with empathy, and build understanding in a way that empowers them to take action.

[W] And lastly, continue the conversation by providing accessible and shareable resources to your audience.

[W] And thank you so much, and I'll pass it back to Anthony.

[W] And we can do questions at the end.

[>> W] Amazing.

[W] Thanks so much, Maddie.

[W] Okay, now I will get into some habitat and outreach examples from our current and past pollinator stewards.

[W] So I'm hoping that some of these examples will inspire you for your, you know, step to's to help complete your certifications.

[W] And then after these slides, I'm really excited for you to hear his story and her pollinator journey.

[W] Okay, so let's get into it.

[W] So here are a few examples of habitat work, large and small.

[W] Again for the habitat.

[W] Requirement for the certification.

[W] There's examples that show habitat on such a large extent, but there's also examples that show it on a super small scale as well.

[W] And both are effective and both are welcome for your your step two.

[W] So on this slide here we have Beth Ames who planted.

[W] Three acres of wildflower meadow, which has become a community attraction, which is in the left picture there.

[W] Krystal Bredow started a movement in her county by challenging every one of 60,000 residents to include at least one native plant in their garden, and Krystal's garden can be seen there in the bottom right, and Adam Barnes founded a volunteer stewardship group called rewilding and created ten pollinator gardens on public lands as a part of the one kilometer Pollinator Pathway initiative.

[W] So his team organized a plant giveaway distributing 900 native plants in his community.

[W] And so Adam's picture there can be seen in the top right.

[W] Okay, so then we have neighborhood cities and public spaces.

[W] So Jean McRae, who is seen in the bottom picture there, grew and distributed 10,000 locally adopted native plants around Mississauga, Ontario, while providing more than 30 free workshops on planting, propagation, pest management and pollinator conservation.

[W] She led volunteers in the creation of 50 new pollinator gardens, bringing Mississauga's total number of pollinator gardens to 310 and counting, which is incredible.

[W] And then in the top picture, we have Mary Bernard and Dennis Durkee.

[W] They're co-chairs of a Pollinator Garden committee of Texas master naturalists, in cooperation with the Big Thicket Biosphere Reserve, the committee has been establishing

pollinator gardens in several public places across Jefferson, Orange and Hardin counties in southeast Texas.

[W] They're also advising schools and other local groups who are starting their own pollinator gardens.

[W] So here are some examples of outreach.

[W] So Chloe Markovitz seen in the top left picture, a landscape horticulturist and horticulturalist in Seattle has made pollinator protection a signature part of her landscape design and business.

[W] So she makes supporting pollinators easy for her clients by teaching them how to identify and protect habitat sites for ground nesting bees and avoiding pesticide use.

[W] She's also taken to social media, spreading the word to 200,000 people on Instagram and TikTok.

[W] Dolly Richards, seen in the top right, hosted an open house plant party event on her property, inviting local plant enthusiasts, businesses, beekeepers and students to exchange native plants and connect over conversation in her pollinator garden.

[W] We have Christine in the bottom right who coordinated a getting Personal with Pollinators events attended by over 50 people, where she led an observational workshop about pollinator diversity in Vancouver, and then Stephanie Espinosa Garcia used information from the Pollinator Steward Certification program to make infographics about pollination, ecology, and stewardship to display in her garden and her infographic can be seen here.

[W] On the slide in the middle.

[W] All right.

[W] So many of our stewards are teachers or educators involved in school communities and take their habitat and outreach work to campus.

[W] So this is a really great way to teach the younger generations about just how important pollinators are.

[W] So examples of doing pollinator related activities in schools include building school gardens, connection and, you know, teaching the students about connections with flowers and food and pollinators.

[W] And that's really important.

[W] Also, pollinators arts and crafts is a really popular one that we see in the step twos.

[W] And so I love this picture here drawn by one of the students.

[W] And it says, clean your room, not your yard.

[W] Pollinators love messy gardens.

[W] And I think that is amazing.

[W] Okay.

[W] And then we have community connections.

[W] So Cathy Stevens, I using resources from PSC to select regionally appropriate native plants for multiple corporate habitat enhancement projects.

[W] And in Ohio.

[W] So she presented to her 180 person team during pollinator Week and spearheaded the creation of the Sustainable Synergy Newsletter to promote green collaboration within her organization.

[W] Christine Kirk Giltner collected pollinator population data for the Idaho Bee Atlas, observing native pollinators and bumblebees on her property and around Idaho.

[W] So Community Science Initiative and Alfred and Nelly Gonzalez collaborated with their university research unit to celebrate World Bee Day with talks and workshops focused on native bees.

[W] Emily Bourke organized.

[W] This is a cool and organized.

[W] The miles for monarchs five K to spread the word about threats to monarchs and how to help.

[W] So a local run.

[W] And finally, Mark Cedar partnered with the Townsend Riverwalk and Arboretum to create five different pollinator gardens with educational signage and conducted massive invasive species removals.

[W] So I hope those examples helped inspire maybe some future action that you're going to take to help complete the certification, but also just further along in your pollinator journey and maybe a low hanging fruit.

[W] Here is the Wild Ones organization.

[W] And so I'll just do a couple slides on wild ones because they have a ton of chapters and would be a really easy way to get your activities done by maybe joining one of these chapters.

[W] So Wild Ones is a national network of local chapters focused on native plants and habitat restoration.

[W] So across more than 100 chapters and over 13,000 members, people are working in their communities to restore biodiversity, support pollinators and create healthier landscapes.

[W] So Wild Ones is grounded in hands on education and local action.

[W] People are applying that knowledge through habitat projects, outreach and community based work.

[W] Wild ones promotes native landscapes through education, advocacy and collaboration, and provides a supportive network for people at any stage.

[W] Whether you're just getting started or already doing this work.

[W] Oops.

[W] So there are two main ways to join Wild Ones, and I have seen this in previous pollinator stewards step twos, you know, folks joining wild ones and getting involved with their community.

[W] So the first is to volunteer with a local chapter.

[W] Chapters are already doing education and outreach, outreach, hosting events and leading habitat projects.

[W] You can step into that work right away, whether that's helping with the workshop, supporting access to native plants, or getting involved in restoration efforts.

[W] If there isn't a chapter near you, you can even consider stepping into a leadership role and starting one for yourself.

[W] So I'll put up the link to Wild Ones on our course information page for you to check out.

[W] When you're reviewing the all of our resources and recordings.

[W] And I just want to end off here by saying that, you know, by installing habitat in your yard and beyond, we are creating that connectivity across the landscape that wildlife so desperately needs.

[W] And it doesn't matter how big or how small your space is.

[W] Again, going back to this amazing balcony example from one of our previous sessions.

[W] Even a balcony garden with a few potted plants can really make a difference to your local pollinators, because some of those pollinators their entire life can be, you know, just a few feet away from your, your house or your balcony or your garden.

[W] So you really are providing those pollinators with, with everything they need to survive.

[W] And I like to end off with this slide just showing where the pollinator stewards are around the world.

[W] There's so many stewards out there, especially in North America and scattering across the world.

[W] And every single one of them is doing something in their community to make a difference.

[W] And I just think that is incredible and inspiring and amazing, and I'm really looking forward to seeing all of your points up on this map.

[W] Once you complete the certification.

[W] So I'll end there.

[W] And now I'm really excited to pass things over to Anya, who will tell you a bit more about her pollinator journey.

[>> W] Hi everyone.

[W] I'm gonna see if I can figure out how to do this.

[W] Are we good?

[W] Anthony?

[>> W] Looks good.

[>> W] Okay, great.

[W] Hi, everyone.

[W] I'm Anya.

[W] As Anthony said, I'm a graduate of this course as well.

[W] 2020 class of 2024.

[W] Congrats to all of you.

[W] This is no small feat and this is just incredible that you've gotten to this point both for interest and for educational purposes.

[W] Before I jump into my garden, I just wanted to and how I use this course.

[W] I just wanted to give some background on myself.

[W] I always start off with a land acknowledgment.

[W] I live on Susquehanna land in the northeast of the United States, along the shores of the Susquehanna River.

[W] I'm in a little town called Marietta in Pennsylvania.

[W] My story starts in Lithuania with my great grandmother, who you can see there in that picture.

[W] My great grandparents immigrated to the US during World War Two, and my grandmother became a master gardener.

[W] I spent a lot of time with her as a young child, so, you know, she kind of started my love of pollinators and gardening and ecological earth care, gardening also always feels bigger to me.

[W] I feel like I'm a part of something that really matters, even if it's like one sad, failing tomato plant or one black eyed Susan or something.

[W] It just feels bigger to me.

[W] Like I'm really preserving something for the future of this planet.

[W] And just even my Wii plot of land, you know, can, can contribute to something bigger, better than what we have now.

[W] You know, I you don't like Maddy said, like Anthony said, you don't need 700 acres of land to make a difference.

[W] It's awesome if you have that, but it's not a prerequisite.

[W] It's not something that you have to have.

[W] You can have a bucket and a balcony.

[W] You can have a windowsill.

[W] I mean, it's, it's, you can start wherever you are.

[W] And that impact is going to be everything to some of these pollinators.

[W] And as this climate crisis gets worse and worse, a lot of people have said to me like, why care?

[W] Why bother?

[W] Like it's all going to be gone within a few generations anyway.

[W] But boo!

[W] The answer is why care?

[W] It's because we live here.

[W] This is our earth.

[W] This is our home.

[W] This is our planet.

[W] And you know, I've seen some pictures of the Artemis from the Artemis two expedition.

[W] And how can we not be inspired?

[W] This is our home.

[W] She's beautiful.

[W] So every plant you plant, every pollinator you provide food for every habitat.

[W] You create matters.

[W] You know, I have neighbors.

[W] I live in the suburbs.

[W] I have neighbors who love their chemicals.

[W] But where are all the lightning bugs?

[W] In my yard.

[W] So, you know it.

[W] It creates magic and wonder.

[W] And it's, you know, it's it's our home.

[W] This all matters.

[W] So this is just kind of a, this is where I live.

[W] So you can kind of see in the big scheme of things where I'm at.

[W] So now we'll get into the fun stuff.

[W] So this is okay, there's pictures.

[W] There we go.

[W] So as you can see, this is my home.

[W] When I purchased the property in 2022, there's a lot of monoculture.

[W] There's a lot of grass that's not native or really beneficial.

[W] There's also some shrubs that are they've seen better days and they're also, I don't remember what they were, but they were not native species to our bio bio region.

[W] So the bottom two pictures are from last summer, as you can see, it is very biodiverse.

[W] I have things in planters, I have natives, I have ornamentals, I have potted things, I have experiments, I have as my husband likes to call road weed.

[W] They're native plants.

[W] You can also see that I have this pond down here that was part of my project for my my.

[W] Step two as.

[W] And I think I will talk about that a little bit later, but I will I could talk about this forever.

[W] So just bear with me.

[W] And again, I just want to let you guys know this took years like this did not happen overnight.

[W] As you can see, like in this area, we killed off some some grass and created habitat.

[W] I got a our neighbors were cutting down a pine tree and I asked if they could dump the woodchips and yes, it turns out they can for \$0, the wood chips may or may not have almost blocked my street, but that's fine.

[W] It turned out fine.

[W] And now we have a beautiful.

[W] I call this our meadow.

[W] It's small, but doesn't matter.

[W] Size doesn't matter.

[W] So this is the front part of the yard.

[W] That's adjacent to the sidewalk.

[W] And the street.

[W] This is a very popular walking street in my little town.

[W] And I wanted to be able to have people interact with my front garden.

[W] And what I mean by that is I wanted them to be inspired.

[W] I wanted them to stop and, and look and oh, what's that?

[W] Oh, I haven't seen that before.

[W] Maybe if I'm out, which I'm out a lot in the warmer months, just walking around and observing.

[W] And I think that's a really underrated thing to do in our gardens.

[W] Again, whether it's a pot and a couple seeds and plants or whether it's 700 acres, I think observation is crucial to having that relationship with your land and your garden and the pollinators and all of that.

[W] So this is what it started off as.

[W] It was grass there.

[W] There was no way that I was mowing that.

[W] Absolutely not.

[W] So immediately, that was our first project in trying to convert that.

[W] So this is what it looked like last summer.

[W] Again, I have natives, I have roses, I have hosta, I have daylilies, so this is these are very esthetic images.

[W] My garden does not always look like this.

[W] The sun is not always shining like that, but it is a fun memory.

[W] To have these pictures, especially on Rainier days or on a day where I'm thinking, oh, why do I do this?

[W] And I need to re-inspire myself.

[W] These are certainly fun images to look at, to look at.

[W] I also have to say that I'm.

[W] I'm not a native plant purist.

[W] I understand as you guys do too.

[W] The benefits of native plants and what that does to our native pollinators.

[W] So yes, I like to focus on native plants.

[W] That said, I love peonies.

[W] I love roses, I have these day lilies, those golden daylilies.

[W] That's kind of my nod to what was there before me.

[W] They came with the house and I, I kept them.

[W] I also have lavender and herbs.

[W] Some of those are not native and that's it's okay.

[W] They still are beneficial to all pollinators, even if they're not as beneficial.

[W] So I know some people freak out about non-native versus.

[W] Native and I'm not a purist.

[W] That said, I don't ever want to see English Ivy.

[W] I'm joking.

[W] That's too much.

[W] But you know, there's a time and a place for every for every plant.

[W] So these are a few more pictures.

[W] This is more of my outreach.

[W] That's my dog.

[W] His name's Reginald Leroy Peters.

[W] The second he in a prior life, he probably wore a monocle in this life.

[W] He wants to tell you about wildlife, habitat.

[W] And then I created a little.

[W] Bug cage here.

[W] This is like a little.

[W] Call it my habitat barrel, but it's where I put all my clippings and I don't move it.

[W] I'll add to it as it, you know, compresses over the years, but I don't it stays right there.

[W] Bugs are welcome.

[W] As you can see up here, we have a little friend who nibbled on my carrots.

[W] He really didn't take a whole lot.

[W] I know.

[W] And I'm.

[W] That said, I'm very lucky.

[W] I do live in the suburbs where deer are not problematic.

[W] And I do know that sometimes these wildlife can can become problematic.

[W] But where I live, it's not.

[W] And this little guy trimmed my carrots for me.

[W] We had a pretty decent relationship.

[W] And then just another picture of of the pond, the meadow.

[W] As you can see, it started off small, you know, that was its first year.

[W] And then I have some veg growing here and now even this year I'll have to update pictures.

[W] This whole corner is pretty much garden.

[W] So, you know, I think it's it's hard to not play the comparison game, but your garden doesn't have to look like anything.

[W] The only thing it has to look like is what you want it to look like.

[W] Do my neighbors love that I leave the leaves?

[W] Probably not, but I did get my other neighbor to start leaving some leaves.

[W] So baby steps.

[W] That's what it's all about.

[W] But I don't care.

[W] Honestly, I know what I'm doing for the soil, for for native habitats, for the plants.

[W] And it's I love the question, how do you make it look like that?

[W] I don't do a whole lot.

[W] I once had a had a farmer tell me that the lazier you can be at gardening or farming, the better.

[W] You're probably doing.

[W] Now, is that an over generalization?

[W] Absolutely.

[W] But in terms of leaving the leaves using a method of chop and drop, when you do weed, you know you can return some of those nutrients to the soil instead of just depleting everything.

[W] So here are some of the food and herbs that I'm growing.

[W] It may be a complete list.

[W] It may not.

[W] You can see here some of my quail eggs.

[W] Anybody who's familiar with quails knows how incredibly entertaining, but really, really unintelligent they are comically unintelligent.

[W] I have some raspberries down here and then these are not my service berries, but I do have some service berry shrubs planted that hopefully will produce fruit soon.

[W] Again, I live on less than an acre of land and that includes my house.

[W] So it's not like I have tons of space to do this.

[W] Here's some of the native plants that I'm growing.

[W] Here's a bouquet from last year.

[W] I actually offered this bouquet to the neighbor across the street and she said, no thanks.

[W] So I'm putting a hex on her house.

[W] I'm kidding, I'm kidding.

[W] But that was that did throw me for a loop.

[W] I talked about that a lot.

[W] As you can see, there's native plants in here.

[W] There's herbs.

[W] And there's also non-natives because it's all beautiful.

[W] So here's what I did with my Pollinator Steward certification.

[W] I got my permaculture design certificate.

[W] I became a master gardener.

[W] I got involved in bee friendly gardening, which is another part of pollinator partnership, and I started my own business.

[W] It's not my full time gig, but it sparks a lot of joy.

[W] And that's what I think.

[W] Gardening.

[W] I don't even want to give it a percentage, but I do think that it needs to spark joy.

[W] It certainly sparks joy for me.

[W] And if it doesn't, I need to change.

[W] I need to do something to change it, to spark joy.

[W] So with that pond area, we took the dirt out and by we, I mean my husband dug the the pond, I dumped it and we created like a hugelkultur adjacent, like serpentine, like mound on the far side of the yard.

[W] And my goodness, okay, some of my timers.

[>> W] Went.

[>> W] Went off.

[W] Okay.

[W] And we planted in there and I, that was my first experience with like freshly tilled, really good soil that had been aerated and was very healthy.

[W] Things grew like that.

[W] And by things I mean things we planted and things we also did not plant.

[W] So that was fun.

[W] The other reminder that I want to tell you guys is that it doesn't have to be hard.

[W] I f around and find out, for lack of a better phrase, all the time.

[W] It's one of my favorite things.

[W] This year I planted some tomato seeds and pepper seeds and buckets outside and covered them with plastic in like February, just to see what would happen.

[W] Spoiler alert nothing.

[W] They didn't grow.

[W] And you know what?

[W] That's cool.

[W] Now I know that I have this little book that I carry around with me.

[W] I mark the last time I saw the frogs in my pond.

[W] I marked when I planted certain things.

[W] I'll mark observations.

[W] For example, last year I marked that I saw the first frog emerge of the year in March.

[W] March 16th, 2025, and the next day we had our first thunderstorm.

[W] This year I saw the frog emerge on March 6th and we had our first thunderstorm the next day.

[W] Is there a pattern?

[W] Maybe.

[W] Is there a correlation?

[W] Maybe.

[W] Is there causation?

[W] Maybe, I don't know.

[W] It's fun.

[W] So while science is important, you know, I'm not writing a dissertation on it.

[W] I'm observing.

[W] And observation is part of science.

[W] So let me see.

[W] I think that's it.

[W] That's what I did.

[W] I really appreciate you guys having me here.

[W] Anthony.

[W] Thank you so much, Maddie and Avery too.

[W] That's what I did.

[W] So yeah, I'll turn it back to Anthony.

[>> W] You made me laugh so many times during that presentation.

[W] Yeah.

[W] I love listening to you speak.

[W] And it's been such a pleasure, too, because you took PSC in 2024.

[W] And so when I initially saw your step two activities, I got to see your initial garden and things.

[W] But seeing the evolution of it now in 2026 is just really satisfying.

[W] So thanks for being here with us tonight.

[W] And very clearly everyone loved your presentation in the chat there.

[W] Okay, everyone, I have a few logistical slides about the steps one and step, step one and step two.

[W] And then we'll get to our Q&A.

[W] So I'll take over the screen one last time.

[W] Okay, so let's very quickly go over the steps to certification.

[W] And we will also send this to you by email afterwards.

[W] Okay, so the next steps.

[W] So we'll be sending you the step one form this week.

[W] And this form must be completed by December 31st 2026.

[W] So this is a summary form.

[W] This is where you're putting in your notes.

[W] I can show you what it looks like right here.

[W] So this is what the form looks like.

[W] Copy and paste the notes that you've been taking and put them right into the form for each live session and submit it.

[W] It's as simple as that and we can't wait to see what you've learned through this course.

[W] You can also send me pictures of your notes if you took them by hand.

[W] You can just summarize your notes in a few sentences on a few key things that you learned.

[W] It's really just supposed to be simple, and we just want to see, you know, a couple of things that you learned from each session.

[W] Okay, so you submitted that to us.

[W] Then you're on to your step two habitat and outreach activities, which I hope you've been inspired to do from tonight's session.

[W] This is due September 30th of next year, 2027.

[W] So you have tons of time to get your work completed.

[W] So once you've done that and you submitted that step two form which looks like this, so you'll just put a little bit of information about your habitat work, some pictures, some information about your outreach work, and you'll submit that to us.

[W] Best part of this job is reading about your activities.

[W] It brings us so much joy to see all the great work you're doing.

[W] So once that's submitted, we'll send you your official certificate.

[W] We'll send you a link so you can sign up for the free PSC pin that I think some of you saw in Maddie's initial slide.

[W] And then you're fully certified and your pollinator stewards now at Pollinator Partnership, we the course doesn't end there.

[W] You know, like we want to continue to engage with you.

[W] We want to continue to help you with your pollinator journey going forward infinitely.

[W] So once you're fully certified, you'll get access to bonus webinars, which we're, you know, continuously doing year after year.

[W] You'll get notified for those, you'll get notified about special events happening at pollinator partnership, access to our PSC Facebook group where you can connect with, you know, thousands of other people at this point who have taken the program and make local connections there.

[W] And first, to hear about new resources that we have to help pollinators.

[W] So again, we really want to help you continue to help pollinators even pass this program.

[W] That that means a lot to us.

[W] And one final wrap up.

[W] So again, the step one form will be sent to you in an email this week.

[W] With all this information recapped for you.

[W] And all the information is also on the course info page.

[W] But if you need help.

[W] You can reach out to us at stewards at pollinator Dot and a big congrats because you have now all completed the first part of your Pollinator Steward training.

[W] So let's get to some questions in the final 20 minutes here.

[>> W] All right.

[W] Thank you so much, Anthony, Mattie and Anya, these presentations are some of my favorite in the course.

[W] And I know my screen is off, but I'm in the background just smiling and grinning and laughing the whole time.

[W] So thank you so much for your knowledge and enthusiasm that you bring to this course.

[W] So our Q&A is going to switch off between questions for Anthony about bee houses, questions for Maddie, about outreach, and questions for Anya, about actual implementation.

[W] So let's start with some bee house questions.

[W] How high should you hang your bee house?

[W] And what is the preferred method of sanitizing a bee house?

[>> W] Yes.

[W] So in terms of height, I think I level is good, you know, not too low or it'd be easily predated or not too high or you can't really reach it.

[W] But my level is good and sanitizing or cleaning.

[W] I think there's many methods out there that you can probably Google, but the one that I first saw was using like, like a light bleach to clean out the bee house.

[W] But again, like if you can remove those tubes and completely replace them, that's probably best.

[>> W] Excellent.

[W] Now for Maddie, we talked a little bit about honeybees and monarchs as gateway insects, but do you have any ideas for other kind of charismatic gateway bugs that people can suggest, maybe on like a regional basis or charismatic?

[W] Bugs?

[>> W] I really think that your gateway bug can it, it can be any bug that you love.

[W] It can be your favorite insect.

[W] Even bumblebees are always a really great one because they're big and fuzzy and noticeable on the landscape.

[W] But then maybe I would also challenge you to maybe try using maybe like something like a pasta as a gateway bug, like, like yellow jackets are always a good one because especially with kids, because they can, they ID the yellow jacket as, as soon as possible

when they see your display, because they say that is what goes after my hamburger and makes my arm hurt.

[W] And so I think honestly, coming at pollinators from like any angle really, really work.

[W] As long as you are just like passionate behind it.

[W] But bumblebees and hummingbirds are a great one too.

[W] And yeah, I mean, any pollinator can really be a gateway bug, but I think those two are.

[>> W] Good.

[>> W] Yeah.

[W] Finding something you are passionate about and spreading that passion as a gateway for more learning is always a great suggestion.

[W] Thank you Maddie.

[W] Now, Anya, can you talk a little bit about where you sourced all of the amazing plants and seeds in your garden?

[W] We had a lot of questions in the chat about like community seed networks and all different ways to acquire seedlings.

[W] Any thoughts?

[>> W] Yes, Yes, so many thoughts.

[W] I was reviewing the chat afterwards.

[W] I have to stay focused.

[W] Otherwise it's it's too much going on at the at at once.

[W] I get a lot of mine through Facebook, Facebook marketplace.

[W] I do a lot of seed swaps or plant swaps.

[W] I saw a lot of people suggested that like your local university extension or if there's like a Master Gardener program or whatever.

[W] Also, just like any gardening enthusiast will be like, I'm splitting 72 plants next week.

[W] Pop by and pick any.

[W] And then they mean that like they actually want you to come take plants.

[W] They probably will even have them in pots for you because that's something we also hoard.

[W] So that's fun.

[W] So I would definitely recommend that.

[W] And, but Facebook has been the primary place that I go.

[W] The other place that I go is like Lowe's or Home Depot have like their death row of plants.

[W] You know, they're like this, this plant is trash.

[W] And it's not, it's just simply not blooming at that moment or hasn't been watered for like 47 weeks, but a lot of those, like plants are so resilient.

[W] The will to live is incredible.

[W] So their plants for like a dollar, \$2, I'm certainly not made of money.

[W] So a lot of my plants are rescue plants.

[W] Luckily, my grandmother is a master gardener.

[W] So she's like, I'm doing this, I'm doing this, take this, have this.

[W] And now I, I get to pass that on.

[W] So now I'm the person who's like, I'm doing this, I'm saving this.

[W] I have 72 milkweed seeds.

[W] Come get them.

[W] So that's what I'd recommend.

[W] Check out Facebook if you're local, message me.

[W] I put my website in the in the chat.

[W] I have stuff for you guys.

[W] I'll figure out if I can ship it.

[W] I don't know, let me know what do you guys want?

[>> W] So yes, that's what I'd recommend.

[W] You are awesome.

[W] That is such a kind offer.

[W] And I think that we can all just echo the gardening community and the community of people who care about pollinators are an empathetic group of people who want to support one another.

[W] So connect with your communities and local resources.

[>> W] You ship up to Yellowknife on you.

[>> W] I don't know, when do you guys get summer like September?

[W] Or is it already starting to be like winter at that point again?

[W] Yeah, yeah, let me know.

[W] I'll ship it with a heat pack.

[W] Absolutely.

[>> W] All right.

[W] Back to the beginning with B houses.

[W] Is there any worry about B houses getting too hot if they're south facing and getting like too much sun exposure?

[>> W] That's a really good question.

[W] I'm actually not too sure because I live in a very cold climate, so getting too hot is never something that's on my mind.

[W] But I can look into that.

[W] And I guess in that regard, I would recommend planting the native habitat as opposed to doing the B houses, because that's what the bees really want, is the is the habitat that they're familiar with.

[W] And that'll provide them with the natural shade that they need.

[W] Maybe if you do have a bee house, like trying to provide, maybe don't put it on the south facing wall or one that gets too much sun, then maybe you can get away with putting it on in an area that has more shade.

[W] But yeah, so I guess it is like case by case basis in terms of what your climate is.

[W] But generally, I think making sure that the House gets that morning sun is important for the bees.

[W] But again, I guess even if you Google it, there's I'm sure there's like a Reddit thread where there's people with bee houses in your area that have had success or failures.

[W] And like Anya mentioned earlier, it is a lot of trial and error with anything to do with pollinators.

[W] So yeah, I would give that a try.

[>> W] Awesome.

[W] Thank you.

[W] And I am just going to do one more question about bee houses for now.

[W] Should they be maintained year round in temperate climates like Florida, where there's not a really distinct winter dormant period?

[>> W] Yeah.

[W] So I think once those bees leave the bee house in areas that it's warm all year round, then I would clean it after that generation is done with it, and then you can put it back out.

[W] And then once the, the new generation comes in and then that cycle continues.

[W] So clean it out.

[W] Every time the the bees leave.

[>> W] Awesome.

[W] Thank you Anthony.

[W] So for Maddie, Carol had a question about not spreading doom and gloom.

[W] And she's wondering about telling people that commercial mosquito spraying destroys beneficial insect habitats and populations.

[W] And I was wondering if you could talk a little bit about your experience between balancing being honest about the threats that are insects and pollinators are facing, but then also not overemphasizing the negativity?

[>> W] Yeah, I think that's a really good question because, you know, sometimes what you're talking about is inherently sad or we, you know, tie that human emotion to it as being sad or tragic or doomy and gloomy, but it's necessary, right?

[W] We need to talk if we're going to talk about pollinator issues and the threats to pollinators and lots of other wildlife, we have to talk about how pesticides affect them.

[W] And I think what's really key here is like staying really close to the facts and also know where your if you're, you know, doing research, knowing where those facts are coming from is really important.

[W] And I think this is a good lesson to always put in context.

[W] If you're going to talk about pesticides, talk about, you know, the context in which pesticides are harming pollinators and suggest, you know, like I just hit really hard as you have to follow through with proper guidance on where to find more information and how just best to move forward.

[W] Like we always advocate for IPM, right?

[W] And IPM itself isn't even, you know, fully like just never use the pesticide ever.

[W] It's choosing the right time and the right place and using other measures first before going towards pesticides.

[W] And I know that was kind of a tangent, but I think it's a really good communications trick to stick with contextual facts.

[W] And it's okay if something is negative as long as you put a positive spin on it and say, okay, but you know, not all hope is lost.

[W] Like this is where this is how we can improve upon our actions and, and just like celebrate those that decide to, you know, go the step further.

[W] When something's really complicated and they don't know how to deal with pesticides and they're just trying to do their best to reduce the amount of harm they cause to the environment.

[W] So.

[>> W] Could I just add something, Maddie?

[W] I think that sometimes it's easy to forget the bigger picture.

[W] So with a lot of these pesticides, they don't just stay in your yard, right?

[W] Like when we apply them, they're into the soil, they go into the water table, they go into our rivers, they then go into the bigger.

[W] They go into the.

[W] So for me, whenever I'm like, is this something that really needs a pesticide or can I do this in a way that isn't going to affect literally everything?

[W] And just taking that moment of pause, like you said before, we're like, oh, everything's lost.

[W] Trash it, burn it, forget about it.

[W] I'm taking that moment of pause to, to think about how this affects and zooming out a little bit, it's also helpful.

[>> W] Yeah, I think I will add one more because I don't want to dive too much just into the nuances of pesticide use and pollinator health dynamics, but I do.

[W] Just, I would say like, oh no, did I lose my train of thought in front of 200 people?

[W] Maybe.

[W] Okay, come back to me.

[W] If I, if I, if it comes back.

[W] I'm too focused.

[>> W] We have so many excellent questions this session, so I'll just move on to Anya.

[W] So we know that you offered a bouquet to one of your neighbors and she rejected it.

[W] But I was wondering if you had any really positive experiences with people in your community, seeing your signs and your habitat and following in your your steps.

[>> W] Almost all of my interactions have been positive.

[W] So that is like the one negative that of course, like stays in my head because I'm like, I took that personally.

[W] You don't love my, these, these roses.

[W] Are you joking me?

[W] And anyway, yes, my other neighbor last year he bagged his leaves and I went over there and said, excuse me, do you mind if I take your leaves?

[W] And he was like, okay, crazy lady.

[W] Yeah, sure.

[W] Go ahead, take my leaves.

[W] But then he said, well, wait, why do you want my leaves?

[W] And so we had a conversation about it, and then I saw him take his other bag of leaves back and spread it around his garden.

[W] This is also the same neighbor who came running into like out front of my yard.

[W] Nobody comes in because the dog you saw.

[W] But he came as close as he safely could and he was like, did you just see that, that Baltimore Oriole that we that we had, you know, so a majority of my interactions, all my interactions are, are positive.

[W] Just one neighbor who didn't want a bouquet.

[W] It's personal and that's fine.

[W] It's her loss.

[W] She can live in her sad, lonely house without a bouquet, so whatever.

[W] But yes, a majority of them are positive.

[W] I've started also like putting bouquets for sale at our little local farmers market that's hosted by our little cafe.

[W] And it's just been I've just met friends like I don't always sell things, but I don't care.

[W] I had a woman, we're now friends and I'm like, this is delightful.

[W] She's like 84 years old.

[W] I'm like, I love this.

[W] Please come over for tea whenever you'd like.

[W] And she does.

[W] So I'd say that 99.9% of my interactions are positive, and I have no doubt that they will remain positive.

[>> W] What I'm hearing you say is that habitat enhancement is contagious in the community.

[>> W] So that's.

[>> W] Absolutely wonderful to hear.

[W] Now, Anthony, we have a question for you because we went through so many star stewards and just so many amazing like above and beyond examples of habitat and outreach actions that past stewards have done.

[W] Some people are a little daunted by this because they're not sure they have the capacity to take on these massive heat like community effort projects.

[W] So can you talk about I don't want to say like the minimum you need to do to achieve your certification, but you know, some more accessible options for people who might not have as much time or resource.

[>> W] For sure.

[>> W] And yes, those were particularly really like, you know, high end examples of people who just went above and beyond.

[W] But really the guidelines aren't strict at all for your habitat and outreach activities.

[W] Like, again, your habitat can be a couple potted plants on your property that you know you've learned from this course.

[W] You know that the plants that you've selected, even if there's only two of them, are ones that might benefit your local pollinators.

[W] So it can be very low scale, very low budget, super easy to do.

[W] It doesn't need to be hard and complex.

[W] And for outreach, even just talking to your family and friends about pollinators and why they're important.

[W] Talking to your neighbors, getting that engagement in, getting that dialog in is important.

[W] So if you, if you, you know, email me back saying my step two is I talk to my family about pollinators over wine or over dinner one night that can absolutely count as your activity because that is good progress moving forward and spreading that network of important information, right?

[W] So it can be very easy, very low key.

[W] But if you do want to take it to that next step, you absolutely can do that too.

[W] So also feel free to email me or Avery if you are worried about your activities and we're happy to point you in the right direction.

[>> W] Awesome.

[W] I want to clarify, just because I'm seeing in the chat, if your habitat action can be the same as your outreach action, and from the way that we like look at the forms, you definitely can have the same thing count for both, but we want to make sure that you are creating on the ground habitat.

[W] So floral resources and nesting sites and also communicating what you've taken away from this course to your community.

[W] So an example could be if you lead a workshop where you're planting native plants, and then also talking about those native plants that could be habitat and outreach.

[W] So they could be the same.

[W] But we do want to make sure that like you are putting plants in the ground or taking an action to like create that habitat for pollinators.

[>> W] Exactly.

[W] And just to go off that a bit more to like some, like I've read step tos where they don't have access to a place to put in habitat at all.

[W] So even like guiding someone else to build habitat, like a family or a friend could work.

[W] And like you said, Avery, sometimes the activity counts as both.

[W] It could be outreach and habitat.

[W] So.

[>> W] All in all, we just want to see that you are taking what you've learned beyond the course and adding to our amazing network of stewards.

[W] So I think with that, we will wrap up our last Q&A session.

[W] And as always, you are so welcome to email Anthony, me or the stewards at email with any questions that you have.

[W] And I'm just so grateful for this cohort of stewards and just your incredible curiosity and passion that you brought to this course.

[W] So thank you so much.

[W] And I'll pass it back to Anthony.

[>> W] Amazing.

[W] Thanks, Avery.

[W] And thanks to our guest speakers for tonight, Mattie and Anya.

[W] Incredible presentations.

[W] And thanks to all of you for being here for signing up for this course 200.

[W] There was like 270 at one point.

[W] People on this final session, which is incredible.

[W] Yeah, we really hope that you enjoyed yourselves, that you learned at least, you know, one new thing about pollinators.

[W] And honestly, we can't wait to see your step one and step two come in.

[W] So looking forward to that.

[W] If you need help with anything, reach out.

[W] But yeah, thanks for being such a great audience and we'll email you this week.

[W] Thanks, everyone.

[W] See ya.