

ACT for Bees

Submission on Draft Variation to Territory Plan
DV369 Living Infrastructure in Residential Zones
Territory Plan Section, EPSDD

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3rd April 2020

ACT for Bees is an organisation dedicated to raising awareness of the importance of bees and pollinators for the health of the environment and food security and has 10 recommendations on the Draft Plan.

Further information on ACT for Bees is included at Attachment 1

ACT for Bees has 10 recommendations that it would like the ACT Government to consider and incorporate where possible into this current review of the Territory Plan. It would also like the ACT Government to embed these recommendations into policy on the future management of Canberra's green spaces and gardens. These green spaces are what make Canberra such a unique city and it would be a shame to lose the biodiversity of plants and animals because of a lack of vision into the future.

Recommendation 1 That the ACT Government include shrubs and groundcovers as well as trees in its consideration of amendments to Living Infrastructure in Residential Zones to provide important food sources for bees, butterflies, birds and small mammals. Table 7a in the draft Territory plan could also include reference to other plantings and also link to the MIS25 document requiring its use for choosing plantings.

Recommendation 2

That the ACT Government ensures that developers plant at least 50% of the Living Infrastructure with pollinator friendly trees, shrubs and groundcover plants for year round flowering. Seeds and plant stock needs to be selected for climate resilience.

Recommendation 3

That the ACT Government supports the development of a gardening guide ACT and Region on planning for year round pollinator friendly plantings.

Recommendation 4

Promote Canberra as a Bee/ Pollinator Friendly City and undertake certification process.

Recommendation 5

The ACT Government ensure plantings are neonicotinoid free and implement Integrated Pest Management in the ACT.

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That Yarralumla Nursery ensures, in propagating and purchasing plants to be available under the Plant Issue Scheme, that bee friendly (forage) plants with various flowering seasons are available, free of neonicotinoid pesticides and clearly labelled as such for developers and gardeners.

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The ACT Government supports Community engagement, education and citizen science projects.

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The ACT Government educate and support developers to use nursery stock that has no neonics and minimal pesticide residue and lead Australia to bring in labelling across nurseries in ACT.

Recommendation 9

The ACT Government allocate funds to oversee developer compliance.

Recommendation 10

The ACT Government encourage green walls and green roofs as an important part to make up for lack of land to plant for pollinators in medium and high density housing.

Summary of the Submission by ACT for Bees

'Pollinator populations are changing. Many pollinator populations are in decline and this decline is attributed most severely to a loss in feeding and nesting habitats, pollution, the misuse of chemicals, disease, and changes in climatic patterns are all contributing to shrinking and shifting pollinator populations.

*'Research on urban insect pollinators is changing views on the biological value and ecological importance of cities. The abundance and diversity of native bee species in urban landscapes that are absent in nearby rural lands evidence the biological value and ecological importance of cities and have implications for biodiversity conservation.'*²

With the current review of the Territory Plan, the ACT Government has a unique opportunity to get out in front and lead Australia to legislate to ensure plantings in new developments are chosen carefully to support pollinators. The ACT government can establish a cost effective and well-designed policy which can address the need to plant to support pollinators year around and also establish positive actions that builds the resilience of our pollinator populations including bees, butterflies and birds.

In the report, [Inquiry into Nature in our City, Standing Committee on Environment and Transport and City Services February 2020](#),³ the Committee recommends that the ACT Government recommit to the concept of the City in a Landscape requiring the development of a comprehensive City in a Landscape Strategy and the implementation of a wide array of supporting policies. Seven of these recommendations directly support our submission. These include prioritizing biodiversity, pollinator planting guides for gardeners, the benefits of being a bee friendly city, the need for neonicotinoid free plantings, developer liaison and support for green walls and roofs.

There is broad support within ACT Govt for supporting pollinators. ACT MLA's from all parties and ACT senior public servants spoke at the recent *Bees, Butterflies, Birds: Maximising Biodiversity by Supporting Pollinators* event hosted by ACT for Bees and ACT Landcare. Minister Gentleman expressed the importance of pollinators in his opening address, Ms Nicole Lawder, Deputy Opposition Leader spoke of 'Pollinating future changes to protect pollinators' and Ms Caroline Le Couteur ACT Greens addressed 'Poli-nators for Pollination: Policy Shapers' and using the recent changes to planting on street verges to plant for pollinators.

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1. Refer <https://e360.yale.edu/features/urban-refuge-how-cities-can-help-rebuild-declining-bee-populations> Nov 2017
 2. Refer <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/cobi.12840>
 3. https://www.parliament.act.gov.au/_data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Proposed Changes to Territory Plan

DV369 proposes to make changes to the Single Dwelling Housing Development Code and Multi Unit Housing Development Code of the Territory Plan, and to amend the definitions in the Territory Plan in relation to site coverage and planting area controls. ACT for Bees applauds the plan to increase the area of a block available for soft landscaping and add a new requirement that development provides a minimum level of tree planting, with associated requirements for canopy trees on compact, mid-sized and large residential blocks.

Inquiry into Nature in our City - RECOMMENDATION 8

3.63 The Committee recommends that the ACT Government, preferably as part of the City in a Landscape Strategy, prioritize biodiversity.⁴

We believe that the Territory plan could go further by implementing Recommendation 8 to include requirements to include understory plantings which provide adequate sources of food available for a wide range of pollinators through all seasons. This can be facilitated through small and practical changes to the draft Territory plan to mandate that specific pollinator friendly plants trees and understory plants are used by developers in new developments across the ACT.

The lack of reference in the draft plan to pollinators and wildlife is disappointing, particularly in view of recent work by the ACT government to include information on appropriate plantings for pollinators and other wildlife in *MIS 25 Edition 1 Revision 0: Plant Species for Urban Landscape Projects, Transport Canberra and City Services* in April 2019.⁵

This *MIS 25* now includes information on which trees and other plants provide nectar and pollen sources, what pollinators they support, and when these food sources are available. This information has made it much easier for developers and other landscapers to select appropriate plantings to support pollinators year round.

As part of making it a requirement for developers to plant for flowering for pollinators throughout the year, a link to the *MIS 25* should be included in the Living Infrastructure in Residential Zones plan. Table 7a in the draft Territory plan could also include reference to other plantings and also link to the *MIS25* document requiring its use for choosing pollinator friendly plantings.

While section 5.2 C38 of the draft variation does refer to 'vegetation', there is no further reference to what this means, nor are there any references to planting other than to provide tree canopy. They focus almost exclusively on tree canopy and permeable surfaces to improve human amenity, and do not appear to recognise the need to plant for wildlife biodiversity and, in particular, pollinators.

Refer 4. https://www.parliament.act.gov.au/data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Ref 5. https://www.cityservices.act.gov.au/data/assets/pdf_file/0004/1378543/MIS25-Plant-Species-for-Urban-Landscape-Projects.pdf

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Research is showing that cities can support pollinators if plantings are appropriate and this is already being successfully implemented in countries like the UK and the USA.

Dr Rebecca Toniello, a biologist at the University of Michigan-Flint, is co-author of a recent essay in [Conservation Biology](#) that points to research on urban bees as evidence that humans can share high-density habitat with other species. “Surrounded by increasingly less hospitable rural and suburban landscapes,” she and her colleagues write, the city “can become a refuge” for the bee species and other insects that are [suffering significant declines](#).⁶

Effective planting for pollinators includes different canopy layers in the landscape incorporating trees, shrubs, and different-sized perennial plants. Dense shrubs and group plantings provide protection from severe weather, from predators and from wind tunnels created in urban areas. Appropriate plants are needed by butterflies during their caterpillar stage of development.⁷

Beyond providing a nutritious supply of fruits, vegetables and nuts to the world’s population, pollinators help maintain native plant communities, which provide a variety of other ecosystem services, such as: Carbon sequestration, Water filtration, Erosion control, Soil health, Urban heat island reduction.⁸

Animal pollinators help to sustain bird populations by supplying them with adult and larval insects full of nutritious proteins and fats. Pollinators also provide an essential reproductive service to the plants upon which songbirds forage, allowing those plants to produce seeds, nuts, fruits, and berries for songbirds and other wildlife.⁹

The footprint of dwellings relative to the block size in current developments in the ACT has increased, leaving less area for planting. The Draft Variation to the Living Infrastructure plan has a focus on planting for climate change but to be an effective policy, and particularly to plan for year round flowering, at least 50% of the Living Infrastructure must include pollinator friendly trees, shrubs and groundcovers. The plan must therefore include seed and plant stock selections for climate resilience for pollinators to be effective over future decades. [Adapt NSW](#)¹⁰ has a range of tools to assist in this regard.

Refer 6 <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185809>

Ref 7 <https://pollinatorlink.files.wordpress.com/2016/10/pollinator-link-flyer.pdf>

Ref 8 <https://landscapeforlife.org/Citation}rg/pollinators/>

Ref 9 https://www.pollinator.org/pollinator.org/assets/generalFiles/NAPPC-Song-Birds-Fact-Sheet_170624_114950.pdf

Ref 10 <https://climatechange.environment.nsw.gov.au/Adapting-to-climate-change/Green-Cover>

Assessing designs for sustainability can be a complex process and there are organisations that support this.

In addition, SITES¹¹ is used by landscape architects, designers, engineers, planners, ecologists, architects, developers, policy-makers and others to align land development and management with innovative sustainable design. SITES offers a comprehensive rating system designed to distinguish sustainable landscapes, measure their performance and elevate their value. SITES certification is for development projects located on sites with or without buildings—ranging from national parks to corporate campuses, streetscapes to homes, and more.

Recommendation 2

That the ACT Government ensure that developers plant at least 50% of the Living Infrastructure with pollinator friendly trees, shrubs and groundcover plants for year round flowering. Seeds and plant stock needs to be selected for climate resilience.

Guide for Developers, Landscapers and Gardeners

Effective support of pollinators requires a wide range of plantings including small shrubs. The shrub plantings in median strips and on the tram way are very effective. A flock of finches was recently seen in the tramway plantings near Downer. The ACT Government could, as suggested in the Inquiry into Nature in our City, provide practical advice to support planting for pollinators.

Inquiry into Nature in our City - RECOMMENDATION 51

7.92 The Committee recommends that the ACT Government develop a guide for gardeners to support the bee friendly city, in particular, looking at pollination corridors.¹²

There are other relevant international and national examples.

See for example, the Million Pollinator Garden Challenge¹³ launched in 2015, the Pollinator Partnership in Canada, and the Pollinator Gardening movement in the UK.¹⁴

Ref 11 <http://www.sustainablesites.org/>

http://www.sustainablesites.org/sites/default/files/legal/SITES_OnePager_FINAL%5B2%5D.pdf

Ref 12 https://www.parliament.act.gov.au/_data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Ref 13 <http://millionpollinatorgardens.org/about/>

Ref 14 <https://e360.yale.edu/features/urban-refuge-how-cities-can-help-rebuild-declining-bee-populations>

Urban gardens can contribute to climate mitigation and adaptation through a range of provisioning, regulating and cultural ecosystem services as multifunctional nature-based solutions in a city. They also provide important habitat for wildlife and genetic diversity.¹⁵

The Brisbane based Pollinator Link^{® 16} project is a not-for-profit social enterprise creating wildlife corridors for urban spaces. The aim of the project is to create innovative and sustainable urban wildlife corridors within an environment of rapidly growing population, busy lifestyles and a culture of “quick fix”. It engages the wider community in bringing birds, butterflies and bees to their gardens thus creating a network of wildlife corridors.¹⁷ It has excellent guides for planting resources and links to a Qld app [GroNATIVE](#)¹⁸ encourages the use and enjoyment of native plants in our urban and rural areas while helping to build and support our biodiversity. It could easily be adapted to the ACT and NSW regions.

Powerful pollinators. Encouraging insect pollinators in farm landscapes. NSW central slopes, Murray-Riverina and North East Victoria is a reference document created for farmers and could be an excellent cross referencing resource for the ACT Government and developers to support pollinator friendly planting. It has a level of detail greater than that in the ACT MIS 25 planting guide. It was recently created by the When Bee Foundation and Sustainable Farms ANU and as yet is not on the web.

Recommendation 3

That the ACT Government support the development of a gardening guide ACT and Region on planning for year round pollinators friendly plantings.

Ref 15 https://link.springer.com/chapter/10.1007/978-3-319-56091-5_14

Ref 16 <https://pollinatorlink.files.wordpress.com/2016/10/pollinator-link-flyer.pdf>

Ref 17 <https://pollinatorlink.org/about/>

Ref 18 <https://www.natura-pacific.com/gronative-app/>

A Bee/ Pollinator Friendly City

The creation of a Bee Friendly city is the aim of ACT for Bees. It is also consistent with the recommendation of the *Inquiry into Nature in our City*.

Inquiry into Nature in our City - RECOMMENDATION 50

7.91 The Committee recommends that the ACT Government commit to being a bee friendly city.¹⁹

Recommendation 4

Promote Canberra as a Bee/ Pollinator Friendly City and undertake certification process.

Another critical element to the development of a Bee Friendly City is the phasing out of neonicotinoid pesticides, consistent with the recommendations of the *Inquiry into Nature in our City*.

Inquiry into Nature in our City - RECOMMENDATION 52

7.93 The Committee recommends that the ACT Government phase out the use of harmful pesticides and chemicals distributed or used within the ACT by government and non-government bodies as well as members of the public.²²

“Neonicotinoid insecticides are now the most widely used class of insecticides in the world. While they were initially introduced as less harmful than older insecticides, research has now shown their devastating ecological impacts. Neonicotinoids are very toxic to pollinators, beneficial insects, and aquatic invertebrates. Their widespread use, combined with their water solubility, means that they are now often found in water and soil samples throughout the country.”²³

The ACT Government must be congratulated on reducing the use of neonicotinoid (neonics) insecticides in the landscape. The issue still remains whether the plants supplied to the Government have been treated with these systemic, persistent insecticides. The effects on bees have been well documented. It is entirely possible for plants, particularly natives to be neonic free. Home Depot in the U.S. committed in 2015 to taking neonics out of its plants and 98% of their plants are now neonic free. Any plants treated with neonics are labelled.²⁴ Other organisations in the US have also committed to phasing out neonicotinoid pesticides.¹

Ref 19 https://www.parliament.act.gov.au/_data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Ref 20 <https://actforbees.org/what-we-are-doing/>

Ref 21 <https://www.beecityusa.org/>

Ref 22 https://www.parliament.act.gov.au/_data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Ref 23 <https://www.xerces.org/pesticides/understanding-neonicotinoids>

Ref 24 <https://www.snopes.com/fact-check/home-depot-bee-pesticides/>

1 <https://www.centerforfoodsafety.org/press-releases/3843/lowes-agrees-to-phase-out-bee-toxic-neonicotinoid-insecticides>

Boulder, Colorado has adopted a detailed [resolution](#)²⁵ based on Xerces recommendations that details the research that justifies protecting and the actions needed to protect pollinators by restricting the use of neonics.

The Xerces Society for Invertebrate Conservation²⁶ has reported on the toxic effects of neonics on invertebrates in the natural environment and has many supporting resources. The report, *Xerces Model Policy to Protect Pollinators from Harmful Pesticide Exposures*, identifies these critical issues:

- *Creating diverse native pollinator habitat throughout the area*
- *Eliminating the use of neonicotinoid insecticides and other highly toxic, systemic insecticides*
- *Restricting the purchase and use of products that contain neonicotinoids and seeds or plants that have been treated with neonicotinoids*
- *Implementing integrated pest management on municipal property that relies on non-chemical options first*
- *Avoiding cosmetic pesticide applications*
- *Engaging residents through education about pollinators.*

Recommendation 5

The ACT Government ensure plantings are neonicotinoid free and implement Integrated Pest Management in the ACT.

Recommendation 6

That Yarralumla Nursery ensures, in propagating and purchasing plants to be available under the Plant Issue Scheme, that bee friendly (forage) plants with various flowering seasons are available, free of neonicotinoid pesticides and clearly labelled as such for developers and gardeners.

Community Building and community education

The ACT government has a valued focus on community building. The engagement of the community in supporting the Living Infrastructure plan can be done through a stakeholder consultative mechanism for new developments. Ginninderry has an effective Bush on the Boundary framework. The community can also become involved in large corridor plantings in coordination with new developers and TCCS. The recently launched Adopt a Park Landcare Initiative could be the basis of this type of collaboration.

The capacity of citizen science to contribute to data collection as part of a larger project can be seen in the effective Waterwatch²⁷ and Frogwatch Programs²⁸. The Australian Wild Pollinator Count²⁹ (12-19/4/20 and 8-15/11/20) notes that Australia has lots of wild pollinator insects that are often overlooked and that besides the European Honey Bee many native insects also contribute to pollination in crops and gardens all around the country.

Ref 25 <https://www-static.bouldercolorado.gov/docs/resolution-concerning-use-neonicotinoid-pesticides-boulder-1-201504101408.pdf>

Ref 26 <https://www.xerces.org/pesticides/understanding-neonicotinoids>

Ref 27 <http://www.act.waterwatch.org.au/>

Ref 28 <http://ginninderralandcare.org.au/frogwatch/>

Australian Pollinator Week³⁰ acknowledges our important and unique insect pollinators during our southern spring (November). It is a designated week when communities, businesses and organisations can come together to raise awareness of the importance of pollinators and support their needs

The Pollinator Monitoring and Research Partnership (PMRP)³¹ aims to establish how insect pollinator populations are changing across Great Britain. They have established two new large-scale surveys that utilise citizen science.

Recommendation 7

The ACT government supports Community engagement, education and citizen science projects.

Developer education and compliance.

Inquiry into Nature in our City - RECOMMENDATION 18

4.24 The Committee recommends that the ACT Government consider ways developers can be encouraged to undertake landscaping beyond the minimum requirements.³²

To support effective pollinator plantings efforts could be made to educate and support developers to use nursery stock that has no neonics and minimal pesticide residue.

The other issue is how do blocks in some of the new suburbs eg Coombs, Wright comply? How is the government planning to ensure they meet the requirement of, for example, at least 50% of the minimum area is planting area on a mid-size block?

Recommendation 8

The ACT Government educate and support developers to use nursery stock that has no neonics and minimal pesticide residue and lead Australia to bring in labelling across nurseries in ACT.

Recommendation 9

The ACT Government allocate funds to oversee developer compliance.

Ref 29 <https://wildpollinatorcount.com/>

Ref 30 <https://www.australianpollinatorweek.org.au/about/>

Ref 31_ <https://www.ceh.ac.uk/our-science/projects/pollinator-monitoring>

Ref 32-34 https://www.parliament.act.gov.au/__data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

Increase in high density housing in the ACT

Inquiry into Nature in our City - RECOMMENDATION

4.63 The Committee recommends that the ACT Government consider how green infrastructure could be implemented in high rise developments. ³³

Inquiry into Nature in our City - RECOMMENDATION

4.64 The Committee recommends that the ACT Government consider current impediments to establishing balcony, courtyard or roof gardens. ³⁴

With the increase in high density housing and a trend towards urban infill, the percentage required on blocks for plantings becomes more problematic as the actual land being allocated for green spaces in these areas is decreasing. With the trend to smaller and smaller blocks and urban infill, how are these changes to the Territory Plan consistent with Action 2 of Canberra's Living Infrastructure Plan, which seeks to achieve 30% tree canopy cover (or equivalent) and 30% permeable surfaces in urban areas by 2045.

All of these factors mean a requirement for green walls and green roofs become more important to make up for the lack of land to plant. If these were to be included as one of the requirements for development, and included appropriate plantings for pollinators eg: indigenous plantings, this would go a long way to increasing green spaces and pollinator plantings in multi-story, high density sites. The plantings around the Nishi building with vegetable gardens and plantings for pollinators as well as the green walls are a great example of what could be done, especially in multi-development areas like the Kingston foreshore.

Recommendation 10

The ACT Government encourage green walls and green roofs as an important part to make up for lack of land to plant for pollinators in medium and high density housing.

Summary

These simple no regrets actions will help to strategically create corridors of pollinator friendly plantings across the ACT. Becoming a 'Bee Friendly' territory is about making our bee and pollinator populations more resilient to existing and emerging threats such as exposure to pesticides, a lower number of forage plants in the new suburbs (due to smaller block sizes), biosecurity threats including the Varroa mite, and the emerging problem of the European Wasp that predated on bees and plunders hives.

Broadening and enriching bee foraging areas as part of the creation of a corridor of bee friendly plants across the ACT through use of Government's existing policies, in tandem with other initiatives like pesticide control and European Wasp control efforts, will facilitate the preservation of a robust ACT bee and pollinator populations. These affirmative actions will not only facilitate the survival of plant pollinators and other insects which are keystone species for our ecosystems, but will also help preserve and improve the social amenity, economic development, biodiversity and climate resilience across the whole community.

Ref 32-34 https://www.parliament.act.gov.au/__data/assets/pdf_file/0005/1480091/9th-ETCS-10-Inquiry-into-Nature-in-Our-City.pdf

The update to planting guide is a good start, and this review of DV369 of the Territory plan provides an opportunity to further embed some of those principles into the Territory plan by mandating need for planting to include both flowering trees year round, and understory plants that provide pollen and nectar as well as attractive flowering plants for the population to enjoy.

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ACT for Bees is an organisation dedicated to raising awareness of the importance of bees and pollinators for the health of the environment and food security.

As a part of our Vision for ACT for Bees we are working towards the ACT becoming a 'Bee and Pollinator Friendly' Territory by 2020, where government, education, business and community practices and behaviours support and encourage healthy bees.

- *Raise awareness with the ACT and regional community and key stakeholders about the importance of healthy bees and pollinators and bee-friendly practices that enhance agricultural and honey productivity, food sustainability / security and public and environmental health.*
- *Promote pollinator-friendly plant propagation, gardening and environmental practices in home gardening, farming, workspaces, public recreation parks, gardens, open spaces and beekeeping.*
- *Develop curriculum materials and resources for schools and other educational organisations about the importance of bees and bee-friendly practices.*
- *Promote the importance of pollinators and pollinator-friendly practices in the wider Australian and Global community.*

We have been involved in a broad range of community projects including:

- Collaborating with the Ginninderry Development in West Belconnen to develop pollinator corridors within the development.
- Successfully lobbied the Australian Capital Territory (ACT) Government to adopt ACT for Bees additions in their Landscape Planting list. The list now includes flowering times, nectar/pollen/seed resources and species of forager (bees, butterflies, birds and habitat for small animals) and used by all ACT Government agencies and land developers.
- We have recently teamed up with Landcare ACT and Friends of Australian National Botanic Gardens to run a ½ day event ' Bees, Butterflies, Birds: Maximising biodiversity by supporting pollinators.' We were very pleased with the broad support from all sides of ACT Government for bees and pollinators.
- Been actively involved in organising and presenting at World Bee Day celebrations in May 20th in 2018 and 2019 and on the steering committee for 2020.

ACT FOR BEES



- *In 2016 we teamed up with Cool Australia to create the [‘Love Food? Love Bees!’ Year 5/6 curriculum](#) which explores the importance of bees for much of our food, threats to bees and ways students can take bee friendly action in their community. This has been very successful and reached over 55,000 Australian students within a year of its release.*
- *In 2018 we focused on the Australian curriculum aligned [‘Love Food? Love Bees!’ Food Security and Sustainable Agriculture -Years 9 & 10 curriculum](#) with Cool Australia which focuses on the importance of sustainable agriculture for healthy and productive soils which in turn support healthy plants, pollinator health and the overall health of the ecosystem. We were very pleased with the reach of this online curriculum.*