CHARTER TOWNSHIP OF VAN BUREN
ENVIRONMENTAL COMMISSION AGENDA

Wednesday, July 20, 2016 – 7:00 PM
Denton Room

CALL TO ORDER

ROLL CALL

ENVIRONMENTAL COMMISSION

Chairman Brownlee	_____	Commissioner Merritt	_____
Vacant	_____	Commissioner Wilson	_____
Commissioner Debuck	_____	Board Representative Jahr	_____
Commissioner Gibson	_____	Director Akers	_____
Deputy Director Best	_____	Recording Secretary Halstead	_____

APPROVAL OF AGENDA

ACCEPTANCE OF THE MINUTES OF THE PREVIOUS MEETING

1. May 18, 2016 Minutes

COMMUNICATIONS

UNFINISHED BUSINESS

1. Township Map
2. Recycling Road Map
3. Coal Tar Discussion
4. Lakeshore Management Workgroup Update

NEW BUSINESS

1. Pollinators and Habitiat
    a. Basic resources at www.pollinator.org
    b. Pollinator Pockets
2. ARC and ADW Updates
3. Stormwater

ADJOURNMENT

***** If you are unable to attend, please contact Developmental Services at 699-8913 before noon on July 20, 2016*****

CHARTER TOWNSHIP OF VAN BUREN
Environmental Commission
Wednesday-May 18, 2016
MINUTES – DRAFT

The meeting was called to order at 7:01 pm in the Denton Room by Chairperson Brownlee.

ROLL CALL:
Present: Brownlee, Debuck, Gibson, Wilson, Jahr
Absent Excused: Akers, Merritt
Staff: Best, Halstead
Audience: 2

APPROVAL OF AGENDA:
Motion Wilson, Seconded by Gibson to approve the agenda as presented.

APPROVAL OF MINUTES:
Motion to approve the Minutes from March 16, 2016 Wilson, Seconded by Debuck.
Motion Carried

Motion to approve the Minutes from April 20, 2016 Debuck, Seconded by Gibson.
Motion Carried

COMMUNICATIONS:
Chairperson Brownlee asked about the vacancy on the Commission and if there had been any interest in the position. Best stated that currently the application process is open and the Supervisor's Office is taking applications. There has been one application received thus far.

Chairperson Brownlee stated he was contacted by Laurie Day from Representative Pagan's Office to speak at an Environmental Forum being held at Belleville High School on Thursday, May 19, 2016. He was asked to speak about how Van Buren Twp. went about instituting the >1% PAH Sealant Ban.

The Supervisor of Spring Lake Twp. contacted Chairperson Brownlee to get some information about the Township's >1% PAH Ban.

UNFINISHED BUSINESS:
1. Recycling Road Map:
Brownlee stated all the information that the Committee gathered has been compiled and they are now looking into ways to get that out to the residents. Chairperson Brownlee will be collaborating with Jennifer Price in the Parks and Rec. Department to formulate a plan for the Recycling information.

2. Coal Tar Discussion:
Anne LeHuray, from PCTC, sent over her presentation with the slides and some additional information that was requested from the commission at her last visit. The Commission discussed the presentation and reaffirmed their action to ban the use of >1% PAH sealants.

3. Belleville Lake Water Quality Discussion:
Best mentioned he will continue looking into the phosphorus reduction plan. He also went over the status of different erosion sites that were brought up in a previous meeting.

Best stated if there is an algae bloom this year, it will receive the same type of response as previous years. The first step would be notification to surrounding municipalities and their elected officials. Secondly, staff would identify/verify that it is an algae bloom so residents can be assured it's not an oil spill or another type of contamination. Finally, staff will document weather, site conditions and patterns.

4. Lead Containing Paint:
There are a number of homes built before 1956 that could be sources of lead paint. Van Buren Twp. is not aware of any lead contamination problems in the Township at this time.

COMMENTS:
Brownlee asked if Deputy Director Best could look into getting a map of the Township to put up in the Denton Room. Something they could use for reference points in their meetings.

Best gave an overview of the Wolverine Pipeline and the work they have been doing in Van Buren Township.

Motion Jahr, seconded by Wilson to adjourn at 8:14 pm.
MOTION CARRIED

Respectfully submitted,

Anna Halstead, Recording Secretary

Photo Sheila Colla

Rusty-patched bumble bee,
Bombus affinis

Declining North American Bumble Bees

Photo David Inouye

Western bumble bee,
Bombus occidentalis

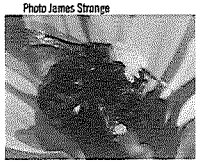


Photo James Strange

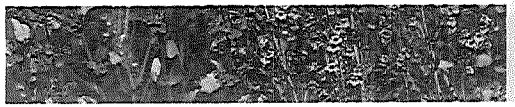
Franklin bumble bee,
Bombus franklini

Photo Leif Richardson

Yellow-banded bumble bee,
Bombus terricola

Photo Ron Hemberger

American bumble bee,
Bombus pensylvanicus



The **North American Pollinator Protection Campaign (NAPPC)** is a collaborative body of over 140 organizations that work for the protection of pollinators across Mexico, Canada and the United States.
The **NAPPC Bombus Task Force** produced this brochure for your use and information. Feedback is welcome. For more information please contact **info@pollinator.org** or **415-362-1137** or visit **www.pollinator.org**.

Visit
www.pollinator.org
to see how much you can do

NAPPC

POLLINATOR PARTNERSHIP

Bumble Bees are Essential

Helping Pollinators Thrive

Prepared by the
Bombus Task Force of the
North American Pollinator Protection
Campaign (NAPPC)

Bumble Bee Facts

Globally, there are about 250 described species of bumble bees. They are found primarily in the temperate zones of North and South America, and Eurasia.

Bumble bees are documented to pollinate many important food crops. They are also more effective than honey bees at pollinating crops grown in greenhouses.

When most insects are inactive due to cold temperatures bumble bees are able to fly by warming their flight muscles by shivering, enabling them to raise their body temperature as necessary for flight.

Instead of starting their own colonies, some bumble bee species have evolved to take over another species' colony to rear their young. These 'cuckoo' bees then use the workers from the queen-less colony to feed and care for their offspring.

Some bumble bee are known to rob flowers of their nectar. Nectar robbing occurs when a bee extracts nectar from a flower without coming into contact with its reproductive parts (i.e. anthers and/or stigma), usually by biting a hole at the base of the flower.

Bumble bees are effective buzz pollinators of several economically important plants in the family Solanaceae such as tomato, bell pepper and eggplant. In buzz pollination bees extract pollen from a flower by vibrating against the flower's anthers, making an audible buzzing noise.

Currently, the Common Eastern bumble bee (*Bombus impatiens*) is the only species being commercially reared for pollination services in North America, despite the fact that it is only native to the eastern U.S. and Canada.

Bumble Bee Life Cycle

The primary function of the nest is to house all members of the colony, particularly developing bees in cocoons (globular sacs in the picture below) laid by the queen. Empty cocoons are used to store nectar and pollen that are replenished by foraging bumble bees. Below is a bumble bee nest made in the fiberglass insulation of a house in Maryland.

Photo David Inouye

Bumble Bees vs. Honey Bees: What's the Difference?

Bumble bee colonies last only one year.

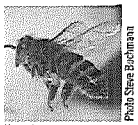
Honey bee colonies can last more than one year.

Bumble bees typically nest underground in rodent burrows, and sometimes on the ground surface.

Managed honey bees nest inside bee boxes; feral honey bees typically nest in tree cavities.

Bumble bee

Photo Stella Dolla



Honey bee

Photo Steve Buchmann

The division of labor in bumble bees is primarily determined by the quantity of food fed to a larval female by a young worker.

The division of labor in honey bees is primarily determined by the quality of food, such as royal jelly, fed to a larval female by nurse bees.

Bumble bees do not communicate floral resources to other bumble bee foragers at the nest.

Honey bees are able to communicate the location of floral resources to other foragers at the nest by a complex 'waggle dance'.

Bumble Bees at Risk?

Recent research in Canada and the United States has shown drastic declines in some bumble bee species. In particular, four bumble bees have declined through much of their range over the past few decades—the Franklin Bumble Bee (*Bombus franklini*), the Rusty-patched Bumble Bee (*Bombus affinis*), the Western Bumble Bee (*Bombus occidentalis*) and the American Bumble Bee (*Bombus pensylvanicus*). Researchers are currently working to determine the causes of these declines, but some possible factors include:

- **Habitat Loss** – Bumble bees need three types of habitat, all of which may be threatened by urbanization and other forms of land alteration:
  - A suitable underground area for nesting (e.g. abandoned rodent burrows)
  - A site for overwintering (i.e. mulch and rotting logs)
  - An abundance of wildflowers for food from spring through fall
- **Climate Change** – These fuzzy bees are cold-weather adapted and are likely affected by long-term changes in weather patterns.

Photo David Inouye

- **Pathogen Spillover** – The use of managed bumble bees for pollination of greenhouse crops has lead to the spillover of disease from managed to wild bumble bees.
- **Pesticide Use** – These chemicals are meant to affect pests but may have harmful effects on bumble bees as they forage from treated plants as well as untreated plants.

Resources

www.pollinator.org

www.discoverlife.org

www.greatsunflower.org

www.xerces.org/bumblebees/

What you can do to help protect bumble bees:

- Plant pollen- and nectar-rich plants in your garden
- Provide habitat for bumble bees
- Buy organic and locally produced food
- Join citizen-science efforts to track bumble bees
- Support bumble bee conservation efforts

Getting Started

How can your school get involved?

By visiting our website, www.pollinator.org/education.htm you will find support to:

- **Integrate** pollinator education into your classroom using our Nature's Partner's curriculum - full of fun activities, photographs, and modules for grades 3–6
- **Assign** students' roles to plant and tend a pollinator friendly garden on campus
- **Order** the **Pollinator School Garden Kit** and other fun and educational posters and brochures for your students to help them visualize the importance of pollinators. Go to www.pollinator.org for more details.

The **North American Pollinator Protection Campaign (NAPPC)** is a collaborative body of over 140 organizations that work for the protection of pollinators across Mexico, Canada and the United States.
The **NAPPC Education Task Force** produced this brochure for your use and information. Feedback is welcome. For more information please contact **info@pollinator.org** or **415-362-1137** or visit **www.pollinator.org**.

WILDLIFE HABITAT COUNCIL

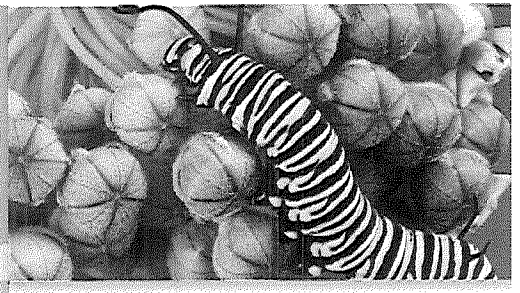
NAPPC

POLLINATOR PARTNERSHIP

Your School and Pollinators

How Pollinators Can Help Your School While You Help Pollinators

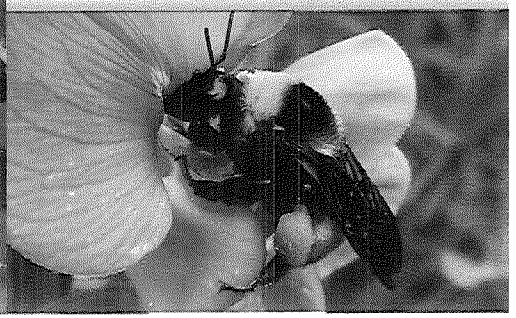
Prepared by the Education Task Force of the North American Pollinator Protection Campaign (NAPPC)



Schools, Pollinators, and You!

Kids love bugs! Your school is a living laboratory where students can learn through observation and hands-on learning. These skills are developed through the Pollinator Partnership (P2) Education Programs that emphasize language arts and math requirements as well as science curriculum, all developed to the highest education standards.

P2 has created free hands-on learning materials for you and your school to build a school garden, and connect to other schools to encourage pollinator education and enrich classroom education. Resources available for free on www.pollinator.org include standards based curricula, lesson plans, posters, and much more!



Why should educators and students care about pollinators?

Pollinators bring us nearly 1 of every 3 bites of food we eat and are vital in the reproduction of nearly 80% of the flowering plants on the planet. Our food, our forests, our farms and our future need good pollinator-friendly practices – and school is a great place to start.

What is pollination and who are the pollinators?

Pollination happens when pollen is moved within flowers or carried from flower to flower by the wind, by water or in some cases through self-pollination and by pollinating animals such as birds, bees, bats, butterflies, moths, beetles, or other animals.

What does pollination do?

The transfer of pollen in and between flowers of the same species leads to fertilization, and successful seed and fruit production for plants. Pollination ensures that a plant will produce full-bodied fruit and a full set of viable seeds, and in some cases it increases genetic diversity to strengthen the genetic make-up of the plant.

Why does pollination matter to us?

Worldwide, roughly 1,000 of the 1,200 plant species grown for food, beverages, fibers, spices, and medicines need to be pollinated by animals in order to produce the goods on which we depend.

Foods and beverages produced with the help of pollinators include apples, blueberries, chocolate, coffee, melons, peaches, pumpkins, vanilla, and almonds, to name a few.

In the U.S., pollination by honey bees, native bees, and other insects produces $40 billion worth of products annually.

Are pollinators in trouble?

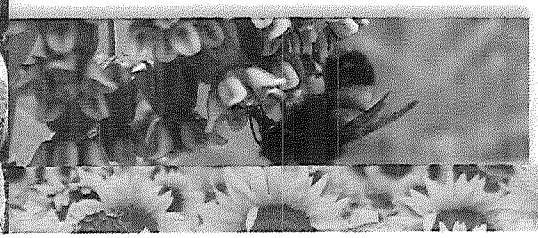
Worldwide there is disturbing evidence that pollinating animals have suffered from loss of habitat, chemical misuse, introduced and invasive plant and animal species, and diseases and parasites.

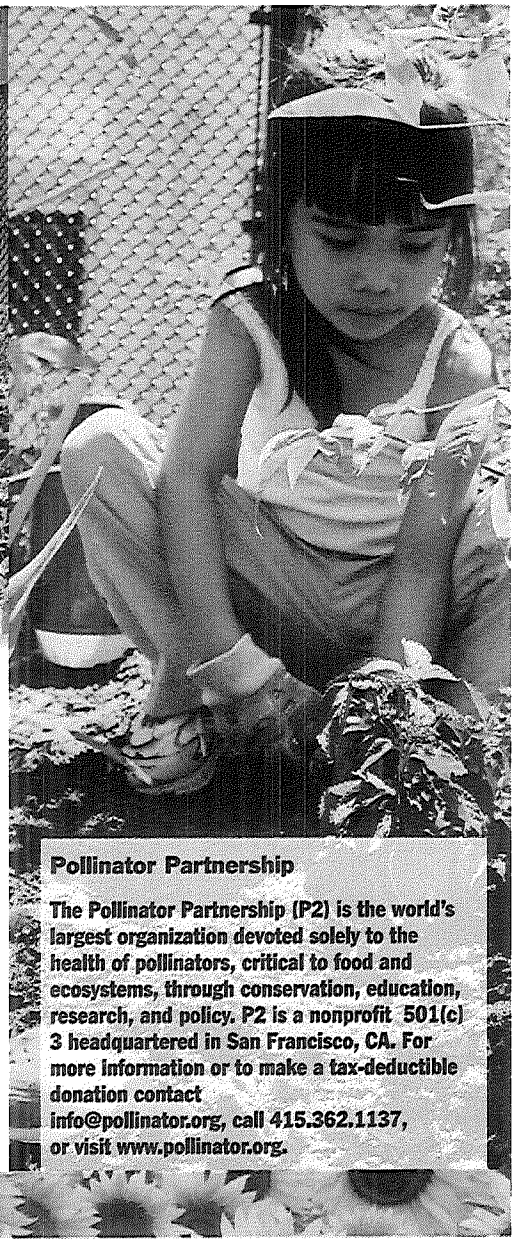
Many pollinators are federally "listed species," meaning that there is evidence of their disappearance in natural areas.

The U.S. has lost over 50% of its managed honey bee colonies over the past 20 years.

A lack of research has hindered our knowledge about the status of pollinators.

Whenever we look closely at pollinator populations, we see problems – the monarch butterfly migration across North America is showing extremely low overwintering numbers, and at least 10 different bumble bee species in the U.S. are not being spotted with normal frequency, in fact 4 appear to have disappeared from their normal ranges.





Here are 5 things you can do to help pollinators:

- Plant a pollinator garden or buffer to provide habitat and forage for local pollinating animals.
- Reduce or eliminate your use of pesticides, and if you must use them, follow directions carefully. The way you apply and dispose of a pesticide can make a big difference for pollinators!
- Educate yourself about the native pollinators in your area, and view them as your ally in making a green and sustainable world.
- Make wise consumer choices; purchase organic produce, local honey, native plants and locally produced fibers whenever possible.
- Join P2 to increase public awareness about the importance of protecting pollinators.

Pollinator Partnership

The Pollinator Partnership (P2) is the world's largest organization devoted solely to the health of pollinators, critical to food and ecosystems, through conservation, education, research, and policy. P2 is a nonprofit 501(c) 3 headquartered in San Francisco, CA. For more information or to make a tax-deductible donation contact info@pollinator.org, call 415.362.1137, or visit www.pollinator.org.