

Memorandum

To: Middletown Sustainability Committee

From: Cindy Unangst, Staff Planner

Date: October 9, 2023

RE: December Sustainability Committee meeting - Tuesday, December 19th in person and via Lifesize

Time: December 19, 2023, 05:00 PM Eastern Time

Meeting link

<https://call.lifesizecloud.com/12429552>

Passcode

21769

Phone

United States:+1 (312) 584-2401

Meeting discussion items:

1. October meeting minutes approval
2. Green Schools – Laurie Jenkins will speak about Green Schools efforts at FCPS
3. Bird City designation – Deb Portney will speak about the Bird City Maryland initiative, and also about protecting chimney swifts.
4. Green Lecture series with library – October talk on Saturday the 28th with Karen Whitehair talking about monarch butterflies was well attended; discuss potential topics for 2024 Green Talks. Nancy Lawson? Sam Droege, bee expert? Birding for beginner's speaker?
5. Outreach sub-committee report – lots of interest in mosquito control and sustainable-minded laundry detergent products at the Heritage Festival; thoughts going forward for 2024 Green Expo and more? thoughts on public education campaign, especially regarding citizen education on trees, outreach and social media?
6. Pollinator demonstration gardens – Memorial Park garden – proposed list of plants to install this fall in space previously filled up with Rattlesnake Master seedlings; Village of Foxfield eyebrow and circle planting – Cindy met with one of Edamarie's employees to look at the spring plantings; considering the drought year, the plants look great; thistle is still an issue at the circle, and Cindy will talk to the Public Works crew about removing the liriopoe on the eyebrow next spring.
7. Mayor's Monarch Pledge – report was due December 1st and approved on November 15th.
8. Compost project – two more compost bins available for purchase at municipal center; one was raffled off at the Heritage Festival and we have one for next year's Green Expo. Community compost numbers are still looking good and seem to be up from last year; October was 814 pounds and November was 704 pounds.
9. Tree plantings – tree planting maintenance/inventory schedule (see below); letter of support sent for SilvoCulture grant request; Healthy Forests, Healthy Waters tree planting will take place next spring; McClintock Distillery employees will be planting 60+ trees at Remsberg Park on March 8th.

FUTURE AGENDA ITEMS:

- Dark Sky policy

TREE PLANTING MAINTENANCE SCHEDULE

February 6 (Tuesday) 12:30-2pm – FRO area at Wiles Branch Park

February 9 (Friday) 10-11:30am – FRO area at Wiles Branch Park

February 23 (Friday) 10-11:30am – FRO area at Wiles Branch Park

Middletown Sustainability Committee Meeting Minutes
Date and Time: Tuesday, October 17, 2023, 05:00-6:15 p.m.

Attendance: Cindy Unangst, Gene Fleeman, Ann Payne, Bill Steigleman, Bill Spare, Sean O'Keefe

Meeting discussion items:

1. September meeting minutes approved.
2. Green Lecture series with library – Edamarie spoke about native plant gardening in late September that was well attended; Gene will cut the activity portion from the recorded tape; October talk is scheduled for Saturday the 28th at 10:30am with Karen Whitehair talking about monarch butterflies; Karen's talk does not yet have a flyer, but Cindy will check on its availability; there will be no talks scheduled for November and December due to the move to the new library; we will need to start brainstorming speakers for the new library; Sam Droege, the bee expert, was suggested.

Gene would like three recorders at our events: one for capturing audio, and two standard phones, one for a wide shot and the other for closeups. The videos are posted on our YouTube channel and linked to our website.

3. Outreach sub-committee report – lots of interest in mosquito control and sustainable-minded laundry detergent products at the Heritage Festival; kudos to the Outreach committee for all their planning! Our table was successful despite the weather.
4. Pollinator demonstration gardens – Memorial Park garden – proposed list of plants to install this fall in space previously filled up with Rattlesnake Master seedlings; Pam was to reach out to Edamarie about additional plants; Village of Foxfield eyebrow and circle planting – Cindy plans to meet with one of Edamarie's employees to go look at the spring plantings, and then schedule one more weeding session this fall; Mark (Backyard Bounty) will consult about weed/plant questions and share advice on the eyebrow.
5. Compost project – two more compost bins available for purchase at municipal center – one was raffled off at the Heritage Festival and we have one for next year's Green Expo. The Lunch out of Landfills teacher at MMS has retired and the program is not being done. There is no longer recycling at the school as well.
6. Tree plantings – tree planting maintenance/inventory schedule (see below); letter of support sent for SilvoCulture grant request; the cottonwood tree that was to be saved on the Foxfield Section 6 property will now be cut down per directions from the Frederick County Soil Conservation Service; close to 3,000 trees seedlings will be planted on that site, and PC Chairman Carney has asked for a Heritage tree to be planted as well. Anna Twig put together a plan for 2.71 acres that will be totally state-funded including planting and upkeep for 3 years on the property off Layla Drive and Hollow Road. The state will provide 1,175 trees – white oak, red oak, persimmons, plums and more. Oaks and sweetgums are doing well on that and other sites. Solar panels should be compatible on the same site. Gene mentioned that the link measuring solar productivity for the town's solar array is not currently working. McClintock Distillery is looking for a place to plant their 60 container Gift of Trees/Gimlets for Green Month campaign trees. Wiles Branch and Remsberg Park were suggested as possible locations. One of the ten redbuds on Foxfield Pass has died and a resident has requested a replacement.
7. Tree trails – Jim Roessler is working on text for Cone Branch tree trail. New trees to add to Wiles Branch tree trail – white ash and black willow.
8. Tree City USA Growth Award potential projects– Cindy will start recruiting help to work on Growth Award projects. She has compiled a recording form to revisit each town property to inventory the trees on town-

owned land. Bill Spare and Cindy are completing their inventories of trees planted within the past few years. There has been some damage done due to deer rub. We need to soon inventory the hundreds of trees planted in the County Park, plus the acre at Catocin Creek.

9. Gift Tree Program – late spring application came in for a redbud to be planted this fall which will be installed soon - location is tree grove off Linden Boulevard; QR code decals have arrived, and Mark has them placed.

A crabapple trees in one of the planters on Main Street that died will be replaced by a crape myrtle.

10. Recycling event – fall event will be held on Saturday, October 21st with a time frame for the event of 9am – Noon (last spring was 8-11am); the paint can, and electronics locations will be swapped to minimize congestion; Cindy has reached out to high school teachers to alert students of the need for help at the event. The Bellringers event is happening the same day, and they might use the Willow Street pocket park this year since they cannot use the town parking lot due to the recycling event.
11. Trex plastic bag collection – we can still take plastic bags to MES; one committee member indicated it would be helpful to have an earlier heads-up about whether a pickup is needed and how large the pickup is.
12. Battery recycling at the Municipal building – we have filled up three boxes so far, and need to recruit students to help with the battery collection boxes and promotion; one high school student has volunteered so far.
13. Weed control on Town streets and storm drains – Cindy pulled weeds along West Main Street last month, and we had volunteers from United Way pull weeds along West Green Street on October 6th. We need to delve more deeply into IPM and put out a fact sheet.
14. Wildlife Habitat Advisors program – Karen is interested in being involved in this program.
15. Frederick County Sustainability Commission meeting – there is a forum planned for February but is a loose plan.
16. Data centers (DCs) - Bill Steigelmann reports that two medium sized DCs already exist near Urbana. DCs like to build close together. AI is beginning to eat up lots of computing power, threatening sustainability with huge electricity use. One DC will use the same amount of power as FredCo uses. Greenhouse gas emissions are a serious concern as the load increases. We do not produce the power ourselves. The DCs have backup generators for when power is not available. Four supersized centers are being proposed with 42 giant diesel-powered megawatt burning backups. DCs alternate monthly testing, producing soot, etc. They make a lot of noise and soundproofing is not planned currently. Two thousand of these generators would run at full power in the event of a power outage. Noise pollution is not regulated during an emergency. It could deafen children. Current regulations are weak. Large amounts of explosive fuel will be stored on site. Rainwater will run off the massive roofs, a possible flood hazard. Tax revenue from the centers is desired to improve schools, etc. Bill urges stronger regulations. Bill was asked to send more info to our GT mailing list.
17. Water conservation, drought, and development discussion - (Ann) Middletown is periodically short of water for existing residential needs. Frederick County is currently absorbing the most new residents in MD. We continue to permit developments in our watershed. Given that an average household uses over 300 gallons of water per day and given that our groundwater sources cannot produce more water to meet the growing demand, it seems prudent for us to consider strategies to efficiently reuse the water that we residents draw into our homes. Enabling residential greywater use is one way to be more efficient with the water we use. For example, plumbing can enable water drawn from the family showers to be reused to flush toilets. Or water from sinks, washing machines, etc. can be reused to water landscapes. Filters are available to ensure reused water safety. Our comp strategic plan goal is to assure that water can be reused and recycled as

appropriate. In 2018 Hogan proposed and legislation was passed to encourage greywater in MD. The state's large committee tasked with designing regulations met from 2018 until COVID but did not resume. Frederick County has regulations that make reusing residential water difficult, if not impossible. Ann suggests we investigate ways to simplify reusing residential water and consider mandating the installation of greywater stubs in all new developments/ housing. Places where water has already become scarce, such as Tucson and Phoenix, mandate greywater in all new construction and even award cash incentives for greywater installation in existing residences. Ann suggests not waiting to run out of water to be proactive in conserving it. EPA info.

18. There will be no meeting in November since it would just be two days before Thanksgiving. December meeting date – third Tuesday – December 19th at 5:00pm.

GOALS FOR 2023:

PLANT 100 TREES IN 2023 – 135 planted in April ✓									
GIFT TREE PROGRAM - GOAL OF \$1000 – \$358 paid in April									
QUANTIFY/SHOW PROGRESS ON 25% CANOPY BY 2025									
HOLD GREEN EXPO - ✓									
SUPPORT MES & MMS LOOL PROGRAM - VOLUNTEER SUPPORT -									
PROMOTE & SELL 20 COMPOSTING BINS – 8 sold									
PROMOTE & SELL 25 RAIN BARRELS (GRANT REQUEST)?									
EVALUATE & RECOMMEND STREETLIGHT BUYBACK PROGRAM TO TOWN BOARD									
CREATE 2 AC POLLINATOR MEADOW NEAR SOLAR ARRAY									
EDUCATION ON STORMWATER PERMIT PROGRAMS									

FUTURE AGENDA ITEMS:

- Habitat advisor volunteers
- Dark Sky policy

TREE PLANTING MAINTENANCE SCHEDULE

- October 10 (Tuesday) 9-10:30am - inventory of trees off Layla Drive and tree tube installation**
- October 17 (Tuesday) 9-10:30am – check on tree-of-heaven along Foxfield walking trail and do tree inventory of Fall 2022 trees planted along trail**
- October 20 (Friday) 9-10:30am – more tree inventory and tree tube installation**
- October 27 (Friday) 9-10:30am – tree inventory at Cone Branch pocket park**
- October 31 (Tuesday) 9-10:30am – prune black gum trees at Remsberg Park**
- November 3 (Friday) 9-10:30am – prune oaks at Remsberg Park**

Growing Green:

The Keys to 100%
Green Schools by 2035

Mobilize Frederick Education Group
Climate Response and Resilience Report
Recommendation 37



**Green Schools are more than just buildings.....
they incorporate our school campuses, curriculum, and communities**

**Kellam High School,
Virginia Beach City School
District**

- 86 schools,
67,000 students
- Similar budget to FCPS
- 1.5 million sq. ft.+ of
LEED building space

**One well-positioned
person led the way....**

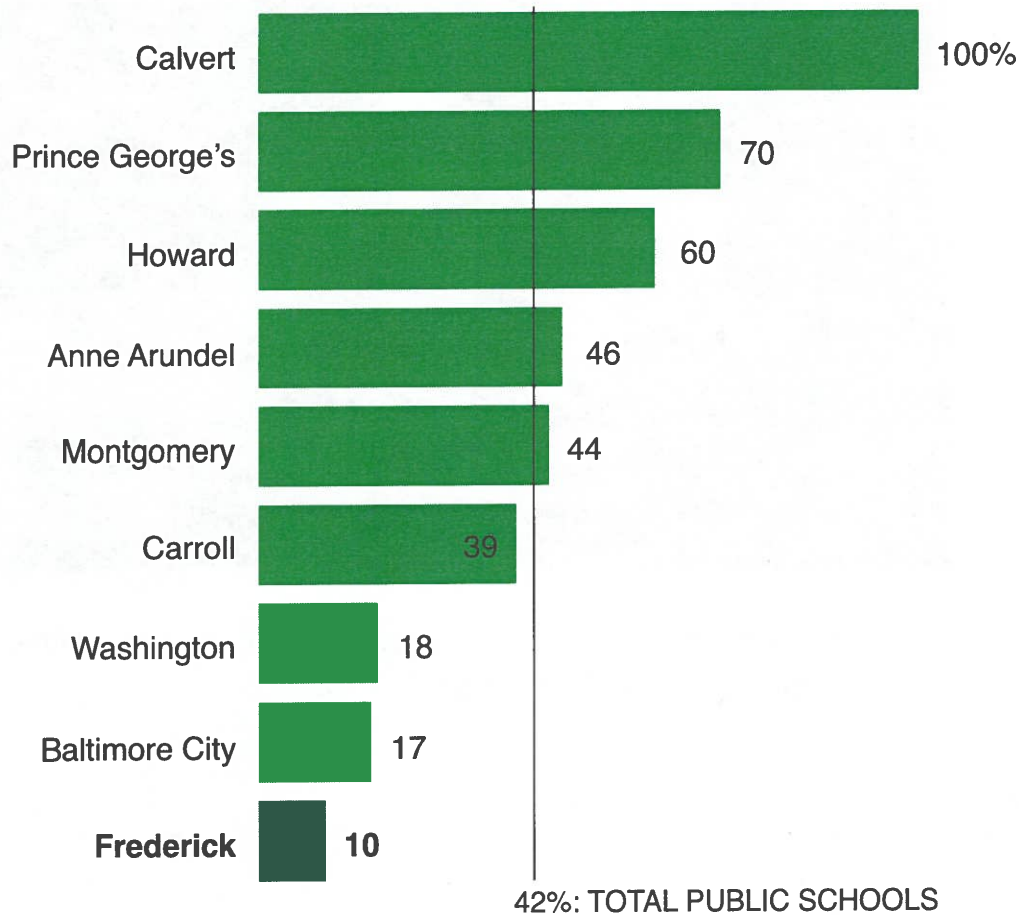


Since 2006:

- Environmental clubs increased from 6 to 72
- Outdoor teaching gardens increased from 5 to 64
- Plan for all 86 schools to have scratch-cooking in school cafeterias by 2024
- **Saved \$69 million on energy costs**

Frederick County ranks among lowest in Maryland Green Schools participation rate

% of select participating schools, by county



MAEOE

Maryland Association for Environmental and Outdoor Education (MAEOE) has managed the Maryland Green Schools Program since 1999.

Program designed to create positive, sustained school-wide changes in knowledge, attitude, behavior, and action.

In 2019, State Legislature provided funds to increase Green Schools to 50%

Green Schools Goals

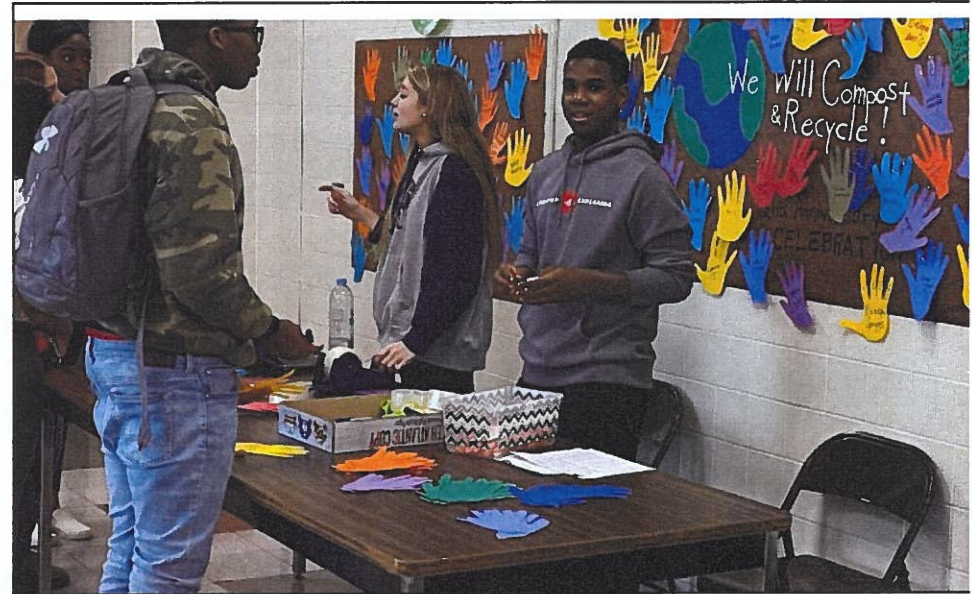
Objective 1: Curriculum & Instruction

- Professional development
- Environmental lessons across all disciplines

Objective 2: Student Actions

- Energy conservation
- Water conservation
- Composting
- Recycling
- Ecosystem restoration
- School gardens
- Etc.

Objective 3: Community Partnerships, Awards & Recognitions



Students renew pledge and celebrate 2nd year of recycling and composting at Urbana High School

Environmental Education Linked to Academic Achievement

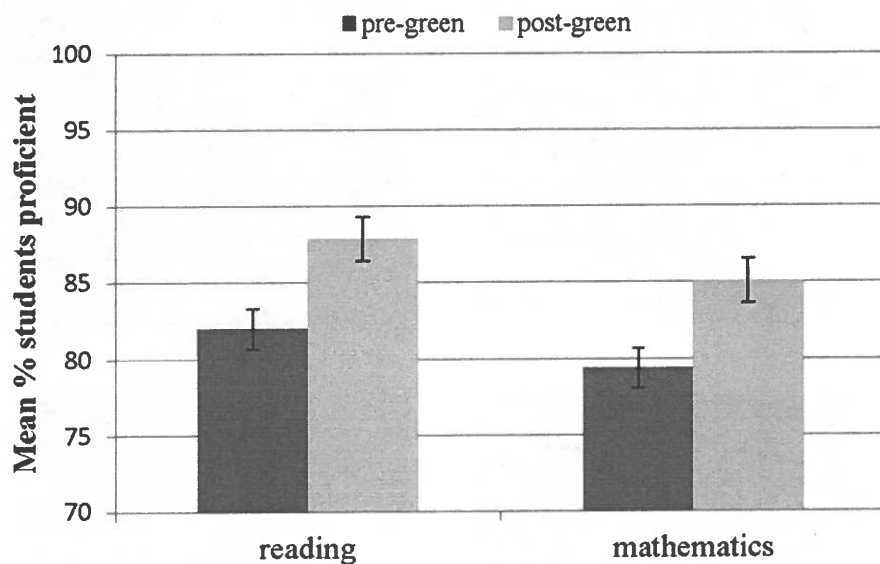


Fig. 1. Mean percentage pass rate for elementary and middle school students, pre- and post- Maryland Green Schools Awards Program designation.

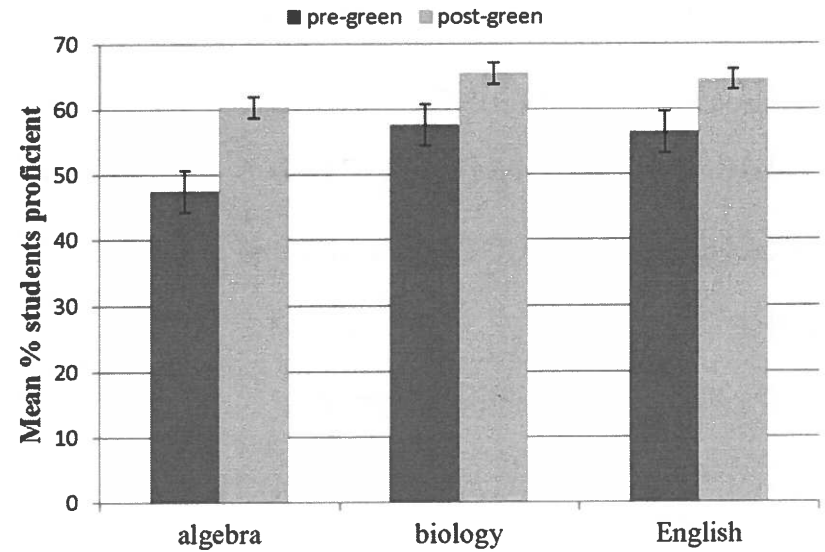
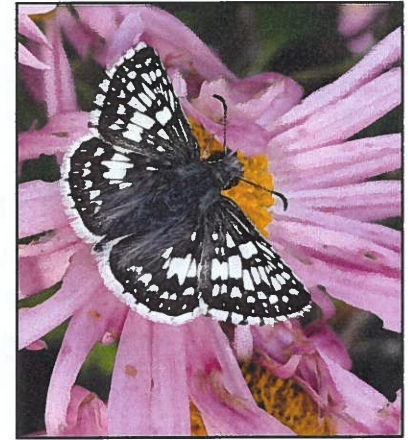
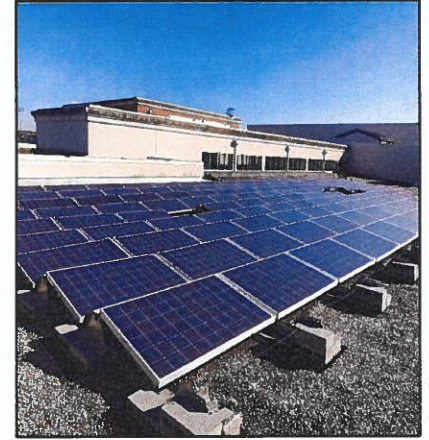


Fig. 2. Mean percentage pass rate for high schools pre- and post- Maryland Green Schools Awards Program designation.

From Study: The Influence of a Statewide Green School Initiative on Student Achievement in K–12 Classrooms by Cynthia Ghent, Amy Trauth-Nare, Katie Dell & Sarah Haines. Towson University. Published online: 13 Dec 2014.

Benefits of Green Schools

- Increase student achievement
- Improve physical and mental health
- Increase staff retention
- Strengthen communities
- Recover food
- Prepare for workforce
- Increase civic engagement
- Improve environment
- Achieve sustainability goals as set forth in BOE Policy 204
- **SAVE MONEY**
- ...and more.



@ participating schools in FCPS

Why Schools?

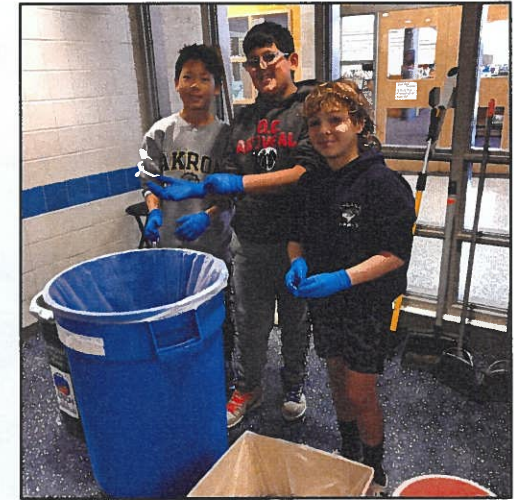


Pollinator garden @ Middletown Elementary

- 20% of our county residents are in schools nearly every day
- 47,000 students
- FCPS county's 2nd largest employer
- 1500 acres of campuses (for comparison, we have 2400 acres of county parks)
- 6.7 million square feet building space
- Budget: FY23 \$800 million plus with nearly 45% of funding coming from local county government

What our team has started!

- Collaborating with FCPS
- Assisted MAEOE with Green Careers Fair
- Grants to support professional development and school supplies
- Facilitating community partnerships
- Facilitating Green Centers



Examples from Other Districts — which have robust Green Schools programs

Baltimore City Public Schools

Sustainability Plan (2016):

- Easy to navigate online plan and progress
- Includes 6 Focus Areas:
 - Develop environmentally literate students
 - Create healthy school environments
 - Reduce and conserve natural resources
 - Improve school green spaces
 - Engage school communities
 - Build student leadership
- <https://www.baltimorecityschools.org/sustainability>

Prince George's County Public Schools

Climate Action Plan (April 2022):

- Developed after county finalized own plan
- Includes 8 Priorities:
 - Support environmental justice through climate curriculum and trainings
 - Reduce carbon footprint from buildings
 - Commit to low carbon school transportation
 - Reduce food waste and grow climate-friendly food
 - Commit to sustainable materials management and procurement
 - Commit to climate resilient land management
 - Lead by example to support transformational change
- <https://drive.google.com/file/d/1eS5YuvflbLyDsnw5QWwqITtKBeEjx28/view>

Started by Principals in 2009

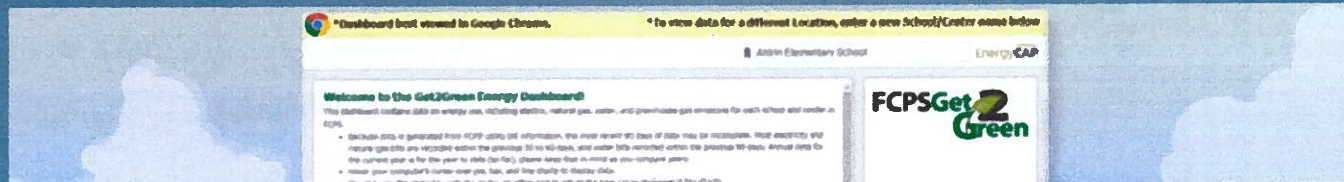


Welcome

FCPS Get2Green is the environmental stewardship program for Fairfax County Public Schools. Use this website as a resource to engage in environmental stewardship projects at your school, incorporate sustainability in the classroom, find your school's energy and recycling data, and learn more about green initiatives in FCPS.



Check out our new and improved Energy Dashboard to find the latest data for your school!



Our Requests of the Board of Education

Commitment

- **Support increasing Green Schools, set goal**
- Recognize accomplishments
- Community partnerships
- Expanded use of public infrastructure
- Support FCPS Green Center or Sustainability Hub

Staff Support/Funding

- **Designate funding for Green Schools Coordinator (who can bridge gap between facilities and instruction)**
- Supplemental compensation/planning time for Green School leaders
- Add district-wide Environmental Educators that can coach and lead
- Expand Outdoor Education opportunities and outreach

Sustainability Plan

- **Include environmental literacy, curriculum in all disciplines in plan**
- Include Green Schools
- Buildings *and* Campuses
- Mirror goals of county and other county plans
- Include a website that shares data and available resources

Why Green Schools Now?

- ✓ Achieves BOE's policy guidance
- ✓ Students know the climate is changing - they are anxious for action and education
- ✓ Green Schools online application is easier now with online portal that was funded by state
- ✓ Synergistic with all county plans and the Blueprint
- ✓ Unprecedented state and federal funding
- ✓ Students need time away from screens



Playing the monarch migration game @
Sugarloaf Elementary School



Want to be a Bird City? Here's how!



Bird City Maryland is part of the Bird City Network – uniting Bird City Programs across the hemisphere to help communities improve habitats, reduce threats to birds, engage people in bird conservation, and promote sustainability.

Getting your community designated as a Bird City in Maryland is great for birds and people!

→ Visit us online: <https://birdcity.org/maryland>

Introduction

Many communities are doing invaluable work to preserve biodiversity and make their landscapes healthier for people and wildlife. Achieving designation as a Bird City allows you to be recognized for your actions, receive guidance about conservation issues and solutions, and learn from and engage with a broader network of communities who share your interests and goals.

There are 5 steps to being part of Bird City Maryland:

1. Review the requirements and action list
2. Contact us when you are ready to get started
3. Form your team
4. Complete your application and create your webpage
5. Promote and continue your work

Step 1: Review the requirements and action list

To become a Bird City, a community fulfills specific actions for initial designation and continues their participation through regular renewals. Visit our website's [Apply / Renew page](#) for details of the application and renewal process.

- The top of the page is an overview of requirements, fees, and deadlines
- Scroll down on that page to View our Action List which you work from to complete your application
- Review the list and think about what projects are already taking place in your community
- Download the list if needed to work from and share
- Start a document to capture your research, ideas, and notes

Step 2: Ready to go? Contact us!

If you think you'd like to work towards applying for Bird City designation, Contact Us using the form on the website. Make sure you select Bird City Maryland from the drop-down recipient list. We will be happy to get you started on the next steps.



Step 3: Form your team

The team you work with in your community is an important part of your Bird City experience. These are the people who work together to complete bird-friendly actions, help complete the application and renewals, and tell your community's Bird City story through your community's website page.

To help you think broadly about possible contributors and assemble a diverse team, download our [Dream Team Worksheet](#) and see what ideas it sparks. **Connect with at least one or a few others to get started.**

Step 4: Complete your application & set up your webpage

We will set you up as a User to Login to the back office of the website – this is where you will manage your webpage and complete your initial application and periodic renewals.

Application: From your back office, your team will complete the initial application, including a narrative description of each of your completed actions. Where appropriate, you may also include documentation and images that support the narrative. Once approved, your achievements and images will be published to your webpage. Payment instructions are included on our [Apply / Renew page](#).

Webpage: Your community will have its own webpage and easy-to-use tools to keep it up-to-date. Visit our [existing communities](#) for examples. There are 5 parts to your community webpage:

1. *Home page header* – include your community logo and a general welcome / introduction here
2. *About Us tile(s)* – here you can tell your Bird City story in text, links, and images. You can update your content as often as you wish. We will share ideas!
3. *Achievements* – this information comes from your application – see above
4. *Events* – include any bird related events here to keep people connected and engaged
5. *Tourism* – this section can be used to promote birding destinations and businesses that support your Bird City conservation and engagement efforts

Step 5: Promote & continue your work

An important aspect of your bird-friendly work is that it is on-going. As you continue working together with your community team and partners, learn more from other communities in the Network, and delve into new ideas to implement locally, the benefits for birds and people grow!

Renewal: To maintain your designation, we'll ask you to update your application online as follows:

- Every year, update your World Migratory Bird Day event details
- Every 2 years, review and update all your action narratives and submit your renewal fee
- Every 4 years, submit a current municipal resolution or letter of support (campuses)

Promote your work by sharing your stories and images on your webpage and in your application.

Thank you for your hard work and dedication to making your community healthier for birds and people!

Chimney Swifts!

Chimney Swift Conservation Association / www.ChimneySwifts.org



Chimney Swifts historically nested and roosted in hollow trees. As American pioneers moved westward across the continent, they cleared forests and removed the swifts' natural habitat. The birds that Audubon called American Swifts became known as Chimney Swifts as they readily adapted to the masonry chimneys erected by those same pioneers. Over the decades, the range of the swifts expanded with the ever increasing availability of this new, man-made habitat. However, changes are again challenging this adaptable species.

The purpose of the Chimney Swift Conservation Association is to promote Chimney Swift conservation by identifying and monitoring existing nest and roost sites, educating property owners about the beneficial nature of Chimney Swifts as insectivores, installing and monitoring new structures specifically for use by Chimney Swifts as nest and roost sites. Our newsletter, *Chaetura*, is distributed to hundreds of volunteer Research Associates all across North America. We hope that you will join us!

Paul and Georgan Kyle
Project Directors

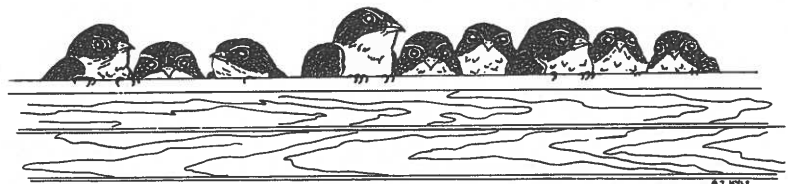
WHAT IN THE WORLD IS THAT SOUND ?

Chimney Swifts create a variety of sounds during their stay with us in North America during the warmer months. There is the "whooshing" sound of their wings as they come and go from the chimney. They utter a gentle "chipping" as they socialize with one another in the roost during nest-building and at night. The most audible sounds are those of the young which have two basic vocalizations: the feeding call which is a very loud, high-pitched "yippering" as they beg for food from the returning parents, and their mechanical, hissing alarm call which they make when disturbed or frightened.

As long as the young are making the loud feeding call, they are incapable of sustained flight and are completely dependent on their parents for food. Homeowners' tolerance during this critical period of the swifts' development is very important. If the young are forced from the chimney during this period, they will perish -- slowly starve to death over a period of several days. The parents are unable to care for them outside of their chimney.

Once the sound of the young becomes noticeable, they are usually only 10 days or so from fledging. Keeping the damper closed and packing the fireplace with insulation can dampen the sound to tolerable levels. If additional incentive is needed to allow the swifts to continue their breeding cycle, consider this: the raucous sound emanating from your fireplace is the sound of thousands of annoying mosquitoes, biting flies and flying ants being converted into beautiful, graceful migratory avian insectivores which will consume thousands more of the insect pests we swat and curse during the summer months.

Chimney Swifts, like many of our precious Neotropical migrants, are declining in numbers throughout North America. We should all be concerned about their plight and do whatever we can to encourage their survival. They do not require acres of unspoiled wilderness, expansive wetlands or complicated wildlife management plans. They only require one square foot of unused column like our chimneys during the summer when we don't need them...and a little tolerance.



LIFE HISTORY OF THE CHIMNEY SWIFT

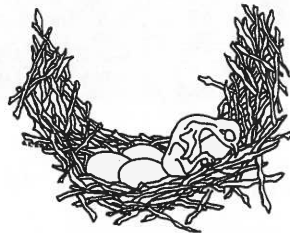
The Chimney Swift is one of four regularly occurring species of swifts found in North America, and the most common one found east of the Rocky Mountains. As their name implies, they are accustomed to building their nests in chimneys as well as abandoned buildings and occasionally stone wells.

Adult Chimney Swifts are most commonly seen in flight -- usually in groups. When soaring, their long, scythe-shaped wings span about 12.5 inches supporting a proportionally short body with a squared-off tail. The flickering, bat-like flight when flapping is due to short, massive wing bones. Chimney Swifts' flight is accompanied by a sharp "chippering" or "ticking" call.

At rest, an average 5 inch, 22 gram adult is sooty-gray to black with the throat silvery-gray in color. Both sexes are identical in appearance. The long wings cross by an inch or more over the tail feathers, which are tipped by pointed bristles. The claws and tail bristles are used to cling to rough vertical surfaces. Swifts are unable to perch or stand upright in passerine fashion.

Chimney Swifts winter in the Amazon Basin of Peru. They arrive in the continental United States in late March and are gone by early November. Nesting begins in May, and has been known to continue into August. Chimney Swifts are usually single-brooded, and there will be only one active nest in any structure regardless of the size of the site.

The female normally lays three to five white eggs in a nest of twigs which are broken from the tips of tree branches, glued together with saliva and attached to a vertical surface. Both sexes are involved in nest construction. The eggs are incubated by alternating adults for eighteen to nineteen days. Chimney Swifts catch flying insects on the wing. Baby Chimney Swifts are fed by both



Newly hatched Chimney Swifts are naked and completely helpless



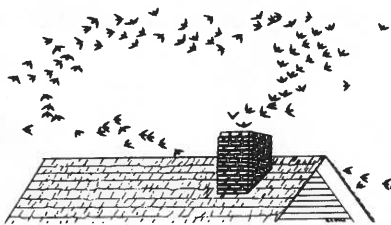
Five day old Chimney Swifts have pin feathers on their heads and bodies



When ten days old, the tips of the swifts' flight feathers begin to unfurl



Fledgling swifts will exercise by "practice-flapping" while clinging tightly to the nest or chimney wall



Chimney Swifts congregate in the fall at suitable roost sites

parents. The feeding continues until the birds fledge from the chimney about 30 days after hatching.

The hatchlings are pink, altricial and completely naked at birth. They have sharp claws which enable them to cling to textured surfaces. Within a few days, black pin feathers begin to appear. The young are able to climb, and they exhibit preening behavior even before their feathers emerge.

By the time they are eight to ten days of age, the babies' feathers begin to unfurl. By fifteen to seventeen days of age, their eyes begin to open.

Shortly after their eyes open, most of the flight and body feathers will be unfurled. However, the feathers around the face and head will stay in sheath for several days -- giving the birds a "frosty-faced" appearance.

By the time Chimney Swifts are 21 days old, they will cling tightly to the nest or chimney wall, rear back and flap their wings furiously until they are panting and out of breath. Twenty-eight to thirty days after hatching, young Chimney Swifts will leave the safety of the chimney for their first flight.

Once an entire brood has fledged, they will fly with their parents in slow, noisy parades around the area of the nest site. The young will return frequently to the roost during the first few days, but may soon begin to visit other roosts in the area.

At the end of the breeding season, the swifts' communal instincts peak prior to fall migration. They congregate in flocks of hundreds and even thousands at suitable roost sites.

Although Chimney Swifts can withstand a few early cool snaps, they will usually ride south on the first major cold-front that blows through in the fall.

This is an edited excerpt from Rehabilitation and Conservation of Chimney Swifts, Fourth Edition by Paul and Georgan Kyle. Copyright, 2004

CHIMNEY SWIFT TOWER DESIGN BASICS

Experimentation with new materials, designs and methods of installation continue. However, several principals are known to work well in wooden Chimney Swift towers.

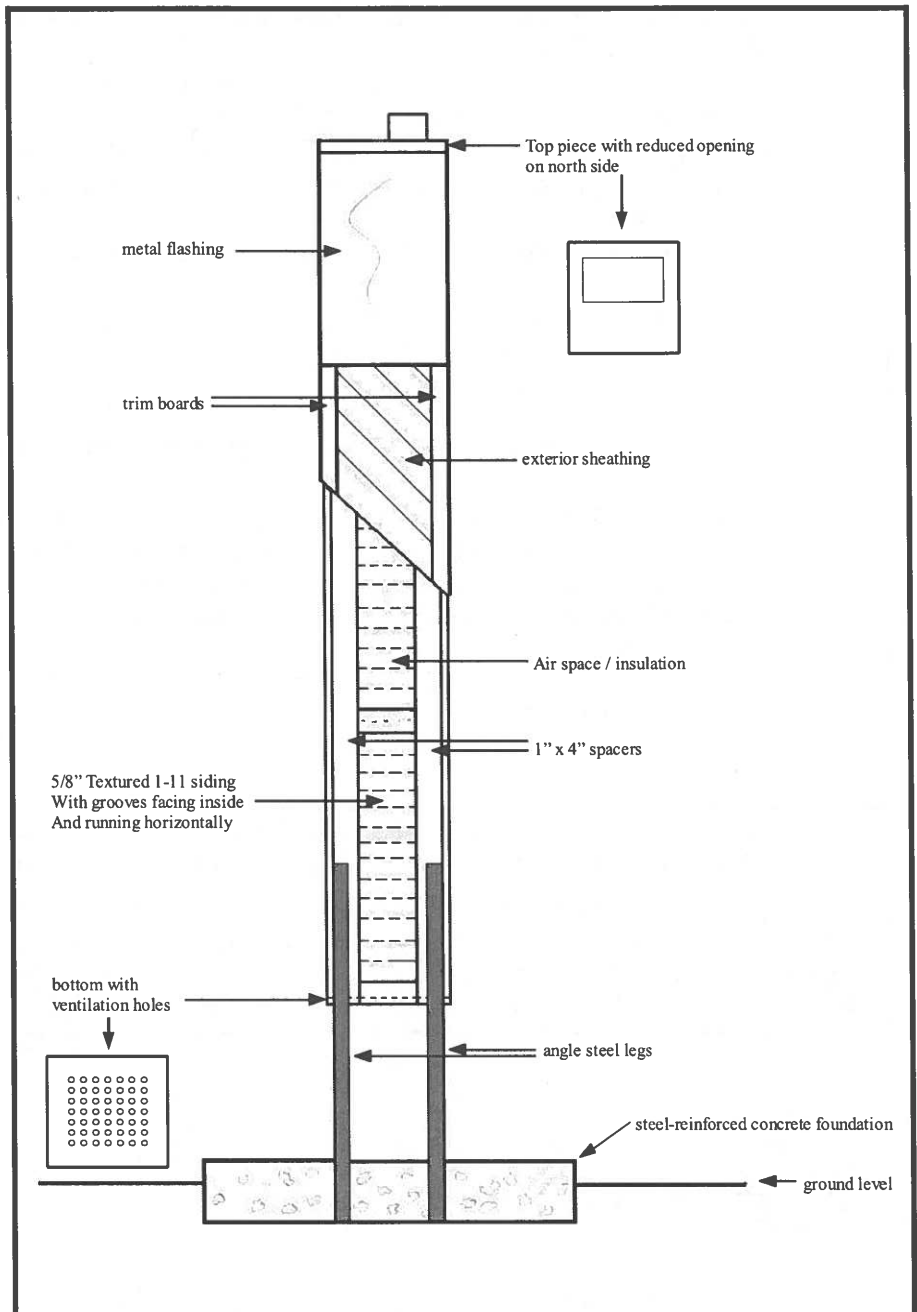
Heavy texture on the inside is essential. 5/8" Textured 1-11 siding is readily available and easy to work with.

Wooden towers should be double-walled with a space between the inner nest chamber wall and the outer skin. This space should be filled with some form of insulation to prevent overheating. A minimum of 3/4" rigid foam insulation is recommended.

The recommended minimum height is 8', but 12' is preferable. The inside diameter should be no less than 14".

Unless the material used on the outside of the tower is completely smooth, a 24" band of metal flashing around the top is mandatory for the safety of the swifts and their young. This will prevent predators from being able to climb the tower and gain access to the nest chamber.

The bottom of the tower should be made from 3/4" treated plywood and have a grid of 3/8" holes spaced 1 1/2" apart for ventilation and installed with wood screws for easy removal. The top should also be made from 3/4" treated plywood and have an



opening cut that is no more than half of the area of the inside of the tower. The opening must be placed on the north edge of the tower to exclude as much summer sun from the nest chamber as possible.

A free-standing tower on steel legs is easier to protect against ants. A 2" band of Tanglefoot (brand) sticky insect trap can be applied around each leg. A concrete foundation will eliminate the need for guy lines. Towers that are 12' tall will require a 48" x 48" x 10" steel-reinforced concrete slab. Towers that are 8' tall will need a slab measuring 36" x 36" x 6". In areas where frost heave is a potential problem, consult local building codes for advice.

In the fall, after the swifts have migrated out of the area, the bottom should be removed and droppings cleaned from the tower. This is a good time to count egg shells and assess the success of the nesting season. Old nests should also be removed at this time. Covering the tower during the winter months will extend the life of wooden towers.

WHY SHOULD I CARE ABOUT CHIMNEY SWIFTS?

- Chimney Swifts eat nearly one third of their own weight in flying insect pests such as mosquitoes, biting flies and termites every day.
- Chimney Swifts historically used large, hollow trees for nests and roosts. As the ancient forests were cut down, they learned to use chimneys and other structures instead.
- Today, just like Purple Martins, Chimney Swifts rely almost entirely on man-made structures for nest sites.
- Because they cannot perch like songbirds, Chimney Swifts must have deep shafts in which to raise their families and roost at night.
- Chimney Swifts are protected by State Wildlife Codes and Federal law under the Migratory Bird Treaty Act of 1916.
- Like all Neotropical Migrants, Chimney Swifts are declining in numbers and need our assistance.
- Like watching a beautiful sunset, the aesthetic value of observing Chimney Swifts' aerial acrobatics and interactions is a simple pleasure that nature has to offer.

WHAT CAN I DO TO HELP CHIMNEY SWIFTS?

- If you have a masonry or clay flue-tile chimney, keep the top open and the damper closed from March through October to provide a nest site for these insect-eaters. Metal chimneys should be permanently capped to prevent birds and other wildlife from being trapped.
- Have your chimney cleaned in early March before the Chimney Swifts return from their winter home in South America.
- Work with local conservation groups to construct Chimney Swift Towers and educate your friends and neighbors about Chimney Swifts.
- Participate in our continent wide monitoring program "A Swift Night Out!"

HOME CHIMNEY MAINTENANCE: SELECTING AN APPROPRIATE CHIMNEY SWEEP

Every chimney needs to be professionally cleaned each year for the safety of the homeowner as well as for the safety of the Chimney Swifts. Although attitudes are changing within the chimney sweeping industry, there are still companies that will remove active nests and kill or discard the young. Before hiring a chimney sweep, ask what action they take when they find birds in a chimney. NEVER hire a company that openly advertises "Bird Removal".



Visit on line at:

www.ChimneySwifts.org

- *Learn more about Chimney Swifts*
- *Participate in monitoring projects*
- *Order: Books about Chimney Swifts*
Books about Tower Construction
Chimney Swift vocalization CDs
Limited Edition Prints
Wildlife Merchandise

Send your e-mail to Kyle@ChimneySwifts.org

The Chimney Swift Conservation Association

An organization dedicated to the preservation and conservation of Chimney Swifts through education and construction of Chimney Swift Towers for use as nesting and roosting sites by Chimney Swifts

Subscriptions to our annual newsletter

Chaetura

are available for \$25.00 per year

CHIMNEY SWIFT CONSERVATION ASSOCIATION
14246 Hunters Pass / Austin, TX 78734
USA

Artwork and Text by Georgan Z. and Paul D. Kyle

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Cindy Unangst

From: mayorsmonarchpledge@nwf.org
Sent: Wednesday, November 15, 2023 12:28 PM
To: Cindy Unangst
Subject: Congratulations! Mayors' Monarch Pledge Report Approved

Dear Cindy Unangst,

Your Mayors' Monarch Pledge report has been reviewed and approved by the National Wildlife Federation Mayors' Monarch Pledge Team. Your profile will now display a "complete" status. If your community completed eight or more actions, you will also see a new achievement badge on your profile page for this program year.

If your mayor or local/tribal executive leader would like to continue to participate in the pledge, please fill out the pledge survey on our website beginning December 1. Please note, only your community's staff point of contact will be able to complete this form. For any questions about the program or your continued participation, please reach out to mayorsmonarchpledge@nwf.org.

Thank you,
The National Wildlife Federation's Mayors' Monarch Pledge Team



MONTHLY SUSTAINABILITY REPORT

START DATE: 10-01-2023 **END DATE:** 10-31-2023

Town of Middletown
313 S. Church St
Middletown, MD 21769



OFFSET EQUIVALENTS:



CO₂
EMISSIONS
FROM

33

GALLONS
OF GAS
CONSUMED



GREENHOUSE
GAS
FROM

743

MILES
DRIVEN
BY AN AVERAGE
PASSENGER VEHICLE



CARBON
SEQUESTERED
BY

5

TREE
SEEDLINGS
GROWN FOR
10 YEARS



CO₂
EMISSIONS
FROM

35,276

SMART
PHONES
CHARGED

COLLECTION WEIGHTS:

Total Weight: 814 lbs (0.4 Ton)

**4539 METROPOLITAN COURT
FREDERICK, MD 21704**

**240-608-0283
INFO@KEYCOMPOST.COM**



MONTHLY SUSTAINABILITY REPORT

START DATE: 11-01-2023 **END DATE:** 11-30-2023

Town of Middletown
313 S. Church St
Middletown, MD 21769



OFFSET EQUIVALENTS:



CO₂
EMISSIONS
FROM

28

GALLONS
OF GAS
CONSUMED



GREENHOUSE
GAS
FROM

641

MILES
DRIVEN
BY AN AVERAGE
PASSENGER VEHICLE



CARBON
SEQUESTERED
BY

4

TREE
SEEDLINGS
GROWN FOR
10 YEARS



CO₂
EMISSIONS
FROM

30,411

SMART
PHONES
CHARGED

COLLECTION WEIGHTS:

Total Weight: 704 lbs (0.4 Ton)

**4539 METROPOLITAN COURT
FREDERICK, MD 21704**

**240-608-0283
INFO@KEYCOMPOST.COM**

Wildlife Habitat Program Mission Statement

Mission: The Habitat Advisor Program will empower, inspire, and educate our community to create and sustain native wildlife habitat by providing them with on-site, no-cost, collaborative visits, led by trained volunteer habitat advisors.

Vision: The Habitat Advisor Program will endeavor to counteract the effects of habitat loss, decreasing density of wildlife, decreasing biodiversity, increasing invasive species, and climate change through the combined efforts of many individuals. We envision a network of privately owned and community properties transformed into beneficial wildlife habitat.

How the program works: Any property owner in our community may request a Habitat Advisor visit. Volunteer Habitat Advisors typically spend an hour visiting a home, neighborhood site, or business. They walk the property together with the client, discussing questions and circumstances unique to the site. Advisors ask about the owners' vision for the property. They talk with the property owner about native plants and landscape elements that provide food, water, and shelter for birds, pollinators, and other wildlife. They discuss important topics like garden structure, lawn reduction, invasive plant removal, native plantings, water conservation, and bird protection. Together, advisors and property owners set priorities and a plan of action. The Habitat Advisors provide carefully selected materials, write a follow-up report, and make themselves available for further assistance if needed.

The Advisors volunteer their time and knowledge because they believe that, working yard by yard, we will make a difference. They do not present themselves as the experts, but as collaborators with each homeowner or community member who has requested assistance.

Nests for Native Bees

Pollinators are a vital part of a healthy environment.

Native bees are North America's most important group of pollinators.

Nest sites are simple to make, and can be added to any area of greenspace, large or small.



A selection of home-made bee nests: (clockwise from left) wooden block, bamboo bundle, and bumble bee box.

Pollinators are a diverse and fascinating group of animals. In addition to their beauty, pollinators provide an important link in our environment by moving pollen between flowers and ensuring the growth of seeds and fruits. The work of pollinators touches our lives every day through the food we eat. Even our seasons are marked by their work: the bloom of springtime meadows, summer berry picking, pumpkins in the fall.

There are 4,000 species of native bees in North America. Together they form the most important group of pollinators. Like all wildlife they are affected by changes in our landscapes, especially the loss of nesting sites. Bees make nests in which they create and provision brood cells for their offspring. In many modern landscapes, a desire for neatness has usually resulted in the removal of bare ground, dead trees, and untidy corners of rough grass—all important nesting sites for bees.

This fact sheet gives information on how to provide nest sites for native bees, including nest blocks and bare ground for solitary-nesting bees, and nesting boxes for bumble bees.

For more information, visit our web site, www.xerces.org, where you will find other fact sheets and more detailed guidelines on how to enhance habitat for pollinators. You'll also find information about *Attracting Native Pollinators*, *Protecting North America's Bees and Butterflies*.

Written by
Matthew Shepherd



The Xerces Society
for Invertebrate
Conservation

(855) 232-6639

www.xerces.org

Wood-Nesting and Cavity-Nesting Bees

About 30% of our native bee species make their nests in old beetle tunnels in snags or similar locations. The female bee builds dividing walls across the tunnel to make a line of brood cells. Where you can, retain snags. Where you can't, make some nesting blocks. (Alternatively, many garden centers and back yard bird shops sell them.)

- **Nesting blocks.** Bee blocks can be made by drilling nesting holes between 3/32" and 3/8" in diameter, at approximate 3/4" centers, into the side of a block of preservative-free lumber. The holes should be smooth inside, and closed at one end. The height of the nest is not critical—8" or more is good—but the depth of the holes is. Holes less than 1/4" diameter should be 3-4" deep. For holes 1/4" or larger, a 5-6" depth is best.
- **Adobe blocks.** In desert areas, adobe blocks can be made and drilled with holes as outlined above.
- **Logs and snags.** Get some logs or old stumps and place them in sunny areas. Those with beetle tunnels are ideal. Plant a few upright, like dead trees, to ensure some deadwood habitat stays dry. On the southeast side of each log, drill a range of holes, as outlined above.
- **Stem or tube bundles.** Some plants, like teasel, bamboo, and reeds, have naturally hollow stems. Cut the stems into 6" to 8" lengths. Be careful to cut the stems close to a stem node to create a tube with one end closed. Fifteen to twenty stem pieces tied into a bundle (with the closed ends of the stems together) makes a fine nest. Or, make a wooden frame to hold as many stems as you like. Paper tubes can be used as well. Just make sure they stay dry.

Location of the nesting sites is important. These nests should be placed where they are sheltered from the worst of the weather, with entrance holes facing towards east or southeast, so they get the morning sun. With stem bundles, be sure that the stems are horizontal. The nests can be any height from the ground, but between three and six feet is convenient. Put them on a building, fence, or stake, or place them in a tree. Fix them firmly so they don't shake in the wind.

Ground-Nesting Bees

Most native bees—about 70% of species—nest in the ground, and need access to the soil surface to dig their nest. Each female excavates her own nest tunnel and brood cells, and stocks the cells with nectar and pollen. Where possible, keep bare or partially vegetated ground. Where you can, create more.

- **Bare ground.** Simply clear the vegetation from small patches of level or sloping ground and gently compact the soil surface. These patches can be from a few inches to a few feet across, but should be well drained, and in an open, sunny place. A south-facing slope can be a good location. Different ground conditions—from vertical banks to flat ground—will draw different bee species, so create nesting patches in different areas if you can to maximize the nesting opportunities.
- **Sand pits and piles.** In a sunny, well-drained spot, dig a pit about 2' deep, and fill it with a mixture of pale-colored, fine-grained sand and loam. Where soils do not drain well, a pile of the sand/loam mixture can help, or make a raised bed. If space is limited, you can fill planter boxes with the sand/loam mixture.

Bumble Bees

Unlike the nests built for solitary bees there are no strict size requirements for bumble bee nests—any hole large enough for a small colony will be OK. After emerging from hibernation, a bumble bee queen will hunt for a dry, warm cavity in which to start her colony. In natural conditions, most bumble bees nest in abandoned mouse holes in the ground or under grass tussocks. Where you can, keep patches of rough grass. Where you can't, consider building a nest box or two.

- **Nest box.** A simple wooden box, with internal dimensions of about 7" by 7" by 7", made from preservative-free lumber will work. Drill a few ventilation holes near the top (covered with door screen to deter ants) and some drainage holes in the bottom. Make an entrance tunnel from 3/4" plastic pipe, marked on the outside with a contrasting color, and fill the box with soft bedding material, such as upholsterer's cotton or short lengths of unraveled, soft string. The box must be weather tight; the larvae may become cold in a damp nest, and mold and fungus will grow.

Place the box in an undisturbed site, in partial or full shade, where there is no risk of flooding. The box should be on or just under the ground. If you bury it, extend the entrance tube so it gently slopes up to the surface. Put your nesting box out when you first notice bumble bees in the spring, or when the first willows and other flowers are blooming, and be patient. There is no guarantee that bees will use your box. Only about one in four boxes get occupied. If it has no inhabitants by late July, put the nesting box into storage until next spring.

For more pollinator conservation information, go to www.xerces.org

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