

In 2017 WM Eagle Valley partnered with Six Rivers Land Conservancy to step up WHC required nest monitoring and assist Eagle Valley in it recertification through WHC's new on-line program.

Wildlife Habitat Council Programs & Environmental Education

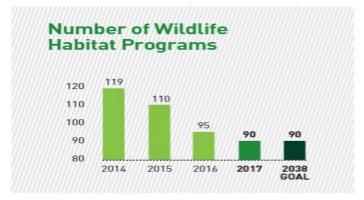
Waste Management provides important habitat and educates for

environmental stewardship



Our WHC partner has changed its emphasis from acreage to site quality and impact of project, and we are shifting our goal accordingly.





Numbers reflect both "Lands for Learning" projects and specific habitat sites. Note that in 2017, the WHC program was revised to emphasize site quality and impact rather than quantity. Our program has taken that approach as well.



Post 2015 Observations & Activities



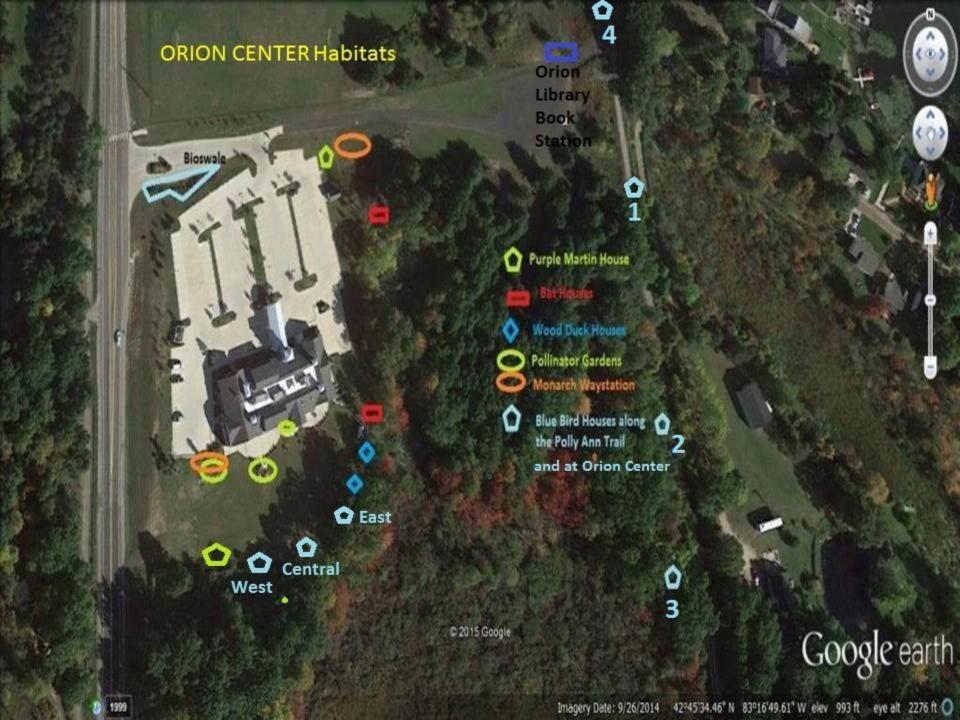
Relocating blue bird houses at the site, moving them off the perimeter fences where racoons may have had accessibility to eggs.











	1	Population Extimate 0 = None	#NCS				
	2	1 = inchiduals/Few 2 = si 3000uqft					NATURAL COMMUNITY SERVICES
	3	1 = >1000 raft to <0 4 = id. Sacres to <1: 5 = it lacre			Date		
	4	5 = is lacre					
5 Observer:		Park: Site Name/Descr		iption:			
	6			Ci			
		GPS Point #	Common Name	Species	Status	Density	Location
HABITAT	8		yarrow	Achillea millefolium		D	Buffer/Natural
	9		raspberry	Rubus idaeus	Native	P	
INSTALLATIONS,	10		wild strawberry	Fragaria virginiana	Native	S	
SPECIES	11		long-bearded hawkweed	Hieracium longipilum	Native	S	
INVENTORY	12		old field goldenrod	Solidago nemoralis	Native	Р	
_	13		big bluestem	Andropogon gerardii	Native	Р	
AND SIGNAGE AT	14		smooth pussytoes	Antennaria parlinii	Native	S	
ORION CENTER	15		wormwood	Artemisia campestris	Native	Р	
	16		poverty grass	Danthonia spp	Native	Р	
	17		rough blazing star	Liatris aspera	Native	S	
ALL SPONSORED	18		panic grass	Dichanthelium oligosanth	Native	Р	
BY WM.	19		northern dewberry	Flubus flagellaris	Native	Р	
	20		black-eyed Susan	Fludbeckia hirta	Native	s	
	21		early goldenrod	Solidago juncea	Native	Р	
	22		witch hazel (<i>Hamamelis virginiana</i>),	Populus tremulaides	Native	Р	
	23		sassafras	Sassafras albidum	Native	s	
	24		red-cedar	Juniperus virginiana	Native	Р	
	25		ironwood	Ostrya virginiana	Native	Р	
	26		swamp loosestrife	Decodon verticillatus	Native	s	
	27		black oak	Quercus velutina	Native	Р	
	28		white oak	Q alba	Native	Р	
	29		pignut hickory	Carya glabra	Native	S	
	30		Asian bittersweet	Celastrus orbiculatus	Invasive	D	
	31		autumn olive	Eleagnus umbellatus	Invasive	D	
	32		buckthorn	Filhammus cathartica	Invasive	D	
	33		Sweet Clovers - Yellow, white	Melilotus spp	Invasive	D	



MUNITY RELATIONS > WHC > EAGLE VALLEY CERTIFICATION > 2017 EV RECERT > 2015 EV RECERT POST ACT > Post 2015 Orion Ctr > 2015 Summer Inv



2015 1st year spotted knap



weed.jpg

2015 2nd year spotted knap OC.jpg

2015 Bioswale at

nightshade Native good host

2015 Bishops

for larvae.jpg

2015 Dog Bane.jpg





Clover.JPG



the nest.JPG





waystation in

development.jpg



clover.jpg



Search 201... J

weed.jpg



invasive.jpg





2015 Non-native Vetch.jpg St Johns Wart.jpg



2015 Non-Native 2015 Pollinator



garden at OC.jpg



2015 Polly Ann Trail Sign at

OC.JPG



2015 Potentilla.JPG



2015 Prickly lettuce non-native







2015 Tree swallow in purple martin house.jpg



2015 Tree swallow in purple martin house2.JPG



2015 Trigopogon 2015 Turtle big dandelion nest.JPG puff.jpg





2015 Vetch and potentilla.jpg



2015 View of OC from trail.JPG



2015 View of Round Lake.JPG



invasive.jpg

2015 Young hazelnut.jpg



Orion veg survey wrksht 6-15.xlsx

garden.jpg



Orion-20150619-00431 (2).jpg

WM Sponsored signage at the Orion Center to educate about storm water management and the importance of bioswales.



2016 Activities

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WINTER NEST BOX MONITORING AT ORION CENTER

E1	.7	- !	× ✓	fx					
4	Α	В	С	D	E	F	G	Н	I
				Type of					
	Date	Time	Weather	Nesting	Box #	Species	# of adults	# juveniles	Notes
1				Structure				0-1-01	
		mid		Blue Bird	Orion Center	None	None	Only 2 brown speckled eggs	
2	1/7/2016	morning	gray/low 30's	House	East	observed	observed	observed	Lots of twig nesting activity
		mid	3 - ,	Blue Bird	Orion Center	None	None		
3	1/7/2016	morning	gray/low 30's	House	Center	observed	observed	None observed	Very little nesting activity
		mid		Blue Bird	Orion Center	None	None		
4	1/7/2016	morning	gray/low 30's	House	West	observed	observed	None observed	No nesting activity
		mid		Blue Bird	Purple Martin	None	None		Did not physically inspect this house. Will leave for
5	1/7/2016	morning	gray/low 30's	House	House	observed	observed	None observed	Orion Staff.
		mid		Wood Duck		None	None		Remnants of wasp nest inside and racoon activity on
6	1/7/2016	morning	gray/low 30's	House	1 South	observed	observed	None observed	
		mid		Wood Duck		Screech			He barely moved when we opened the Wood Duck House to observe. Only when I took the camera did
7	1/7/2016	morning	gray/low 30's	House	2 North	Owl	1	None observed	he peak! He never left the nest.
		mid		Blue Bird		None	None		
8	1/7/2016	morning	gray/low 30's	House	Polly Ann Trail 1	observed		None observed	Lots of twig nesting activity
		mid		Blue Bird		None	None		
9	1/7/2016	morning	gray/low 30's	House	Polly Ann Trail 2	observed	observed	None observed	Lots of twig nesting activity
		mid		Blue Bird		None	None		
10	1/7/2016	morning	gray/low 30's	House	Polly Ann Trail 3	observed	observed	None observed	Lots of twig nesting activity
		mid		Blue Bird		None	None		
11	1/7/2016	morning	gray/low 30's	House	Polly Ann Trail 4	observed	observed	None observed	Wasp nest in with bird nesting activity.
		mid	2015	Datilana	4.0	None	None	N	No Photos - fell when dead tree came down, needs to
12	1/7/2016	morning	gray/low 30's	Bat House	1 South	observed		None observed	
4.0	4 /7 /004 5	mid	growlow 20's	DetHouse	2 North	Forgot to	Forgot to	Forgot to	Forgot to look but at this time of year, no likely
13	1/7/2016	morning	gray/low 30's	Bat House	2 North	observe	observe	observe	inhabitants - no photo taken

2016 Winter Monitoring



1 2016 Screech Owl Documentation 1.msg



1 2016 Screech Owl Documentation 2.msg



1 ORION CENTER HABITAT MAP.jpg



1 Orion Ctr BB Houses.jpg



2 Orion Ctr BB Hs East.jpg



3 Orion Ctr BB House East Contents.jpg



4 Orion Ctr BB House East Contents.jpg



5 Orion Ctr BB House Center.jpg



6 Orion Ctr BB House West.jpg



7 Orion Ctr Wood Duck Hs 1 Racoon Activity.jpg



8 Orion Ctr Wood Duck Hs 1 South Wasp Activity.jpg



9 Orion Ctr Wood Duck Hs 1 Wasp Nest Contents.jpg



10 Orion Ctr Wood Duck Hs 2 North.jpg



12 Orion Ctr Trail Head to Polly Ann Trail.jpg



13 Orion Ctr Library Station at Trail Entrance.jpg



14 Orion Ctr Polly Ann Trail BB Hs 1.jpg



15 Orion Ctr Polly Ann Trail BB Hs 2.jpg



16 Orion Ctr Polly Ann Trail BB Hs 3 Needs Repair.jpg



17 Orion Ctr Polly Ann Trail BB Hs 3 Contents.jpg



18 Orion Ctr Polly Ann Trail BB Hs 4 Wasp Nest.jpg



19 Orion Center GM Volt Multi Chmbr Bat House.ipa



20 Orion Center Purple Martin Hs.JPG



21 Screech Owl at Orion Center.jpg



Orion Center Monitoring Log.xls



Orion-20160107-00673.jpg



Orion-20160107-00674.jpg



Orion-20160107-00675.jpg



Orion-20160107-00676.jpg



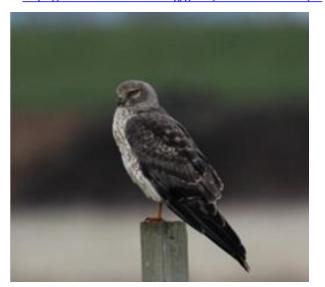


A buoyant, large-headed duck that abruptly vanishes and resurfaces as it feeds, the tiny Bufflehead spends winters bobbing in bays, estuaries, reservoirs, and lakes. Males are striking black-and white from a distance. A closer look

Bufflehead Duck

Northern Harrier

The bird I saw today 1/15/2016 looked just like this from far away - which I why I couldn't get a good photo...I believe it was a Northern Harrier. From far away, the chest looked white and it was mostly gray on its head and back...it was a smaller bird than a Red Tail Hawk - maybe 16" https://www.allaboutbirds.org/guide/Northern Harrier/id



Cliff Swallows



Busy flocks of Cliff Swallows often swarm around bridges and overpasses in summer, offering passers-by a chance to admire avian architecture and family life at once. Clusters of their intricate mud nests cling to vertical walls, and when a Cliff Swallow is home you can see its bright forehead glowing from the dim entrance. These common, sociable swallows are nearly always found in large groups, whether they're chasing insects high above the ground, preening on perches, or dipping into a river for a bath.



OAS CBC - Area #9, Oakland, Michigan, US

Dec 17, 2016 9:15 AM - 3:45 PM

Protocol: Traveling

67.0 mile(s)

Comments: Part of the Oakland Audubon Christmas Count

28 species

Canada Goose 40

Mallard 1

Red-tailed Hawk 14

Ring-billed Gull 330

Herring Gull 8

Rock Pigeon (Feral Pigeon) 30

Mourning Dove 56

Red-bellied Woodpecker 1

Downy Woodpecker 12

Hairy Woodpecker 1

American Kestrel 1

Blue Jay 26

American Crow 48

Horned Lark 4

Black-capped Chickadee 29

Tufted Titmouse 11

White-breasted Nuthatch 9

American Robin 11

European Starling 3115 Mostly found at Eagle Valley Landfill

Cedar Waxwing 2

American Tree Sparrow 28

Dark-eyed Junco 61

White-throated Sparrow 2

Northern Cardinal 23

Red-winged Blackbird 3 Blackbird with red-shoulder pads

seen at feeder stations in lake orion - no photos

House Finch 32

American Goldfinch 43

House Sparrow 62



V 0



2016 Eagle Valley Habitat Map.jpg



Img 1 BB Hs 2.JPG



Img 2 BB Hs 4.JPG



Img 3 BB Hs 4.JPG



Img 4 Bat Hs 6 JPG.



Img 5 Bat Hs 5.JPG



Img 6 Coyote Tracks near WD Hs 1.JPG



Img 7 Wood Duck Hs 1.JPG



Img 8 Wood Duck Hs 1.JPG



Img 9 Bat Hs 1.jpg



Img 10 Bat Hs 2.jpg



Img 11.jpg



Img 12 BB Hs 3.jpg



Img 13 BB Hs 3.jpg



Img 14 BB 3 Unidentified deceased young



Img 15 BB 3 Unidentified deceased young.jpg



Img 16 Evidence of Beaver Dam activity.jpg



Img 17 Evidence of Beaver Dam acvtivity.jpg



Img 18 Evidence of Beaver Dam activity.jpg



Img 19 Bat Hs 4.jpg



Img 20 Wood Duck Hs 2.jpg



Img 21 Bat Hs 3.jpg



Img 22 BB Hs 1.jpg

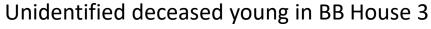


Img 23 BB Hs 1.jpg



Img 24 Wood Duck Hs 3.JPG







tracks near **Wood Duck** House #1



Coyote



Evidence of beaver activity. WM had to discourage the activity by disturbing the beaver's efforts to build its dam.

A beaver dam in this area would flood out the ground water monitoring wells in this area.

Beavers are a challenge for development in North Oakland County.



2016 Spring Observations



2016 May 24 Baby Starlings in Owl Hs.JPG



2016 May 24 Baby Starlings in Owl Hs2.JPG



2016 May 24 BB on BB Hs 2.jpg



2016 May 24 Wild Turkeys.jpg



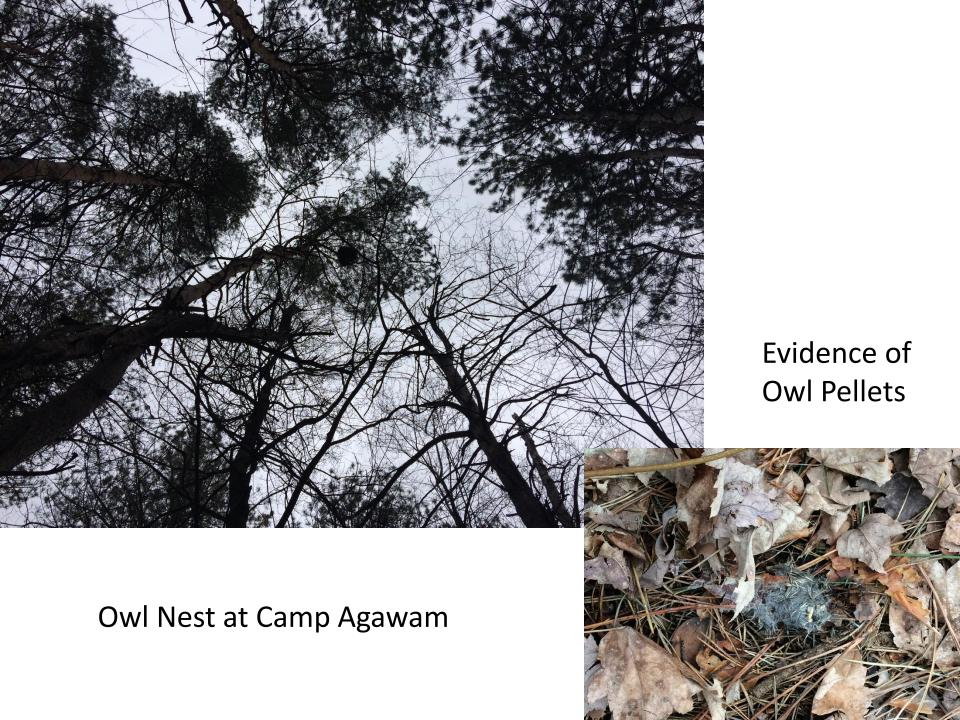


Adult (Great Horned)

Large owl with large ear tufts and yellow eyes.

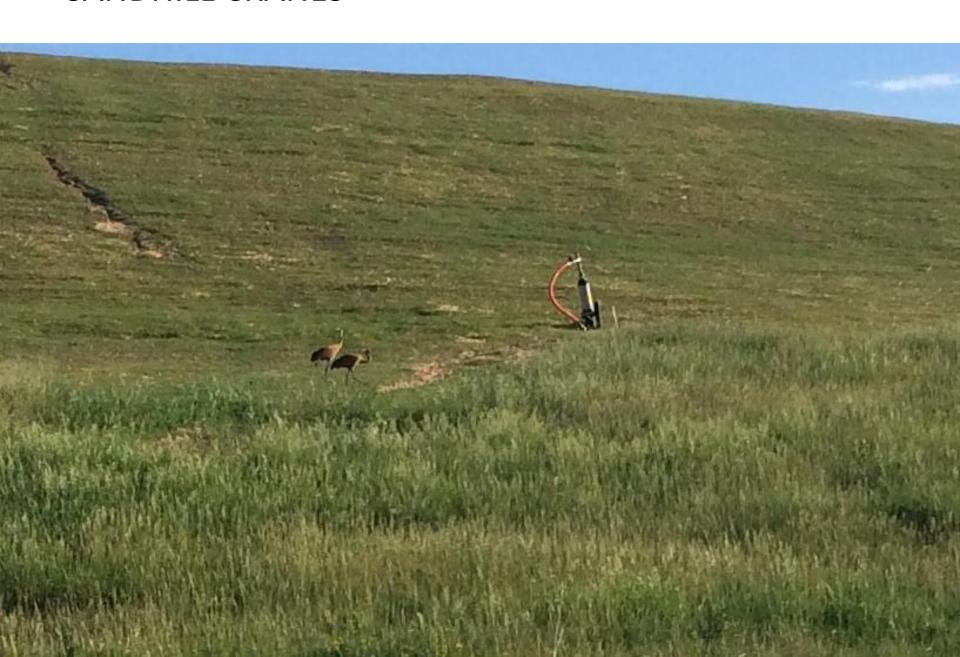
The color of the facial disc varies regionally from gray to cinnamon.







SANDHILL CRANES





DISCOVERING A NEW BAT SPECIES IN ILLINOIS

It is not too often that you get to discover a new species. In 2005, we discovered the Eastern Small-Footed Bat in Illinois for the first time. While it was not a huge surprise, there had been a lot of work in the state over the years, and yet, we still had not bumped into them! Turns out there is a very good reason; Eastern Small-Footed bats behave very differently than most of the other eastern bats. Most eastern bats are found in bottomland or wetland like areas. Our new friends, these Eastern Small-Footed Bats, are found on dry rocky outcrops called pine barrens or sand-stone barrens. But that's not the end of their incredible story. While most bats roost in hollow trees or under bark or in buildings, our Eastern Small-Footed Bats prefer to roost under rocks on the ground...

Dr. Tim Carter is an Associate Professor at Ball State University. His wildlife lab conducts research on a variety of species and topics, but over the last decade much of their work has focused on bats and bat ecology.



Forest Harvesting

Ruth Vrbensky – local naturalist visited Eagle Valley to identify native species in the woodlots to the west in the area pending new cell develop.

WM harvested native plants in 2013 & 2014

- Oakland Wildflower Farm
- Natural Community Services











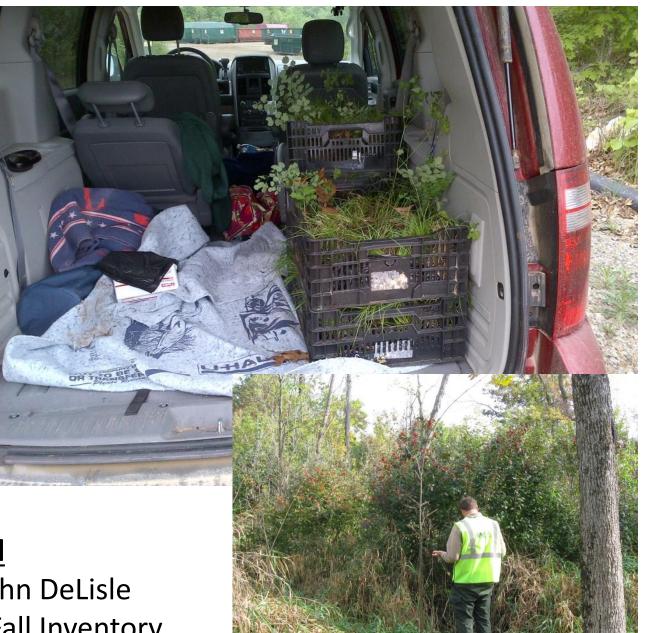




2013 Spring

Ruth Vrbensky harvested native plantings





2013 Fall

NCS - John DeLisle did our Fall Inventory

Wildflowers were accidentally planted in the SW corner of the site in 2014. Waste Management intentionally planted them on the north facing slope in 2016 but it will take a couple of years for them to germinate and establish.

Midwestern Wildflower

GENUS/SPECIES	COMMON NAME	TYPE	Ht.	COLOR	% MIX
Aster novae angliae	New England Aster	Р	24-72"	Purple	2%
Centaurea cyanus	Cornflower	A	12-36"	Blue	10%
Cheiranthus allionii	Siberian Wallflower	B/P	10-18"	Orange	
Coreopsis lanceolata	Lance-Lvd Coreopsis	Р.	18-36"	Yellow	8% 5%
Coreopsis tinctoria	Plains Coreopsis	A	12-36"	Yellow	
Delphinium consolida	Larkspur	A	12-36"		3%
Dianthus barbatus	Sweet William	P	12-36	Purple	5%
Echinacea purpurea	Purple Cornflower	P		Pink/Red	3%
Gaillardia aristata	Perennial Gaillardia		24-36"	Pink	5%
Gaillardia puchella	Annual Gaillardia	P	18-30"	Yellow/Red	3%
		Α	12-24"	Yellow/Red	3%
Gypsophila elegans	Annual Baby's Breath	Α	8-18"	White	10%
Linum lewisii	Blue Flax	P	18-30"	Blue	10%
Lupinus perennis	Perennial Lupine	P	12-36"	Blue	15%
Oenothera missouriensis	Dwarf Evening Primrose	P	8-12"	Yellow	2%
Papaver rhoeas	Corn Poppy	Α	12-30"	Red	3%
Ratibida columnifera	Prairie Coneflower	B/P	12-36"	Yellow	2%
Rudbeckia amplexicaulis	Clasping Coneflower	A	18-30"	Yellow	5%
Rudbeckia hirta	Black Eyed Susan	A/B/P	12-36"	Yellow	5%
Silene armeria	Catchfly	A/B	16-22"	Pink	
	,	7,0	10-22	FILIK	1%
					100%

A-Annual	39%
P-Perennial	45%
B-Biennial	
	16%

ORIGIN: California & Oregon TESTED: 11/2016

NET WT. ____LBS.

LOT # MW561

Area of Wild Flower Seeding





Educational Materials available at the Orion Center





Learning Lyrics – The fastest way to *learn* bird songs....



2017 Observations & Activities





2016 Eagle Valley Habitat Map.jpg



EV 1 Owl Hs.JPG



EV 2 Owl Hs.JPG



EV 3 WD Hs 1.JPG



EV 4 BB Hs 3.JPG



EV 5 BB Hs 3.JPG



EV 10 WD Hs 3.JPG



EV 11 WD Hs 3 eggs.JPG



EV 12 WD Hs 3.JPG



EV 13 Hs 3.JPG



EV 14 WD Hs 3.JPG



EV 15 WD Hs 3.JPG



EV 6 WD Hs 2.JPG



EV 7 WD Hs 2.JPG



EV 8 WD Hs 2.JPG



EV 9 BB Hs 1.JPG

WM Installed Bioswale signage and Story Board on Green Infrastructure.



New partnership with Six Rivers Land Conservancy – interns performed nest monitoring from May through July in 2017 and are beginning in April through July in 2018.

Waste Management and Six Rivers Land Conservancy's partnership is for the birds

Further in support of nature and the environment, this year Waste Management teamed up in a successful partnership with the Six River Land Conservancy. From May through July, Six Rivers provided Waste Management with two summer interns who assisted in monitoring



Site Manager, Scott Rowe, installing blue bird houses.

nest boxes installed at Eagle Valley. Wood duck houses and blue bird nest boxes encourage nesting opportunities for these two species who have seen a decline in natural areas for their nesting activities. Nest monitoring during the active spring/summer reproduction season ensures that invasive species such as European House Sparrows and Starlings are discouraged. "Partnering with Waste Management has been a phenomenal experience for the interns, as well as staff of Six Rivers," stated Danielle Devlin

program manager for Six Rivers' involvement in the project. "This effort shows how important attention to natural areas, even small areas, is to wildlife."



Sparrow Egg



Danielle Devlin, Land Protection Director, with summer interns Anne Leone and Nick Kallabat https://www.sixriversrlc.org/

A home for 10,000 new honey bees

Landfills provide plentiful wildflowers for bees to gather pollen so in our efforts to support challenged bee populations in the U.S., Waste Management installed bees and a new hive at Eagle Valley. Local area resident and apiarist, Michele Arquette,



Meet our new residents - 10,000 bees

offered to be a care giver to the new bees at Eagle Valley. Having bees at the site provides an opportunity for school students who tour the site to learn about the importance of pollinators while also learning how their waste is managed at a landfill, and why it is important to reduce, reuse and recycle.



Orion resident, Michele Arquette places the bees in their new home.



If the nest is active, watch from a safe distance with binoculars to see if any birds approach the nest.

Female birds can be hard to identify, so if you're not sure what species it is, write down a careful description and use a regional field guide to identify the species.

Tip: Don't have a field guide? Browse by shape in our online bird guide

Location and timing are key! Migratory birds have separate ranges for their breeding and wintering activities, whereas "resident" birds live in the same region year-round. Nests found early in the spring tend to belong to non-migratory residents, while migrants return and breed later in the spring and summer. For example, you can expect to find a chickadee nest earlier in the spring than a warbler nest. However, there are always exceptions such as the American Goldfinch, which tends to nest during the late summer despite being a year-round resident. Birds in the southern states also tend to nest earlier than birds in northern regions. Use your location and the timing of the nest to help identify the builder.



Three Nests

Can you identify which 3 species have previously used this box? (Answer located at the bottom of this page.)

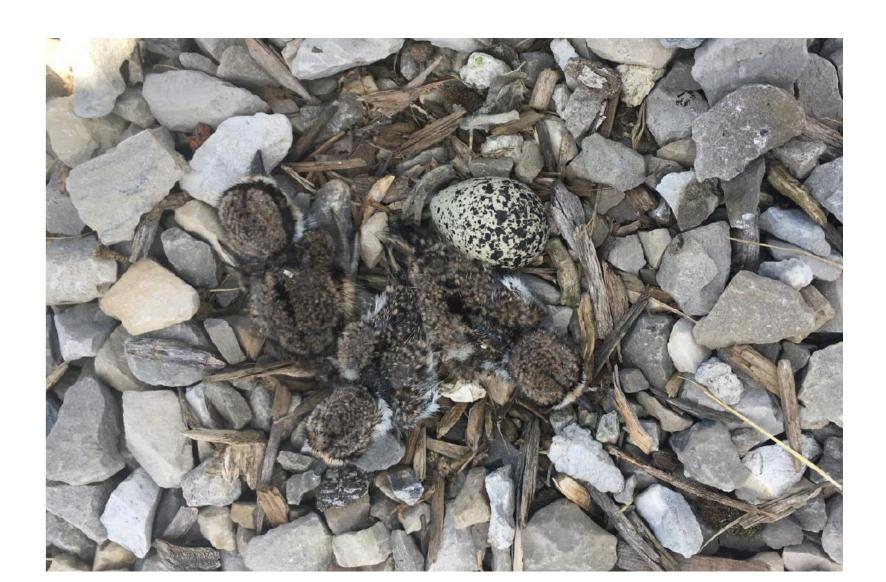
Photo @ Sally Sims

Answer: From bottom to top, House Wren, Carolina Chickadee, and Eastern Bluebird built nests in this box.

Unidentified eggs in BB house along the Polly Ann Trail...



Do you see the baby Killdeer



Eagle Valley Tree Harvesting

Waste Management had to remove the remaining trees on the west side of Eagle Valley for cell development. Aaron Whatley, Director of Parks and Recreation for Orion Township, asked if the township could have some of the trees to mill for lumber and for firewood to be used at Camp Agawam for their events. The trees would have



been salvaged as mulch and firewood from the tree clearing company but Waste Management was happy to repurpose the trees directly with the township. Orion Resident Michele Zimmerman, teacher at Notre Dame Prep Academy in Pontiac

Kids paint multi-chamber bat houses and blue bird houses.

BB Houses are available.



Bathouses 1.jpg



Bathouses2.JPG



BluebirdHs 2.jpg



BluebirdHs.JPG

WM recognized for education and commitment to conservation

On a local level, Waste Management Community Relations representative, Kathleen Klein was recognized in 2017 by Oakland County's Trails Water Land Alliance (TWLA) with its Oak Land & Partner Award and by the Michigan Alliance of Environment and Outdoor Education with an Appreciation Award for Waste Management's public education and partnership efforts. Kathleen Dougherty, formerly of Oakland County Parks, current MAEOE member and volunteer with the Oakland Audubon Society wrote, "Kathleen exhibits all of the traits of an exceptional educator and she has demonstrated her commitment to environmental education in the community."





BOO BASIA

Friday, October 13th

6:30-8:30 pm

\$11

Ages 1-8

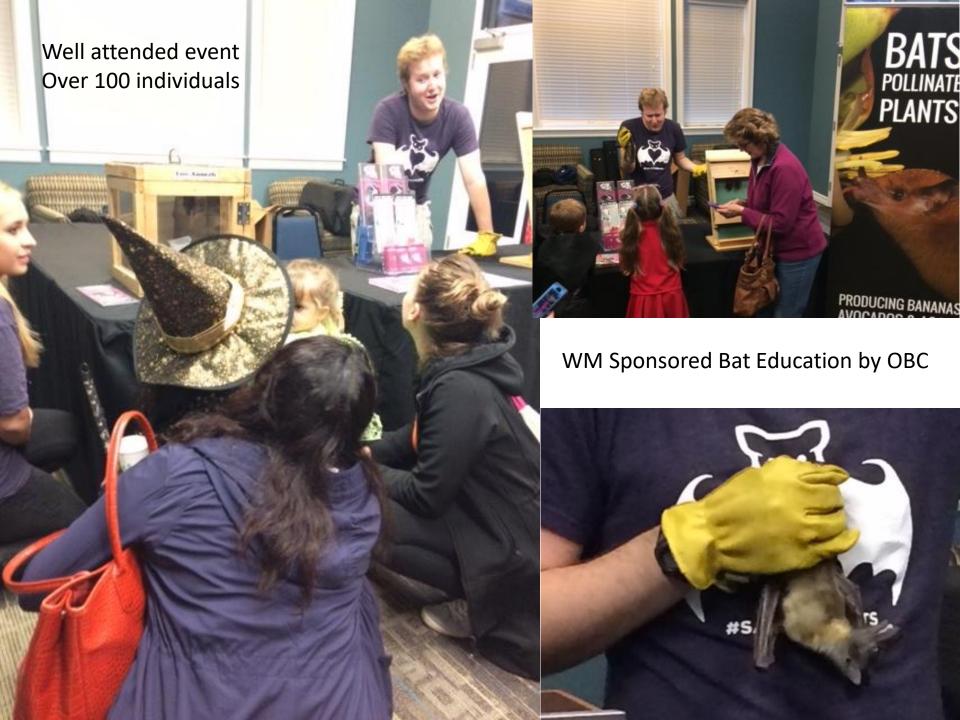
Orion Center

1335 Joslyn Rd

For more information please confact Jesse Hayes at (248) 391-0304 ext. 3500

This event is sponsored by Waste Management





Oakland Audubon Society - Christmas Bird Count





THROUGH THESE EFFORTS AND SUPPORT OF WM's PARTNERS

Eagle Valley Recycling and Disposal Facility was able to recertify in 2017 with a total of 386 points - receiving GOLD status from WHC.

Next recertication will be in 2020.



2017 Tiers

Program Score	Tier	Certification term (# years until reapplication)
0 - 120	Certified	2 years
121 - 235	Certified Silver	2 years
236+	Certified Gold	3 years