



THE BEACHCOMBER

DUNE ACRES, INDIANA

WWW.DUNEACRES.ORG

April, 2017

Earth Day is Clean-Up Day in DA

Dear Friends and Neighbors,

We have some special activities to celebrate Earth Day on April 22nd. As usual, we will clean up an area that is overrun with invasive plants, but this time we will have some amazingly wonderful free goodies. Everyone who volunteers or donates to the Environmental Committee will receive a beautiful Butterfly Milkweed plant for their landscape and the ultimate designer bag to be reused many times - the Dune Acres Green and White Canvas Tote with the spectacular Town Logo. This bag is provided by DACIF; not sold in stores or online but only available at Town clean up.



To make it a fun team building day, we will have a cook-out across from Town Hall in the park with both meat and vegan options.

The start time for Cleanup is 9:00 am on April 22, and we will work until 3:00 pm.

Please come out and greet your fellow town residents for a welcome back to spring. If you can, bring loppers. Looking forward to seeing everyone.

Robin Tennant, Environmental Commish
847-710-1242



New 4-year Vehicle Registration Stickers

Dune Acres' current vehicle registration stickers are expiring! New 4-year registrations effective July 1, 2017 to June 30, 2021 will go 'on sale' May 15th. We hope all residents will have new stickers in place before the July deadline since the old sticker will not be valid after that date.



Resident vehicle registrations are important! The Dune Acres windshield decal:

- Allows residents to park at the beach, tennis courts, trailheads, and any other town-owned parking area.
- Helps town security staff verify resident-owned vehicles when entering town.
- Provides emergency vehicle ownership information should your car be found abandoned.

Your cooperation in promptly submitting applications for **all cars, golf carts, scooters, and ATV's** is greatly appreciated. Starting May 15, forms will be available online, or may be picked up at the gatehouse or town hall. Completed forms and payment may be dropped off at the gatehouse or town hall. Fees are unchanged: \$40 per vehicle for a 4-year sticker.

Please remember stickers are only issued to vehicles owned by town residents, and visitor parking permits are available only to residents who have registered their personal cars.

The new decal colors are black and white. This color scheme should complement every vehicle and provide an unobtrusive way for town security to identify your car.

Beach Buoys – Important Safety Devices for Our Town Swimmers

Every summer, Dune Acres Beach Commissioner Rob Carstens oversees the installation of swim safety buoys along our shoreline. The town maintains 15 units that are regularly spaced from the Town boundary near East Beach, all the way to the west end. The buoys provide protection for Dune Acres swimmers and provide a no-wake zone for kayaks, paddle boards and other non-motorized pleasure craft.

Summer squalls typically reduce the town's buoy inventory, so replenishing is required every year. In 2017, equipment replacement and installation/removal costs exceed \$10,000. The Town is continuing its buoy program by combining capital funds with a generous donation from residents John and Weezie Gates.

The swim buoys are yet another reminder of the community spirit that continues to drive our town. A sincere thank you is extended to Beach Commissioner Rob Carstens for his ongoing volunteerism, and to the Gates Charitable Trust for its generous contribution.

Mark Your Calendars

April 15	Easter Egg Hunt, starting at Town Hall, 10:00 AM
April 22	Spring Town Cleanup, starting at Town Hall, 9:00 AM
May 3	Clubhouse "Open Wednesday" starts 4:30 PM to sunset – No reservations needed
May 27	Town Spring Party, clubhouse - Prom Night
July 1	Independence Day Celebration and Fireworks
July 1	Old Vehicle Stickers Expire

You've Got Mail

As most are aware, the Town maintains an **'email blast address listing'** to electronically notify residents about upcoming events and important town announcements. Residents are encouraged to participate. Instructions regarding list participation are found on the Town's website under "Information for residents." Please sign up if you're currently not receiving emails, or verify your participation if you have not recently received a message.

Dune Acres Clubhouse – Let's Use It!

In an effort to increase resident use of our beautiful clubhouse, the Town Council and Clubhouse Coordinator Ivan Chermel have instituted changes in the building use and rental agreement.

Highlights are as follows:

*May 1st through Labor Day, the clubhouse will be open free of charge every Wednesday from 4:30 PM to sunset. Residents are encouraged to gather for a cookout, enjoy the patio, or use the building to host friends for a sunset cocktail party. No reservations needed. Please note that an adult must be present at all times to supervise minors.

*New Rental Schedule for Small Groups:

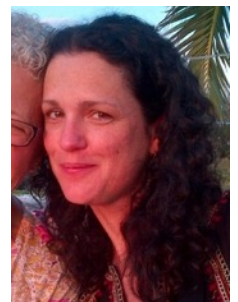
- Small gatherings of 25 people or less, \$50.
- Groups of 26-50 people, \$300.
- see online schedule for large parties.

Contact Ivan Chermel at ivan126@comcast.net with questions. And thank you to Ivan for volunteering to manage this wonderful town resource.

Next publication date: May 15, 2017
Submission deadline May 10, 2017

Easter Egg Hunt

Just a reminder that a Dune Acres Easter Egg Hunt is scheduled for April 15, 2017, 10:00 AM in the Town Park. Even if you are not planning to hunt for eggs, come on by the Town Hall for coffee, juice & treats to celebrate with neighbors.



Sara Masloroff

If you are able to bring baked goods, contact Sara Masloroff at sd_lund@hotmail.com or 312-343-9450. A fun time is guaranteed!



Short but Fun Ice Rink Season

The Town Ice Rink opened in December following some great, early-season cold weather! Lots of kids were seen enjoying the winter. We had beginners learning to skate using the new town-provided 'walker-aide,' skilled skaters practicing their twirls, and a number of hockey games under the lights.



Greyden, Sarah and Brianna Bancroft



Dune Acres mom, Heather Stock, walks son Gavin on beautiful spring day. Heather says she sometimes completes the 'long loop' of Cowles Bog with Gavin in a backpack carrier. Wow!

Organic Yard Waste – No Dumping Please!

Residents are reminded that moving yard waste such as leaves and branches onto Town parkland and roadsides is prohibited. When clearing driveways, patios, and other areas you may either move debris into reserved spaces on your own property, or have it removed by one of the many lawn services that are licensed in Dune Acres. Removal is highly encouraged.

Because most Town parkland is natural woods and dunes, adding yard waste would seem harmless enough. But, in fact, these areas are complex ecosystems that provide habitat for many rare plants, and they are extremely sensitive to introduced disturbances. Large leaf piles, even discarded Christmas trees, have recently been found on town parkland. All such debris requires removal by resident volunteers and/or maintenance staff. Please help keep our town beautiful and reduce potential wildfire fuel – remove your accumulated yard waste.

Thanks to the following people who made this issue happen:

Jan Bapst	Irene Newman
Sarah Bancroft	Heather Stock
Rick Hawksworth	Mike Swygert
Sara Masloroff	Robin Tennant

We welcome all submissions - news, stories, photos, ideas for articles, information about upcoming events, etc.

Town Ordinance on Short-term Rentals

Like other communities along the Lake Michigan shore, Dune Acres has grappled with the challenges of controlling short-term property rentals while maintaining the small-town character, scenic beauty and natural resources that are the foundation of our quality of life. With the popularity of on-line rental sites such as VRBO, the issue is more timely than ever.

Parking problems, noise complaints, concerns about inappropriate use of common areas, and disputes between neighbors led the Town to enact an ordinance in 1981 restricting short-term rentals. In practice, it allows residents to rent their homes several times each year, but prohibits the wholesale commercial exploitation of residential property. This has proved to be an effective compromise that balances each owner's property rights with the overarching needs of the community.

Section 46-113 of our zoning code defines the uses permitted in the R-1 residential district, which includes most of the property within Dune Acres. The permitted uses include:

Single-family detached dwellings, each of which shall be occupied by no more than One family. Change of occupancy from One family to another may not occur more often than every Thirty days, with no more than Four changes from One family to another in any calendar year.

As you can imagine, enforcing this ordinance is a challenge because town officials are rarely in a position to know how many rentals may be occurring in a given residence. For this reason, you may have received a notice even if you are in full compliance with the ordinance. If this is the case, please accept our apologies.

- the Town Council

Part Two
LAKE MICHIGAN'S AQUATIC INVADERS

Alewives, Lampreys, Zebra Mussels, Asian Carp

Michael Swygert, © 2017

“A National and Global Treasure”

The five Great Lakes with their watersheds together constitute the largest fresh water system on the planet. Containing 20% of the world's surface freshwater, the lakes' coastlines exceed 10,000 miles. ⁽¹⁾

The Great Lakes are indeed a national and global treasure, one that reaps huge economic benefits for both the United States and Canada. Commercial and recreational fishing are a \$7 billion a year industry. Add to that the National Parks and Lakeshores, along with State and local sanctuaries, that attract millions of visitors annually. Then there is shipping. Over 100 commercial ports are in the Great Lakes and St. Lawrence Seaway. Many are privately owned by steel mills, power plants, and mining companies. Lake Michigan itself has about 50 private and public ports along its Indiana, Michigan, Wisconsin and Illinois shorelines. These vessels haul iron ore, limestone, cement, farm products, petroleum, over-sized objects, steel, lumber, chemicals, vehicles and cargos transported by container ships. Great Lakes are also the home of thousands of recreational craft. ⁽²⁾

Sea Lampreys Enabled Alewives' Explosion

Millions of dead and dying alewives on the beaches of Dune Acres, Indiana, and around the shores of the Great Lakes would not have occurred but for an earlier and concurrent invasion of sea lampreys. They created a problem with their aggressive parasitism on key game fish including lake trout, lake whitefish, chub and lake herring. Elimination of these game fish allowed alewives to explode in a population boom. *“Invasive species have had, and continue to have, devastating impacts on the Great Lakes. Non-native species harm fish at the top of the food web and decimate organisms at its base, changing the ecology of the Lakes. Once damaged, a water system as huge as the Great Lakes is extremely difficult to restore.”* ⁽³⁾

Alewives and sea lampreys together have had a calamitous impact on Great Lakes' food chains, fisheries, shorelines, commerce, and recreation. Today, sea lampreys are found in the Mediterranean Sea, the northern latitudes of the Atlantic Ocean, and the fresh waters and tributaries of the Great Lakes. Spotted in Lake Ontario in the 1830s, lampreys initially were thought to be indigenous. More recently, however, ichthyologists believe sea lampreys came from the sea through various natural and man-made tributaries, including the Erie Canal. In the 1920s, lampreys for the first time appeared in Lake Erie, having apparently

migrated from the ocean via the St. Lawrence Seaway and then through the Welland Canal (avoiding Niagara Falls). It was not until the 1930s and '40s that sea lampreys moved into the three upper Great Lakes: Huron, Michigan, and Superior.



Sea lamprey with open mouth.

Lampreys have neither jaws nor other bony structures. Though resembling eels, sea lampreys *“are set apart by their unique mouth: a large oral sucking disc filled with rows of sharp, horn-shaped teeth surrounding a razor-sharp rasping tongue. It uses its suction cup-like mouth to attach itself to the skin of a fish. It rasps away tissue with its sharp, probing tongue and keratinized teeth, thus consuming fluids and tissues. After a meal, it detaches and swims away. Secretions in the lamprey's mouth prevent the victim's blood from clotting. Victims typically die from excessive blood loss or infection”* ⁽⁴⁾

For many fish species, lampreys are their worst nightmare. “An adult lamprey can kill up to 40 pounds of fish in 12-20 months.” Multiply 40 pounds by millions of lampreys and you get the picture. One report concluded: *“The lamprey has most likely had the most significant impact on Great Lake fisheries of any invasive fish species.”* ⁽⁵⁾ Described as “the scourge of the Great Lakes,” lampreys in the 1950s and '60s devastated several native fish populations, in particular, lake trout and ciscoes. *“The sea lampreys killing of Lake*

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Wildflowers are springing up all over!

by Rich Hawksworth

April is the month in which the earliest wildflowers begin to burst forth. Some of these will persist into summer, while others--the spring ephemerals--will bloom, become pollinated and set seed before the canopy of trees overhead erupts into leaf to steal their light. Here are a handful of local natives to seek-out during the coming weeks.

Anemonella thalictroides (rue anemone) – This diminutive ephemeral thrives in the dappled shade of mesic woodlands. There's a great display on the south side of Oak Hill Road, just east of Mineral Springs.



Caltha palustris (marsh marigold) – Striking yellow blossoms adorn this spring beauty. It grows in a variety of moist habits, including marshes, fens, and ditches. You'll find it just south of security along Mineral Springs Road.



Dentaria laciniata (toothwort) – The roots of toothwort are said to have a peppery taste that was relished by Native Americans. I can't vouch for its culinary use, but it is certainly a welcome sight in our spring woodlands.



Erythronium americanum (trout lily) – Trout lily's fishy moniker derives from the resemblance of its fleshy, mottled leaves to brook trout. The NPS's Heron Rookery has an outstanding display.



Hepatica americana (round-lobed Hepatica) – This may be my very favorite spring wildflower. Pushing through the leaf litter in early April, it's beautiful flowers are reminiscent of African violets. Occasional along woodland trails, including Heenan Trail park.



Pedicularis canadensis (wood betony) – Wood betony is a hemi-parasitic plant that draws nutrients from the roots of other plants using its own. There is a wonderful patch on the east side of Mineral Springs Road about halfway between the security office and West Road.



Phlox bifida (cleft Phlox) – Cleft Phlox gets its name from the distinct notch in each flower petal. It is a wonderful early wildflower found in sunny exposed sites. Find it along West Road near Willow, in Lupine Lane Prairie, and along the NPS's Cowles Dune burn break.



Sanguinaria canadensis (bloodroot) – Bloodroot is fairly common in DA, but among the most impressive of spring ephemerals. It's especially plentiful along Crest Drive.



Stylophorum diphyllum (celandine poppy) – You can't miss this bright yellow poppy growing with *Mertensia virginica* (Virginia bluebells) along the west side of Mineral Springs Road just north of the security office.



Viola pedata (bird's foot violet) – Our largest and showiest violet, *Viola pedata* grows in the sandiest locations. Look for it on north border of the soccer field and in sunny spots along woodland trails.



In the next few issues of the Beachcomber, I'm going to highlight some of my favorite native plants. Dune Acres certainly has lots to choose from. More than one thousand species of vascular plants have been identified in and around our town. This abundance of super-diversity is undoubtedly world class. It is, in my opinion, perhaps our greatest endowment and one that should be fiercely protected for future generations.

Aquatic Invaders

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Michigan's trout reached its zenith in the early 1960s, resulting in their virtual extirpation throughout the lake. Once the trout population was depleted, the alewife population exploded."⁽⁶⁾

Over time, aquatic biologists were able to control the lamprey population. The Great Lakes Fishery Commission and U.S. Army Corps of Engineers pooled their expertise. ***"Of the 180 non-native species in the Great Lakes basin, sea lampreys [today] are the only invader that are controlled basin-wide and is the only example in the world of a successful aquatic vertebrate pest control program at an ecosystem scale."***⁽⁷⁾ Today, professionals use various means to contain the sea-lamprey population including chemicals, barriers and traps.

What Caused the Massive Alewife Die-Offs?

Besides disruptions in the food chain and overpopulation due to sea lamprey killing the game fish, which had been eating alewives, other factors caused the massive alewife die-offs. These included low food supplies resulting in less energy, and severe stress caused by the alewives' difficulty in adapting to fresh water, especially physiological "osmotic stress" that results in alewives having larger kidneys.⁽⁸⁾

Then, there's the issue of temperature differences, both seasonal and gradient. A director of the Federal Bureau of Commercial Fisheries reported: ***"Abnormally cold temperatures in the deep waters of the lake were too much for their systems, particularly affecting their thyroid glands."***⁽⁹⁾ Alewives live in the deepwater in mid-winter months and then move to warmer, near-shore waters and rivers in spring and summer. When they enter the warmer waters, alewives are often near starving with little stored energy for stamina. The sudden change in water temperature becomes the last straw. ***"The alewife is unable to adjust to 50 degrees (Fahrenheit) gradient between deep and shoal water . . . such fluctuations cause their deaths."***⁽¹⁰⁾

Current Threats to the Great Lakes: Depletion of Chinook and Coho Salmon

"Lake Michigan's salmon population could be on the verge of a cataclysmic collapse. Biologists are struggling to figure out how to save Chinook salmon with the sudden decrease of their main food source, the alewife, a fish that biologists spent 66 years trying to obliterate from the lake." Recently, between 2012 and 2014, the number of Chinook salmon in Lake Michigan fell 50 percent, from 8.4 to 4.2 million.⁽¹¹⁾ Increasing the rate of salmon stocking in Lake Michigan would mitigate the decline, but that solution would be costly and therefore problematic. A proposed 2017 Federal budget

cuts back the Environmental Protection Agency's funds that had previously been allocated to States for environmental projects designed to save the ecosystems of the Great Lakes. How this might affect control of invasive species is problematic.

Spread of Zebra Mussels

Today, it's more likely to see zebra mussel shells on the beaches of Lake Michigan than alewives. First appearing in the Great Lakes in 1988, zebra mussels were discharged from ballast waters of ocean vessels.



Zebra mussels on the beach.

As described by the National Wildlife Federation:

"The zebra mussel is a highly opportunistic mollusk that reproduces rapidly and consumes microscopic plants and animals in large quantities . . . About the size of a fingernail, zebra mussels excrete a strong adhesive that allows them to attach to virtually anything from rocks to municipal water intake pipes."⁽¹²⁾ These mollusks are filter feeders, removing microscopic nutrients from the Lake's waters, harming the food chain aquatic species need to survive. Zebra mussels thrive in cold and deep waters and colonize in thick mats over acres of lakebed. But they do more than disrupt the ecological food chain. They also, so to speak, "gum up the works," especially for power plants, commercial ships and recreational boat propellers, and municipal water facilities with water intakes from the Lakes.



Zebra Mussels attached to a boat propeller

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Aquatic Invaders

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The Coming of the Asian Carp – Lookout!

Assume it's a warm, beautiful summer day on Lake Michigan. You are steering your boat that is pulling gleeful kids on a rubber raft. You make a turn to port and, suddenly, an 80-pound silver fish leaps out of the water and lands on top of you. Was this a dream? (No)



Dec. 2009 photo shows Illinois River silver carp jump out of the water after being disturbed by sounds of watercraft.

Could this really happen? (Yes) In Lake Michigan? (Yes) Near Dune Acres? (Yes) Today? (Not likely) In the future? (More likely) Is the DA Beach Commissioner responsible? (No) Such an aquatic pole-vaulter is either a bighead or silver Asian carp, each capable upon a moment's notice of skyrocketing into the air and crashing back into the water (or a boat). They instantaneously leap out of water when startled by the sounds of boat engines and propellers.

Four distinct Asian-carp species -- silver, bighead, black, and grass -- today roam the rivers, tributaries, lakes, and ponds of the Mississippi River corridor from the Gulf of Mexico to (and a few already in) the Great Lakes. Grass carp are the most common and are known already to be in the waters of Lakes Michigan, Erie, and Ontario. A grass carp has a voracious appetite, capable of eating 40% of its body weight each day. Though posing a significant environmental risk, when compared with the other carp species, grass carp are least disruptive to the environment. ⁽¹³⁾

Why did Asian Carp Come to the United States?

Ichthyologists believe ocean carp have existed 340 million years. Asian Carp are fish native to Southeast Asia. Non-invasive (common) carp have been in the United States over 100 years, but it has only been 40 years since Asian carp *“were imported into the U.S. [to control weed and parasite growth in ponds] on fish farms . . . Flooding allowed them to escape and establish reproducing populations by the early 1980's.”* ⁽¹⁴⁾ The National

Wildlife Foundation notes the bighead carp are present today in 23 states and silver carp in 13. Moreover, Asian carp consist of 90% of the biomass in segments of the Mississippi River, and over 97% of the fish biomass in the Illinois River. “Few of Illinois’ 44,000 miles of streams and rivers are free of Asian carp.” ⁽¹⁵⁾

According to the U.S. Army Corps of Engineers, the Chicago Area Waterway System (CAWS) is the *“only continuous connection between the Great Lakes and the Mississippi River basins and poses the greatest potential risk for the transfer of aquatic nuisance species [in particular Asian carp] . . . Electric Barriers are operated to deter the inter-basin establishment of Asian carp . . . by maintaining an electric field in the water.”* ⁽¹⁶⁾ A 2012 study of ways to stop the spread of invasive species into the Great Lakes by the Army Corps of Engineers “focused on the 128-mile network of waterways around metropolitan Chicago” The study concluded that no option guaranteed success in the long run. ⁽¹⁷⁾



Bigmouth Asian Carp

Asian Carp Are Near Lake Michigan; Just a Matter of Time

Reportedly, a bighead carp has been spotted far up the Des Plaines River though the Army Corps of Engineers had installed an electric barrier on the Des Plaines downstream. Moreover, should the Des Plaines River flood, Asian carp would easily find other ways to enter Chicago-area waterways in route to Lake Michigan. Mature, reproducing bighead and silver carp have thus far been inhibited from entering lake Michigan, blocked by electric barriers and lock and dam systems (one on the Chicago River). On the other hand, younger, “juvenile” bighead and silver carp can do more damage and are moving closer to the Lake. Electrical barriers are not as effective in deterring juvenile carp. ⁽¹⁸⁾ Joel Brammeier of the Alliance for the Great Lakes, cautions: “The

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Aquatic Invaders

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bottom line is [larval] juvenile carp are advancing [closer to Lake Michigan] and made a big jump last year . . . We still don't have a permanent solution in place that's going to solve the problem.”⁽¹⁹⁾

Of course, Lake Michigan's ecosystem inevitably will suffer other environmental calamities that impact food chains, fish species, aquatic microscopic organisms, and commercial and gaming fisheries. Though Asian Carp entering the Great Lakes have been minimal thus far, many people who study the threat – aquatic biologists, engineers, environmentalists, and ichthyologists-- believe it's just a matter of time before Asian Carp will be off our beaches.

Acknowledgements

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The Fine Print: *The Beachcomber* is published on-line monthly during the summer and periodically during the winter. All information, news, creative contributions, articles, reports, corrections, suggestions, Letters to the Editor, art work, comments and otherwise are welcomed and encouraged. *The Beachcomber* is a grass roots publication not officially affiliated with either the Town of Dune Acres or the Dune Acres Civic Improvement Foundation, Inc. (DACIF). All content is believed to be reasonably accurate and reliable but not “guaranteed!”

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Email submissions to inewman680@aol.com. Please use “**Beachcomber**,” in the subject line.