



April 2016



CRYSTAL LAKE PARK DISTRICT

LAKE LINES

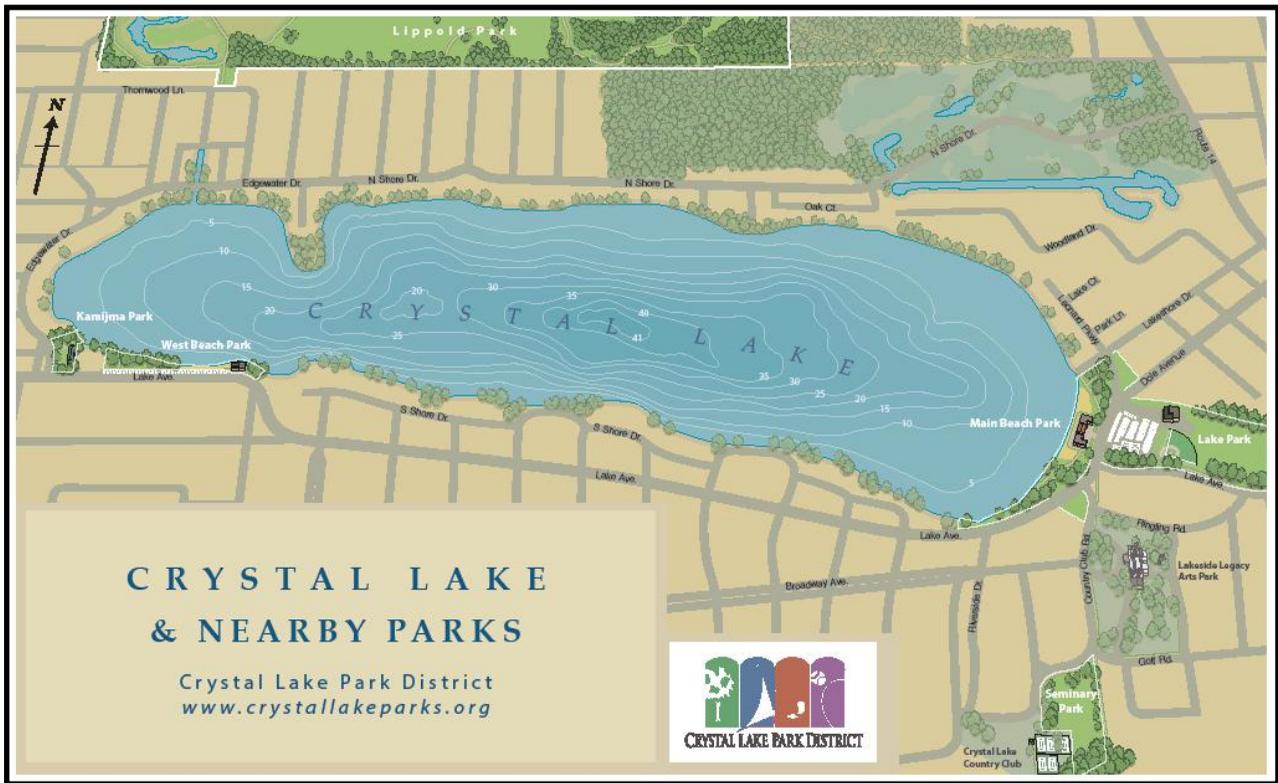


The mission of the Crystal Lake Park District is to enhance the lives of our residents by providing programs, services, facilities and open spaces that safely promote health, recreation and community in an environmentally and fiscally responsible manner.

As the last remnants of ice melt off the lake, we are looking forward to warmer, longer days, and eagerly anticipate a summer on beautiful Crystal Lake! In this issue of Lakelines we will provide timely information for lake users as well as some tips on how everyone can be a part of keeping Crystal Lake clean and healthy. The Crystal Lake Park District and our partners, the Village of Lakewood and City of Crystal Lake, work diligently to preserve the high quality of the water, fish and plant life.

There are many opportunities to learn more about Crystal Lake—look for links throughout this newsletter where you can delve deeper into many subjects.

Enjoy this newsletter ~ we'll see you at the lake!



Simple tips for a cleaner lake:

- Use lawn and garden chemicals sparingly. Eliminate the use of fertilizers containing phosphorous which promote algae growth.
- On waterfront property, grow a buffer strip or rain garden along the shoreline. These will intercept and clean water before it flows into the lake.
- Keep fallen leaves and other yard waste out of the street gutter.
- Clean up pet waste to prevent nutrients and bacteria from washing into the lake.

- Use safer de-icing products, like sand whenever possible. Salt and other ice melting chemicals can harm the lake.
- Direct roof downspouts into landscaped areas and away from driveways or hard surfaces. This allows the water to soak into the ground. Better yet, install some rain barrels and reuse the rainwater.
- Wash cars with a no-phosphorous detergent and wash them on the lawn, not the driveway.

Reprinted from Lake Notes, ILEPA. For more information, visit www.epa.illinois.gov.

Summer Boating Information



Lake Use Decals

All watercraft that are operated on Crystal Lake must display a current lake usage decal which can be obtained at the City of Crystal Lake Municipal Building. Initial decal fees are \$15 for paddleboats or similar watercraft that are powered by human power. All other watercraft are \$25. Replacement decals are available at reduced prices. Users must be residents of the Crystal Lake Park District.

Public Boat Launch

Residents wishing to launch their boats at Main or West Beach must purchase a boat gate key card. These are available at the Park District Administrative Office for \$75. Discounts are available for seniors and after Labor Day.

One Time Launching

Residents who moor their boat on the lake may contact the Park District Administrative Office to arrange for a one time boat launch access to put their boat in for the summer season and a one-time boat launch access to remove their boat at the end of season.



Lake Patrol and Safety

All residents of the Crystal Lake Park District are eligible to launch a boat on Crystal Lake. The Village of Lakewood and the City of Crystal Lake have a joint agreement for regulating and patrolling the lake between Memorial Day and Labor Day. A copy of the Crystal Lake Boating and Safety Regulations can be found at www.village.lakewood.il.us and at www.crystallake.org in the ecode section.

THE CRYSTAL LAKE PARK DISTRICT
LAKE DISCOVERY DAY

SUN JUNE 12

12 PM - 4 PM

**NEW
LOCATION!
WEST
BEACH**

**DEMONSTRATIONS
HANDS-ON ACTIVITIES**

**RAIN
OR
SHINE**

FREE KIDS FISHING DERBY

brought to you by the CLPD Nature Center, Crystal Lake Anglers and Happy Trails Volunteers

**BAIT, PRIZES AND A LIMITED NUMBER OF FISHING POLES PROVIDED.
AGES 16+ MUST HAVE CURRENT ILLINOIS FISHING LICENSE. ALL AGES WITH ADULT.**



Lake Facts

Surface Area: 233.32 acres

Shoreline Length: 3.2 miles

Maximum Depth: 40'

Average Depth: 14.7'

Lake Volume: 3,347 acre-feet

Watershed Area: 3,175 acres

Lake Type: natural glacial seepage

From Crystal Lake Clean Lakes Phase I Protection Plan, July 9, 2007, Hey and Associates, Inc.

Aquatic Invasive Species: What You Can Do to Help

Invasive species are non-native plants, animals, and pathogens that can harm our environment. These invaders can have devastating impacts in lakes, rivers, and streams – they crowd out native species, cause declines in water quality, and make boating and fishing difficult. On land, invasive species have similar detrimental effects, reducing wildlife habitat, negatively impacting biodiversity, and impairing recreational opportunities.

All recreational activities, including hiking, boating, camping, waterfowl hunting, and fishing, can potentially spread invasive species. If you enjoy the outdoors, following the **Be A Hero—Transport Zero™** tips can help prevent aquatic and terrestrial invaders from taking over your favorite natural areas.



FIGHT THE SPREAD OF AQUATIC INVADERS

- REMOVE** PLANTS, ANIMALS AND MUD FROM ALL EQUIPMENT.
- DRAIN** ALL WATER FROM YOUR BOAT AND GEAR.
- DRY** EVERYTHING THOROUGHLY WITH A TOWEL.

TRANSPORTZERO.ORG



FIGHT THE SPREAD OF TERRESTRIAL INVADERS

- CLEAN** OFF YOUR SHOES, CLOTHES, ANIMALS AND GEAR.
- BURN** ONLY LOCAL FIREWOOD.
- LEAVE** PLANTS AND OTHER NATURAL MATERIALS IN THEIR PLACE.

TRANSPORTZERO.ORG

The Be A Hero—Transport Zero™ campaign is made possible through a partnership between Illinois-Indiana Sea Grant and the Illinois Department of Natural Resources. Funding is provided by the Great Lakes Restoration Initiative and the National Oceanic and Atmospheric Administration's National Sea Grant College Program. Visit www.iiseagrant.org for more information.

Invasive Plant Spotlight: Eelgrass



Also known as Wild Celery or Tapegrass, this submersed plant can form thick beds and dominate an area. The grass like leaves have a distinctive pattern used to identify the plant. Flaccid when out of the water, the foliage occurs in tufts, much like turf grass. Soft muck bottoms are its preferred substrate. This invasive aquatic plant is often found in the west bay of Crystal Lake, particularly late in the summer season. Dense mats form and “float” atop the water surface. For more information about invasive species, visit the Midwest Aquatic Plant Management Society at www.mapms.org.



Reference: Midwest Aquatic Plant Management Society, Inc. and U.S. Department of Agriculture



Save the Dates! Future Crystal Lake Park District Special Events:

May 28, 2016—Main and West Beach Open at 9 AM

June 12, 2016—Lake Discovery Day at West Beach 12—4 PM

June 18, 2016—America’s Cardboard Cup Regatta at Main Beach

July 3, 2016—Independence Day Parade and Fireworks at Main Beach

August 6, 2016—Blast on the Beach at Main Beach 3—9 PM

For more information, visit www.crystallakeparks.org

Faces on the Lake: Jeremy Husnik and Bob Bruzzino

Jeremy Husnik is a familiar face on Crystal Lake. Jeremy is an Engineering Technician for Hey and Associates, Inc., where he has worked for over 18 years. Jeremy coordinates and performs many services, including Lake Management, Water Quality Sampling, Aquatic Vegetation Management, Stormwater Runoff Quality Inspections and Construction Observation.



Jeremy is a Certified Professional in Erosion and Sediment Control (CPESC) and holds numerous certifications in both Illinois and Wisconsin. He is a member of the Illinois Lakes Management Association (ILMA) and the North American Lake Management Society (NALMS.)

Jeremy has been the primary monitoring technician on Crystal Lake since 2004, the start of the CLPD's work with IEPA's Clean Lakes Grant

Program. During the months of open water, Jeremy can be seen on the lake performing a number of lake management tasks such as water quality sampling and data acquisition, hydrology monitoring, vegetation surveys, invasive species management, bathymetric surveys, sediment sampling and gauge maintenance.

Bob Bruzzino is the Risk Management Technician for the Crystal Lake Park District and serves as Jeremy's "chauffeur" as he surveys the lake. Bob has worked for the Crystal Lake Park District for 26 years. He is responsible for promoting the safety and health of persons employed in the Parks and Maintenance Department. Bob performs monthly building inspections and building repairs as needed.



An Illinois Fishing License is required to fish on all Park District bodies of water. Fishing licenses can be purchased at the Park District Administrative Office, One East Crystal Lake Avenue, Crystal Lake, IL. M-F 8:30 AM—5:00 PM

Safer Sealcoating: What You Can Do to Help

Pavement sealcoat (also called sealant) is a black liquid that is sprayed or painted on asphalt pavement. It is marketed as protecting and beautifying the pavement and is used commonly on driveways and parking lots. Most sealcoat products have a coal-tar-pitch or asphalt (oil) base.

PAHs are a group of chemical compounds that form whenever anything with a carbon base is burned. PAHs are of environmental concern because several are toxic to aquatic life, and seven are probable human carcinogens. (US EPA, 2009) Coal-tar-pitch is the residue remaining after the distillation of coal tar. Coal-tar-pitch is 50% or more PAHs by weight.



Some PAHs are toxic to mammals (including humans), birds, fish, amphibians, and plants. The aquatic invertebrates—insects and other small creatures that live in streams and lakes—are particularly susceptible to PAH contaminants. These invertebrates are an important part of the food chain and are often monitored as indicators of water quality. Scientific studies have shown a relation between coal-tar-based pavement sealcoat and harmful effects on human life.

PAHs move from a sealcoated surface into our environment by stormwater runoff, adhesion to tires, wind, and foot traffic. Cities, counties and states throughout the U.S. are beginning to ban the use of coal-tar sealants.

The Crystal Lake Park District now requires that its parking lots be sealcoated with an asphalt emulsion which is shown to be safer than coal-tar sealants. We recommend that homeowners follow our lead.

Reprinted from U.S. Geological Survey, Fact Sheet 2011-3010, Coal-Tar-Based Pavement Sealcoat, Polycyclic Aromatic Hydrocarbons (PAHs), and Environmental Health.



2015 State of the Lake Report

Each year, lake managers Hey and Associates, Inc. provide a State of the Lake Report to the Park Board of Commissioners. The entire report can be viewed online at www.crystallakeparks.org in the Document Library. The water budget is one of the items that is studied each year. That is, how much water enters the lake and from where vs. how much water leaves the lake and how does it leave. A stilling well, staff gauge, drain tile monitors and groundwater wells are used to monitor the lake level. With the exception of drought years 2005 and 2012, the level of Crystal Lake remains very consistent.

CITY OF CRYSTAL LAKE WATER QUALITY MONITORING SITES

City Sampling Locations:

- A. Lake
- B. Crystal Creek
- C. Sod
- D. Lippold Park Eff.
- E. Lippold Park Inf.
- F. Lippold Park West
- G. Lippold Park Center
- H. Lippold Park East
- I. Cove Pond Inf.
- J. Cove Pond Eff.



Hey and Associates, Inc.

Water quality is monitored by measuring temperature, dissolved oxygen, phosphorus, chlorophyll a, and clarity. High levels of phosphorus will lead to algal growth which leads to unclear water. Fortunately, these readings have remained very steady over many years. Crystal Lake continues to be in excellent health.

Finally, the type and density of aquatic plants is studied many times throughout the year. Crystal Lake has a good variety and density of native plants but also can also have high incidences of non-native invasives such as Eurasian watermilfoil. In 2015, a hybrid type of watermilfoil that is very resistant to herbicide treatment was first discovered.



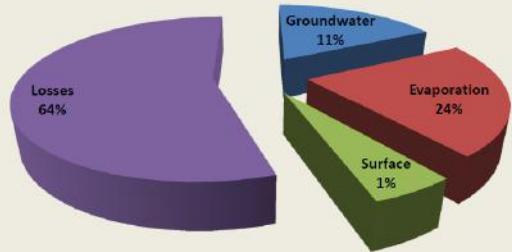
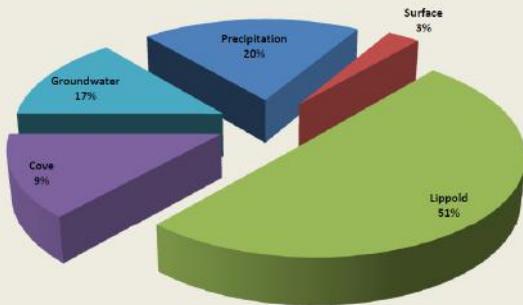
CRYSTAL LAKE MEASURED LAKE LEVEL



Hey and Associates, Inc.

HYDROLOGY (2015 WATER INPUTS)

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CRYSTAL LAKE PARK DISTRICT
One E. Crystal Lake Avenue
Crystal Lake, IL 60014



Lake Lines - April 2016

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