



Secretary Zinke reverses Obama Administration Lead Ban Order

On March 2, newly appointed Secretary of the Interior Ryan Zinke issued two Secretarial orders to expand access and recognize the impact that sportsmen and women have on the nation's economy.

Interior Secretary Zinke returned science and reason to federal decision-making about ammunition use. The first order reversed Director's Order 219, a ban on lead fishing tackle and ammunition former Fish and Wildlife Service Director issued on January 19, the last day of the previous Administration.

The second order advances conservation stewardship by directing Interior agencies such as the USFWS and the National Park Service to identify areas where recreation and fishing can be expanded. Zinke will request input from the Sport Fishing and Boating Partnership Council, of

which the [American Sportfishing Association](#) (ASA) is a key member, in this process.

Also, twenty pro-hunting organizations were invited to meet with Secretary Ryan Zinke on his first day at work as Secretary of the Interior. Former FWS Director Ashe issued Director's Order 219 on the last day of the Obama Administration, imposing severe ammunition restrictions without input from the states, the public, and ammunition and tackle manufacturers.

Ashe's Director's Order failed to take into account the harm that eliminating lead-based ammunition could cause to wildlife conservation and habitat management programs supported by the sales of firearms and ammunition. It ignored the question of whether adequate alternate ammunition types would be available to substitute for lead-based

ammunition. The former Director's measures would have seriously undermined hunting and the important role it plays in wildlife conservation. In issuing Director's Order 219, Ashe sought to impose Obama Administration prejudices into FWS management of lands for the next five years and beyond.

Secretary Zinke was joined by representatives from the Association of Fish and Wildlife Agencies, Congressional Sportsmen's Foundation, National Shooting Sports Foundation, Boone and Crockett Club, Wild Sheep Foundation, Theodore Roosevelt Conservation Partnership, National Rifle Association, Safari Club, National Wild Turkey Foundation, Archery Trade Association, American Recreation Council, Pheasants Forever, Ducks Unlimited, Sportsmen for Fish and Wildlife, and National Marine Manufacturers Association. ✧

In this issue...

Asian carp update plan postponed.....	2
Poaching hotline accepts text messages	2
New five fish daily limit for lake trout	3
IL Becoming and Outdoors Woman	3
Volunteers needed for frog & toad	3
Catchable trout releases available	3
Steelhead, walleye & bass seasons with.	4
Reminder: release sauger	4
NOAA sets public meetings on refuge.....	5
Fishing Information Booklet.....	5
Updated Economic Contributions.....	5
Angler feedback shapes strategy	5
2016 L Michigan sportfishing harvest.....	6
'Real prosperity' ahead for boating indus	6
Top fishing brands of 2016	7
Chestonia Bridge replacement project	7
Spring Trout Season opens April 1	7
LaSalle Lake opens	7
Outdoor industry applauds new Int Sec....	8
NY free Family Fishing Festival	8
Trout Fishing at Castalia FH	9
Attend Ohio Forestry and Wildlife Camp .	9
Michigan's hand netting season.....	9
Gov dedicates new target range	10
Fish Finder now includes survey reports	11
Resort/campground owners AIG training	11
10 Tips to get right boat loan.....	11
Genesee Riv angler diarists wanted.....	11

DEC adopts new freshwater fishing regulations

New freshwater fishing regulations go into effect **April 1, 2017**.

These regulations will be published in the 2017-18 Freshwater Fishing Regulations Guide that will be available at all license sales vendors and on-line in March.

Highlights of the new regulations include:

- Adjustments to existing walleye regulations in various waters throughout the state, including measures to protect spawning walleye and conservative minimum harvest size and creel limits in waters where managers are trying to establish self-sustaining populations of this popular sport fish. Regulations have also been liberalized for two waters where successful management has resulted in increased walleye abundance,

Chautauqua Lake (Chautauqua County) and Franklin Falls Flow (Essex County);

- Modifications to DEC Region 7 Finger Lakes rules to increase survival of rainbow trout, brown trout, and Atlantic salmon and to create a greater balance between these species and lake trout;
- Allowing ice fishing in some waters and restricting the number or use of devices used for fishing through the ice (including, but not limited to hand line, tip-up, tip down, etc.) in other waters to protect self-sustaining populations or limit fishing pressure;
- Simplification of the black bass regulations in Lake Erie by

New freshwater fishing regs

Continued on page 11

Asian carp update plan postponed

The Trump administration has ordered a hold on the release of a tentative plan to stop Asian carp from reaching the Great Lakes by strengthening a choke point in the Chicago waterway system.

The White House wants to review the plan for stopping Asian silver and bighead carp at the Brandon Road Lock & Dam, which the U.S. Army Corps had been scheduled to release in draft form on February 28. The release is on indefinite hold for now, confirmed Allen Marshall, public affairs officer for the Army Corps Rock Island District.

The Corps had anticipated the release of the draft Brandon Road Report on February 28; however, the release has been deferred pending further coordination. The Corps will advise when further information is available. ✧

Poaching hotline now accepts text messages

The [Report All Poaching \(RAP\) hotline](#) (800-292-7800) now accepts text messages in addition to telephone calls. Text messages may include photos. The RAP hotline is a toll-free, 24-7 number that enables citizens to report violations of fish and game laws, as well as other natural resource-related laws. It is operated by DNR's Law Enforcement Division. The DNR also offers a [web-based reporting form](#). Upon receiving a text, the RAP system immediately replies with a message stating that a dispatcher soon will be in touch with the complainant. A link to the RAP webpage is included. A dispatcher will begin a conversation with the complainant via text, collecting information just as dispatchers would do during a phone call. Complainants wanting to speak to a dispatcher can request a return phone call or call the RAP hotline. ✧

Joseph B. Nutt 1941 – 2017

Devout family man, longtime angler, personal friend, and GLSFC webmaster, Joe passed away suddenly February 23 at home after a long battle with cancer. A lifetime member of the Villa Park Sportsmen's Club, Joe was also their editor and webmaster. Our condolences and prayers to the Nutt family and his many friends; he will be missed.



Volunteer Webmaster needed

The GLSFC is looking for a volunteer to take over responsibilities of Council webmaster. For more information, e-mail Dan Thomas at: glafc444@gmail.com or call 630-941-1351.



• Established 1972 •

President

Daniel N. Thomas, *Illinois*

Vice President

Open

Secretary

Michael D. Sanger, *Wisconsin*

Treasurer

Thomas G. Couston, *Illinois*

DIRECTORS

Illinois – Robert Gaik

Indiana – Mike Schoonveld

Michigan – Tom Hamilton

Minnesota - Dave Koneczny

New York – Thomas Marks

Ohio – Rick Unger

Ontario – Darryl Choronzey

Pennsylvania - Ed Kissell

Wisconsin – Robert Wincek

Position Statement

Representing a major interest in the aquatic resources of the Great Lakes states and the province of Ontario, the Great Lakes Sport Fishing Council is a confederation of organizations and individuals with a concern for the present and future of sport fishing, our natural resources and the ecosystem in which we live. We encourage the wise use of our resources and a search for the truth about the issues confronting us.

Inland Seas Angler

GREAT LAKES BASIN REPORT

Publisher

Dan Thomas, 630/941-1351

Editor

Jeanette Thomas

Webmaster

Open

© Copyright 2017 by Great Lakes Basin Publications, the INLAND SEAS ANGLERS-GREAT LAKES BASIN REPORT is the newsletter of the Great Lakes Sport Fishing Council, a federally recognized not-for-profit 501(c)(3) organization, and recognized for tax-deductible giving by the federal government.

Opinions expressed are those of the authors and not necessarily those of GLSFC, its officers or staff. Reproduction of any material by paid-up members is encouraged, but appropriate credit must be given. Reproduction by others without written permission is prohibited.

Address Change:

Send six weeks in advance with old mailing label to GREAT LAKES BASIN REPORT, P.O. Box 297, Elmhurst, IL 60126, (630) 941-1351 or glafc@comcast.net.

New five fish daily limit for lake trout as part of combined salmon and trout bag

MADISON, Wis. – The Wisconsin Natural Resources Board approved expanded harvest opportunities for Lake Michigan lake trout using the emergency rule process.

Brad Eggold, Great Lakes district fisheries supervisor for the Wisconsin Department of Natural Resources, said the new rule would:

- Expand Lake Michigan lake trout harvest opportunities to a daily bag limit of five
- Include the five fish daily lake trout limit as part of the overall five trout and salmon combined daily bag limit.
- Maintain closure of refuges, which are supporting some natural reproduction
- Offer a continuous open season
- Maintain the commitment to lake-wide lake trout restoration and promotion of a diverse salmon and trout fishery through continued assessment of lake trout restoration goals and impacts of management actions on those goals.

The emergency rule was developed following an extensive angler engagement process that included seven public meetings convened by the department with total

attendance of 500. DNR fisheries managers also participated in numerous angler group meetings to discuss the changing Lake Michigan ecosystem and stocking strategies to improve the balance of predators with record low levels of prey fish.

"Based on more than 100 comments from stakeholders, we believe the option to harvest up to five lake trout per day will expand recreational opportunities while reducing predation pressure on alewives," Eggold said. "We intend to monitor the harvest through the duration of the emergency rule and use the information to develop a permanent rule. Given the current data on lake trout populations and harvest activity in the Wisconsin waters of Lake Michigan, we do not believe the increased bag limit will jeopardize long-term restoration efforts."

During 2016, the Lake Michigan lake trout harvest totaled 19,137 fish, down 46 percent from 35,715 in 2015. The lake trout sport harvest has remained at or below levels considered necessary for recovery of the species since 1998.

While pursuit of lake trout may not be the primary motivator for

anglers who head out with their own equipment or hire charters on Lake Michigan, the opportunity to catch more lake trout including the possibility of a trophy fish is likely to generate additional interest in the prized fishery. Each year, Wisconsin's Great Lakes fishing opportunities draw some 178,000 anglers (as measured by the sale of the Great Lakes Salmon and Trout stamp) who contribute some \$114.3 million to the economy, according to the American Sportfishing Association.

The lake trout emergency rule now moves forward for consideration by Gov. Scott Walker. Pending this approval, DNR will hold concurrent public hearings for the emergency rule and planned permanent rule in anticipation that the emergency rule will take effect during the 2017 season.

To view a recent presentation on Lake Michigan lake trout that informed development of the rule, visit dnr.wi.gov and search "[Lake Michigan Fisheries Forum](#)." For more information including recent presentations on broader Lake Michigan management topics, search "[Lake Michigan salmon and trout meetings](#)." ✧

ILL Becoming an Outdoors Woman

Registration is open for the IDNR 'Becoming an Outdoors Woman' Workshop on **June 9-11** at the Lorado Taft Field Campus in Oregon, Illinois. 'Becoming an Outdoors Woman' workshops are designed to provide introductory instruction and experiences in many outdoor-related activities and skills. The cost per person is \$230, which includes meals, lodging, four instructional classes, use of class materials/supplies, transportation during the workshop, and more. Registration materials can be downloaded from the BOW webpage www.dnr.illinois.gov/recreation/BOW. Register soon; there is a limit of 95 participants, and registration filled quickly last year. ✧

Volunteers needed for the annual DNR frog and toad survey

The Michigan DNR is seeking volunteers throughout the state to assist with its annual frog and toad survey. Declining populations of frogs, toads and other amphibians have been documented worldwide since the 1980s. Studies suggest amphibians are disappearing due to habitat loss, pollution, disease and collection. Those interested in volunteering should contact Lori Sargent at 517-284-6216 or SargentL@michigan.gov. More information on the [frog and toad survey](#) and other projects is available at mi.gov/wildlife. ✧

Catchable trout releases available

COLUMBUS, OH – More than 100,000 rainbow trout are expected to be released this spring in 64 Ohio public lakes and ponds, creating excellent fishing opportunities for anglers all across Ohio.

Releases will take place across Ohio from **March 3-May 21** as long as areas are ice-free and accessible to anglers. Information about the trout releases, including updates to the schedule due to weather and stocking locations, is available at wildohio.gov or by calling 800-WILDLIFE (945-3543).

For a list of trout stocking dates and locations, go to www.wildlife.ohiodnr.gov/fishing/trout-stocking-dates. ✧

Steelhead, walleye and bass seasons with DNR skills clinics in Cadillac

As part of its Outdoor Skills Academy, the Michigan DNR will offer opportunities to learn more about steelhead, walleye and bass fishing and turkey hunting with upcoming clinics at the Carl T. Johnson Hunt and Fish Center in Cadillac, Michigan.

Steelhead Clinic – Saturday and Sunday, **March 25-26**

This class, taught by instructors with more than 30 years of experience fishing steelhead in Michigan, is for both beginners and advanced anglers. Participants will spend the first day in the classroom and the next day on the river. Saturday's session runs 10 a.m. to 5 p.m., and there are two Sunday morning sessions, 8 to 10 a.m. and 10 a.m. to noon. Cost is \$40 and includes lunch.

Turkey Hunting Clinic – Saturday, **April 1**

The Outdoor Skills Academy welcomes the [National Wild Turkey Federation](#) for the academy's first wild turkey clinic. Starting at 10 a.m. and running four to five hours, this "A to Z" class on how to hunt wild turkeys will cover everything a beginner needs to know to get started, including how to find a location, scouting, calling and gear. The clinic will be held both in the field and in the classroom. The cost for this class is \$25, which includes lunch.

Open Water Walleye Clinic – Sunday, **May 7**

This four-hour class, starting at 10 a.m., will go through how Outdoor Skills Academy pro-staffers Steve Berry from Church Tackle and Matt Peterson from Fishbones Custom Lures spend their days chasing trophy walleye. The class will cover everything from which rod and reel to use to how to use your electronics. DNR staff members also will be on hand to answer any rules and regulations questions participants may have. Cost is \$25 and includes lunch.

Bass Fishing Clinic – Saturday, **May 13**

In this class for beginners, starting at 10 a.m., the Outdoor Skills Academy pro-staff will present various strategies and techniques for pursuing northern Michigan bass. Feel free to bring your own gear. This clinic will cover a wide range of fishing techniques for both smallmouth and largemouth bass, but will focus on the use of various plastic presentations, including Texas rigging, Carolina rigging, tube jigs, etc. Cost for this class is \$25.

The Outdoor Skills Academy is a DNR program focused on developing and honing outdoor recreation skills, with classes offered at the Carl T. Johnson Hunt and Fish Center. The Carl T. Johnson Hunt and Fish Center is located in [Mitchell State Park](#), at 6093 E. M-115 in Cadillac. A [Recreation Passport](#) is required for entry into the park. To learn more about the Carl T. Johnson Hunt and Fish Center and its programs, visit www.michigan.gov/huntfishcenter. ✧

DEC reminds anglers to release sauger during the restoration period Sauger restoration continues in the Allegheny River

New York State DEC reminded anglers that the possession of the sauger species of fish is strictly prohibited and anglers should familiarize themselves with the difference between walleye and sauger. Sauger, a close relative of walleye, were once native to the Allegheny River system but disappeared due to severe pollution in the late 19th to mid-20th centuries. Even as water quality improved after the Clean Water Act (1972), the Kinzua Dam stood in the way of sauger naturally repopulating the Upper Allegheny River.

In 2014, DEC began a five-year stocking program in the Allegheny River and its tributaries with the goal of creating a self-sustaining sauger fishery. DEC has stocked more than 14,000, 1.5 - 2 inch fingerlings and 250,000 fry (3/8 inch) over the last three years. The fish, raised at DEC's Chautauqua Hatchery (Stow, NY), are

released into the wild in early summer. Stocked waters include the upper Allegheny Reservoir, Allegheny River, Olean Creek, and Oil Creek.

Sauger have a streamlined body shape like a walleye, but have three distinguishing characteristics to tell them apart. Sauger have horizontal rows of black spots on their dorsal fin, black saddle-like marking on the sides, and are lacking a white tip on the tail. Walleye have a defined white tip on the bottom of the tail.

Similar to their walleye cousin, sauger are a highly migratory species that move into rivers and tributaries to spawn in early spring. The Allegheny River and many of its larger tributaries are popular for walleye, and anglers may encounter sauger while fishing. It is critical that anglers are aware of the program and the importance of immediately releasing any sauger that are caught.

Since the restoration program began, DEC Region 9 fisheries staff have conducted surveys in the Allegheny River and the results are encouraging. Fish from all three stocking years have been caught, indicating that sauger are surviving well in the river. The largest sauger collected during 2016 surveys was a 2 year old fish measuring 17.5 inches.

Anglers are on the front lines when it comes to knowing what is actually going on in the river. Any reports or evidence of sauger activity will greatly assist DEC in learning more about how these sauger are using the river. Anglers are encouraged to report catches or sightings of sauger to the Region 9 DEC fisheries office in Allegany at (716) 372-0645. More information and the full version of New York's [Sauger Conservation Management Plan](#) can be found on DEC's webpage. ✧

NOAA sets public meetings on proposed Lake Michigan refuge

Four March stakeholder meetings and a public comment period are being offered by the National Oceanic and Atmospheric Administration to gain citizen feedback on a [proposed 1,075 square mile marine sanctuary](#) in the Wisconsin waters of Lake Michigan.

The proposed NOAA Lake Michigan National Marine Sanctuary would lie adjacent to Manitowoc, Sheboygan and Ozaukee counties and protect 37 shipwrecks and related underwater cultural resources.

The sanctuary would include prohibitions against damaging the shipwrecks and grappling into and anchoring on shipwreck sites. Cities supporting the state of Wisconsin's sanctuary nomination include Manitowoc, Mequon, Port Washington, Sheboygan and Two Rivers.

Read more [here](#) and submit comments [here](#) by **March 31**. The meetings will be held from 6:30 to 8:30 p.m. at:

- Algoma, **March 13**, Knudson Hall, 620 Lake St.
- Manitowoc, **March 14**, Wisconsin Maritime Museum, 75 Maritime Dr
- Sheboygan, **March 15**, UW-Sheboygan, Main Building, 1 University Drive.
- Port Washington, **March 16**, Wilson House, 200 N. Franklin St.

Fishing Information Booklet

The *2017 Illinois Fishing Information* guide is available at many IDNR license and permit vendor locations, and in PDF format online at this link: http://www.ifishillinois.org/regulation/s/2017_Fishing_Guide%20.pdf.

Regulations in the guide are effective **April 1, 2017** through March 31, 2018. A reminder to anglers, and would-be anglers, that Illinois Free Fishing Days for 2017 will again be during the Father's Day weekend – **June 16-19**. ✧

Updated Economic Contributions of Recreational Fishing by U.S. Congressional Districts

Alexandria, VA – Recreational fishing brings a myriad of economic benefits to communities throughout the U.S. The [American Sportfishing Association](#) (ASA) and [Southwick Associates](#) have released the 2017 update of [Economic Contributions of Recreational Fishing: U.S. Congressional Districts](#), along with a new [series of one-page infographics](#), which depict recreational fishing's economic impact on all 435 Congressional districts and the 50 states.

The information in the report and infographics use data from the most recent U.S. Fish and Wildlife Services' [National Survey of Fishing, Hunting and Wildlife-Associated Recreation](#), conducted in conjunction with the U.S. Census Bureau, as presented in ASA's [Sportfishing in America](#) report. The study used mapping and population software to hone in on smaller geographic areas in a way that is particularly relevant to members of the U.S. House of Representatives.

The results in *Economic Contributions of Recreational Fishing: U.S. Congressional Districts* report describe the economic contributions for the respective state economies from anglers who live within each congressional district.

America's 46 million anglers generate more than \$48 billion in retail sales with a \$115 billion impact on the nation's economy creating employment for more than 800,000 people. Recreational fishing is the foundation of an industry that involves not just the manufacturing, sale or provision of tackle and other fishing gear, but also includes services such as boat builders, hotels, restaurants and much more.

The report and [Congressional district infographics](#) are available at www.ASAfishing.org under Facts & Figures. ✧

Angler feedback shapes 2017 brown trout stocking strategy

For 2017, Wisconsin plans to stock 316,000 seeforellen brown trout yearlings and 40,000 brown trout fall fingerlings into Lake Michigan. Seeforellen strain brown trout appear to survive better, live longer and grow larger than the Wild Rose strain, which has been discontinued.

DNR intends to stock the fish starting in March according to the following allocation:

- 75 percent of the total yearly available brown trout yearlings will be distributed equally among the 11 counties where brown trout are stocked.
- The remaining 25 percent will be allocated based on each county's annual directed brown trout fishing effort and directed brown trout harvest rates relative to the number stocked. The higher the effort and harvest rates, the more fish that are allocated to each county.
- The fall fingerling brown trout will be allocated based on the best professional judgment of fisheries biologists and Lake Michigan fisheries team members. Distribution of these fish will be discussed on an annual basis through the Fisheries Forum process.

For questions about the brown trout stocking plans, contact Todd Kalish, DNR deputy fisheries bureau director, at Todd.Kalish@wisconsin.gov, 608-266-5285. ✧

Campground Hosts needed

The 2017 Illinois state park camping season is getting underway and there are Campground Host positions available at a number of parks. Hosts are needed starting between **April 15 and May 1**. Positions include free camping and require 35 hours per week (weekends required). For more information on Campground Host positions: [Volunteer - Illinois.gov](#). ✧

2016 Lake Michigan Sportfishing harvest highest since 2012

MILWAUKEE, Wis. – Lake Michigan anglers reported significantly improved results for many species in 2016, reeling in nearly 385,000 salmon and trout, including the third highest number of coho salmon since 1992.

"During much of 2016, favorable weather and water temperatures helped produce solid results and we are pleased to see anglers benefit from ongoing efforts to provide a diverse and balanced fishery," said Brad Eggold, Wisconsin DNR Great Lakes district fisheries supervisor. "While the Chinook harvest showed healthy increases over the past two years, coho salmon proved to be the big story with more than 125,000 fish harvested."

Factoring in other species such as northern pike, walleye, smallmouth bass and yellow perch, the 2016 harvest totaled 557,375. The sport harvest from ramps and marinas totaled 395,549 fish, while charter captains helped clients bring in 112,150 fish.

Highlights from DNR's 2016 survey of anglers on Lake Michigan include:

- An overall salmon and trout harvest of 384,908 fish, up 43

percent from the 269,978 taken in 2015. This marks the highest catch since 590,210 fish were harvested in 2012;

- A Chinook harvest of 139,082 fish, up 22 percent from 113,973 in 2015;
- A coho harvest of 125,964, up 207 percent from 41,010;
- A rainbow trout harvest of 76,846, up 30 percent from 59,106;
- A brown trout harvest of 23,879, up 18 percent from 20,174;
- A lake trout harvest of 19,137, down 46 percent from 35,715.

The improved results came even as anglers decreased their effort to 2.63 million hours from last year's 2.73 million hours, about 1 percent below the five-year average. The harvest rate increased to 0.1464 fish per hour, up slightly (2.17 percent) from the five-year average.

Factoring in other species such as northern pike, walleye, smallmouth bass and yellow perch, the 2016 harvest totaled 557,375. Among the other fish, walleye accounted for the single largest target species at 78,440 fish, a 21 percent decrease from 99,302 in 2015. Smallmouth bass saw

the greatest increase to 16,880 fish, up 79 percent from 9,422 in 2015.

Over the last 15 years, sport fishing surveys show that boat anglers are harvesting the majority of fish on Lake Michigan. Anglers who launched their own boats from ramps or marinas or invested in a charter trip were the most successful. The sport harvest from ramps and marinas totaled 395,549 fish, while charter captains helped clients bring in 112,150 fish.

DNR's annual creel survey dates to 1969 and last year captured the results from more than 13,000 angler interviews at ramps, shorelines, piers and streams in the Wisconsin waters of Lake Michigan stretching from Kenosha County to Green Bay. Each year, creel clerks interview anglers at established locations, measure fish and keep track of hours fished, numbers of boats and more. Results also include harvest estimates for guided charters from monthly reports that were initiated in 1976.

To learn more, visit dnr.wi.gov and search "[Fishing Lake Michigan](#)." Complete creel survey information can be found by searching "[Lake Michigan management reports](#)." ✧

Two years of 'real prosperity' ahead for boating industry

MIAMI – Boat sales are increasing and are expected to ride the momentum for the coming two years. That's according to National Marine Manufacturers Association president Thom Dammrich, who addressed a crowd of roughly 200 at the Miami International Boat Show last month.

"Consumer confidence is at a 10-year high," Dammrich said. "Real disposable income continues to grow. Consumer spending continues to grow. Gasoline prices remain low. We've got two, two-and-a-half years of real prosperity ahead." The industry still needs to make gains in reaching a younger and more diverse audience, Dammrich said.

"The interesting thing is that research is showing us people between the ages of 25 and 34 have a very high

interest in the boating lifestyle. In fact, [they have] a higher interest than any other age group," Dammrich said.



Another challenge is getting people to actually buy a boat—only 2 percent of people who research the purchase of a boat pull the trigger, Dammrich said.

That is in part attributable to "a lack of transparency of what the real cost of boating is," Dammrich said, adding that they aren't put off by the

extra costs, but are repelled by the hidden costs. "This is a challenge we're going to need to deal with."

"We have a prospering industry, and a bigger and better show to serve it," Dammrich said.

First-day attendance at the Miami International Boat Show was up 8 percent from last year. It features \$3 billion of products with 1,300 boats on display, including 550 in the water.

The industry was up 6 percent in unit sales in 2016 and had an 11 percent increase in dollar sales. It has seen "an acceleration in growth in the last several months," Dammrich said. According to data from ITR Economics, the industry is expected to peak in the first quarter of 2018, continuing to the first or second quarter of 2019. ✧

Top Fishing Brands of 2016

Fernandina Beach, FL – Southwick Associates' has announced the 2016 top brands for many angling product categories. This list has been compiled from the internet-based surveys completed in 2016 by AnglerSurvey.com panels.

In 2016, the most frequently purchased tackle brands included:

- * Top combo brand: Shakespeare
- * Top spinner bait: Strike King
- * Top swivel brand: Eagle Claw
- * Top leader brand: Seaguar
- * Top fly reel brand: Orvis
- * Top fly tying material brand: Hareline Dubbin
- * Top fish finder brand: Humminbird
- * Top clothing brand: Columbia
- * Top rain gear brand: Frogg Toggs
- * Top fishing net brand: Frabill
- * Top knives brand: Rapala

The list above is only a fraction of all fishing products tracked in the Southwick Associates bi-monthly consumer panel surveys. Aside from brand purchased, information also includes the percentage of product purchases across different retail channels, total spending and average price paid by product, and demographics for anglers buying specific products. In addition, Southwick Associates tracks angler participation information including total days spent fishing, type of fishing (fresh, salt and more), preferred species and where they go.

Topline participation and equipment purchase information from the AnglerSurvey.com consumer panel surveys is available in the Fishing Participation and Equipment Purchases Report. The report can be purchased as a subscription to the six bi-monthly reports, or as a single annual year-end report. Companies can gain a better understanding of where they trail or lead the competition through custom analysis of the database of information collected through the years. To purchase a report or learn more about the insights available, email info@southwickassociates.com. ✧

Chestonia Bridge replacement project causes intermittent closures on Jordan River

The Chestonia Bridge boating access site (Antrim County) is closed through early July due to a bridge replacement project. In addition, intermittent closures of the Jordan River will occur. The Antrim County Road Commission will replace the existing 16-foot-wide culverts where Old State Road crosses the Jordan River with a new concrete, full-span bridge. During this period, river closures near the project area will be posted upstream at the Grave's Crossing access site and on the Antrim County Road Commission website at <http://www.antrimrc.org/old-state-road-bridge-over-the-jordan-river-construction>.

As a result, the Chestonia Bridge boating access site will be relocated. The DNR has preliminary plans under way for the relocation project. Alternate access points for launching on the river, during construction, include:

- Grave's Crossing boating access site located upstream approximately 3 miles south on M-66.
- Webster's Bridge boating access site located downstream approximately 4 miles to the north. ✧

Spring Trout Season Opens April 1

The 2017 Spring Trout Fishing Season in Illinois opens at 5 a.m. on Saturday, **April 1**. The catchable trout program is made possible through the purchases of inland trout stamps by those anglers who participate. Unless exempt, anglers must have a valid Illinois fishing license and an inland trout stamp to legally possess trout. Catch-and-release fly fishing for trout will open at nine locations on **March 18**. Go to this link for details on spring trout fishing locations: http://www.ifishillinois.org/programs/trout_stocking.html ✧

2017 Pure Michigan Hunt winners

The Michigan DNR announced the three winners of the eighth annual Pure Michigan Hunt. Michele Ketchum of Sparta (Kent County), Richard Farris of Almont (Lapeer County) and Jerry Peak of Crystal (Montcalm County) each won a pocketful of licenses and more than \$4,000 worth of hunting gear.

Each \$5 Pure Michigan Hunt application purchased helps fund wildlife habitat restoration and management in Michigan.

Each winner receives elk, bear, spring and fall turkey, and antlerless deer licenses to be used in 2017. In addition—along with three hunting companions—the winners will get first pick opening morning of the waterfowl season at any of Michigan's premier managed waterfowl hunt areas. Ketchum, Farris and Peak each also won a package of gear donated by Michigan businesses and organizations.

The winners officially were awarded their prizes at the Michigan Natural Resources Commission meeting February 9, in Lansing. The 2017 drawing saw a total 51,090 applications purchased by 18,581 individuals, generating more than \$259,000 that will fund wildlife habitat restoration and improvements in Michigan.

Applications for the next Pure Michigan Hunt drawing are now available. For more information, visit www.mi.gov/pmh. ✧

LaSalle Lake opens

LaSalle Lake State Fish and Wildlife Area will open for the 2017 season on **March 15** and will be open daily, 6:00 a.m. – Sunset. All fishermen must be off the site by closing time each day. There is a wind warning system at LaSalle Lake. Orange windsocks are located on interior dikes throughout the lake. When the windsocks are erect, wind speeds are 14 mph or above and no boats are to be launched; boats on the lake should find calm water and get off the lake when safe to do so. ✧

Outdoor industry applauds new Interior Secretary

The United States Senate on March 1st confirmed U.S. Representative Ryan Zinke (R-MT) as the nation's 52nd Secretary of the Interior by a 68-31 vote of bipartisan support. His confirmation drew praise from the Outdoor Recreation Industry Roundtable (ORIR), American Sportfishing Association and the National Shooting Sports Foundation (NSSF) which strongly backed his nomination.

"Secretary Zinke is a true friend of American sportsmen who believes in the inestimable value of our public lands. His leadership at the Department of the Interior offers new opportunity to preserve and promote our hunting and related outdoor traditions. He is an American hero, a lifelong hunter and angler, and a true conservationist in the tradition of Teddy Roosevelt," said Lawrence G. Keane, NSSF senior vice president and general counsel. "The Secretary of the Interior is arguably the nation's single most important position with regard to the management of federal lands, wildlife habitat and natural resources. Competing interests must be balanced with what will be in the

best long-term interest of the nation.

We look forward to standing with Secretary Zinke to help him achieve that mission."

The NSSF, along with the National Rifle Association, Boone and Crockett Club, The Mule Deer Foundation, Rocky Mountain Elk Foundation and Theodore Roosevelt Conservation Partnership, supported Zinke's nomination. That support was entered into the Senate record during the confirmation hearing.

Secretary Zinke, as a lifelong outdoor enthusiast, hunter and angler, understands the importance of access to and funding for America's public lands and waters, and the outdoor industry's critical economic impact. He was a co-sponsor of the recently enacted Outdoor Recreation Jobs and Economic Impact (REC) Act of 2016, which requires measurement of the economic impact of outdoor recreation and its role in the U.S. economy.

Secretary Zinke takes over a department that is responsible for 25 percent of the country's surface area and exercises great influence on outdoor activities throughout the

nation. The parks, refuges, trails, rivers and more that the Department manages attract hundreds of millions of visits each year.

The Department of the Interior has an annual budget of \$13 billion and administers the Land and Water Conservation Fund, Sport Fish and Boating Trust Fund, Pittman-Robertson Program and other key programs providing more than \$1 billion annually in grants to assist outdoor recreation experiences. The land and water it manages provide the foundation for much of the \$646 billion outdoor recreation industry that directly supports some 6.1 million jobs.

"The sportfishing industry is pleased that Secretary Ryan Zinke will be leading the Department of the Interior," said Mike Nussman, president and CEO, [American Sportfishing Association](#). "As a Montanan and a sportsman, Zinke understands firsthand the importance of the outdoor recreation economy and the jobs and economic growth it provides for the nation. We applaud this new member of the President's Cabinet." ♦

NY sponsors free Spring Family Fishing Festival

The New York State DEC and Office of Parks, Recreation and Historic Preservation (OPRHP) will hold their annual Spring Family Fishing Festival on Saturday, **April 1** at Belmont Lake State Park.

Additional sponsors for the fishing festival include the Natural Heritage Trust, the Fisherman Magazine, and radio stations 106.1 WBLI and 102.3 WBAB.

The festival begins at 10 a.m. and is free of charge. Activities include open fishing, fishing instruction, fly casting demonstrations, and fish cleaning services. DEC and a number of local fishing clubs will have a display and demonstration area, and participants are urged to try their hand at fly casting. Loaner rods and free bait will be available to participants

throughout the day. The supply of loaner rods is limited and participants are encouraged to bring their own fishing tackle if they have it.

Children's activities also begin at 10 a.m. and include an inflatable slide (weather dependent), the "Spring Fling" casting contest, and hands-on educational displays by DEC's Education Unit. Children participating in the casting contest will have a chance to win prizes supplied by DEC's I FISH NY Program, OPRHP, the Fisherman Magazine, and The Natural Heritage Trust.

The Spring Fishing Festival is a designated Free Fishing Event, so the freshwater fishing license requirement for anglers age 16 and older is suspended for this event.

This event will be held rain or shine. Call I FISH NY at (631) 444-0283 or Belmont Lake State Park at (631) 667-5055 for more information.

A vehicle use fee of \$8 will be in effect. Parking is free for Empire Pass holders. The 2017 Empire Pass can be purchased at state park offices, online or by phone at (518) 474-0458. For more information about the festival, call I FISH NY at (631) 444-0283 or visit DEC's Learn to Fish page.

For information about freshwater fishing on Long Island or the spring trout stocking program in Nassau and Suffolk counties, call the DEC Bureau of Fisheries at (631) 444-0280, [e-mail](#) or visit the [Long Island/NYC fishing page](#). ♦

Trout Fishing at Castalia Fish Hatchery

COLUMBUS, OH – Great trout-fishing opportunities on Cold Creek, one of Ohio's most unique streams, await fishing enthusiasts who enter and are drawn in a special lottery conducted by the Ohio DNR. A half-mile section of the creek, located at the ODNR Castalia State Fish Hatchery in Erie County, will be open to a limited number of anglers on selected dates from **May 1–Nov. 30**.

Anglers interested in fishing the stream must submit an application form and a nonrefundable \$3 application fee by **March 31**, in order to be eligible for the random drawing. Applications may be completed online at wildohio.gov or by calling 800-WILDLIFE (945-3543) to obtain a paper form, which must be returned via mail. Only one application is allowed per person. More information about the lottery can be found at wildohio.gov or by calling 800-WILDLIFE.

There will be one season for adults (**May 1–Nov. 30**), and one for youths (**June 12–Aug. 11**). Applicants of the youth lottery must be at least 4-years-old and under 16 when they apply. Approximately 90 adult and 90 youth permits will be issued. Individuals selected to participate will be allowed to bring two adults and three youths under the age of 16 (no more than six people total). Participation is determined by a random drawing, which will be held in early April.

The results of the adult drawing will be posted on the division's website at www.wildohio.gov. Successful youth applicants will be notified by mail. This year, all permits will be mailed. Applicants not chosen will not be notified.

Special fishing rules will be in effect to ensure that a quality fishing experience is maintained throughout the season. One of these special rules prohibits catch-and-release fishing, with wildlife officials requiring that anglers keep all fish they catch. The daily bag limit will be five trout per angler. ✧

Attend Ohio Forestry and Wildlife Camp

COLUMBUS, OH – Students who are interested in learning more about the outdoors in a hands-on environment while spending a week outside are invited to attend the Ohio Forestry and Wildlife Conservation Camp. The camp will be held **June 11-16**. The camp is open to all students who have completed the eighth grade through high school seniors graduating the year of camp, which is held at FFA Camp Muskingum on beautiful Leesville Lake in Carroll County.

Programs at this year's weeklong resident camp include tree identification, ecology, forest industries, wildlife management, forest management, wildlife law enforcement, wildlife identification and watershed health. New this year will be the opportunity for the students to observe and learn from a recent timber harvest at the camp.

The camp is sponsored by the Ohio Forestry Association Foundation, a private, nonprofit organization whose purpose is to promote the wise management of Ohio's forests and natural resources.

Campers spend the week making new friends, participating in fun camp activities and learning about the environment around them. Camp culminates with a comprehensive exam, including a tree identification section. The highest scoring students compete for college scholarships to Hocking College, The Ohio State University and Ohio University.

Camp costs \$375, with sponsorships available to assist interested students who need help covering the fee. Sponsorships are offered through local SWCD offices, sportsmen's clubs, forestry groups and many private forestry-sector businesses. Students must register by **June 9**, to participate, and registration is now open.

For more information and to register for the Ohio Forestry and Wildlife Conservation Camp, contact the Ohio Forestry Association at 888-38-TREES, or visit the OFA website at ohioforest.org. ✧

Michigan's hand netting season open, dip netting opens March 20

With recent warmer weather conditions making many people interested in getting on the water, the Michigan Department of Natural Resources reminds anglers about netting season dates:

- The hand netting season opens **March 1** and closes **May 31**
- The dip netting season opens Monday, **March 20**, and also closes **May 31**

The following species can be taken during both seasons: bowfin, carp, goldfish, gizzard shad, longnose gar, smelt and suckers. Waters open to hand netting include all Great Lakes, Lake St. Clair, the St. Clair River, the Detroit River and the St. Marys River including all tributaries to those waters from the mouth to half-mile upstream. Waters open to dip netting include all Lower Peninsula and Upper Peninsula streams, except Designated Trout Streams.

Additional waters are closed to these activities; visit michigan.gov/fishingguide for full details.

Using seines, hand nets or dip nets for minnows is allowed all year on all waters (except Designated Trout Streams and those waters closed to minnow harvest), while cast nets can be used for alewives, minnows, smelt and gizzard shad all year on the Great Lakes, Lake St. Clair, the St. Clair River, the Detroit River and the St. Marys River. ✧

Camping Reservations

Make your reservations now for campsites and shelters for many IDNR sites for 2017. Reservations can be made online through the Reserve America website at www.reserveamerica.com using a Visa or MasterCard. For more information, check the IDNR website: <http://dnr.state.il.us/lands/Landmgt/Programs/Camping/index.htm>. ✧

Gov dedicates new target range

Gov. Eric Holcomb and First Lady Janet Holcomb recently helped dedicate Indiana's newest target shooting range at Deer Creek Fish & Wildlife Area. The First Lady, who is a certified firearms instructor, took the ceremonial first shot, after which the range was opened to the public for a free target-shooting session.

The new range is on a 44-acre parcel in the southeast corner of Deer Creek FWA off State Road 243. It features 33 shooting stations at distances of 10, 25, 50 or 100 yards, plus a four-station shotgun range. A building houses range staff, retail space for associated shooting supplies and restrooms. There are 49 parking spaces.

"This new range adds to our growing inventory of modern shooting facilities at DNR Fish & Wildlife Areas," DNR director Cameron Clark said. "Like ranges at Atterbury, Kingsbury, Roush Lake, and Willow Slough, this facility gives target shooters and hunters another quality venue polish their skills."

Deer Creek FWA was acquired in 2010 when the Department of Correction transferred 1,962 acres of the Putnamville Correctional Facility to the DNR. The property has expanded since to 2,162 acres under management of the DNR Division of Fish & Wildlife. Activities include hunting, fishing, and wildlife viewing.

Deer Creek comprises rolling interspersed agriculture and mature oak-hickory woods. A 4-acre pond in the north section offers fishing for bass, bluegill and catfish. Its namesake stream—Deer Creek—winds through the south section of the property. A smaller, unnamed creek crosses the north section. Planning for the public shooting range started in 2013, with construction starting in 2016.

A concessionaire will manage the range for DNR. Hours of operation are 11 a.m. to 5 p.m., Wednesday through Sunday. For more information, visit www.deercreekrange.org or call (765) 267-3032. ✧

DNR Fish Finder now includes survey reports

The Indiana "Where to Fish Finder," an interactive map of public access boat ramps, now includes fish survey reports to keep anglers informed. The map is at wildlife.IN.gov/3591.htm. Fish survey reports summarize the species collected by number and size, how the sport fish in a specific waterbody compare to those in other waters, and include depth maps and information on water quality and submersed vegetation. "Making these reports accessible in the Where to Fish Finder creates a one-stop shop for anglers to gather up-to-date fishing information on public waters," said Michelle Cain, wildlife information specialist for the DNR Division of Fish & Wildlife. ✧

Resort & campground owners must take aquatic invasive species training

The Minnesota DNR is offering aquatic invasive species training to owners of lake service provider businesses, so they can legally work in lakes and rivers throughout the state. Lake service provider businesses include resorts, outfitters and campgrounds that rent or lease boats and other water-related equipment. Business owners must attend training, apply for a permit and pay a \$50 application fee every three years to comply with Minnesota law.

Eleven AIS training sessions are planned around the state, and a new online training will be available in March. Training is offered in winter to give businesses time to attend training and get a permit before ice-out. Registration deadlines for in-person training are one week prior to each training. For a listing all training sessions: www.dnr.state.mn.us/lsp/calendar. For training or for more information, visit the DNR website at www.mndnr.gov/lsp. ✧

Commission oks semi-auto firearms for hunting

On January 31, the Pennsylvania Game Commission unanimously passed the proposed rulemaking for the semi-auto rifle hunting law at the quarterly meeting. Final approval for the regulations will take place at the **March 27-28** meeting. Signed by Governor Tom Wolf on November 21, 2016, Act 168 of 2016 eliminates the prohibition on the use of semi-automatic rifles for hunting and allows for the Pennsylvania Game Commission to regulate these sporting rifles for all game species in accordance with season and bag limits. ✧

DNR rules hearing/ Conservation Congress meeting

On Monday, **April 10**, there will be 72 public hearings, one in each county starting at 7:00 p.m. where individuals interested in natural resources management have an opportunity to provide their input by non-binding vote and testimony to the Department of Natural Resources, Natural Resources Board and the Conservation Congress on proposed rule changes and advisory questions relating to fish and wildlife management in Wisconsin. [Spring Hearings page](#)

County residents have the option to run for a seat on the Conservation Congress and to elect delegates from their county to represent their county views regarding natural resources on the Conservation Congress. Also, individuals have the opportunity to bring forth new conservation issues of a statewide nature to the attention of the Conservation Congress through the citizen resolution process.

[2017 Spring Hearing Questionnaire](#)
[2017 Spring Hearing locations](#)
[2017 hearing flyer](#) ✧

10 Tips to get the right boat loan

ALEXANDRIA, VA – How do you get the right boat loan for your new or previously owned dream boat? Here are 10 tips from BoatUS.

1. Check your credit: Before applying for a loan, ensure your credit report is accurate, and get your current credit score. The closer to 700 and higher, the better the rate you'll get. A free copy of your credit report is available annually from each of the three national credit bureaus at www.annualcreditreport.com. To get your credit score, first try checking with your credit card issuer or bank you do business with. If it's not provided, you will need to speak to a credit counselor, use a fee-based service or purchase it from the credit bureau. More at the Consumer Financial Protection Bureau.

2. Find the right loan type: A fixed-rate, fixed-term, simple-interest loan is the most common. This offers the same monthly payment for the life of the loan. Variable rate or hybrid options may offer a combination of a fixed rate for a few years then a variable rate. With interest rates forecasted to rise, variable rate loans may increase. Don't forget to ask if there are prepayment penalties for paying off the loan early.

3. Compare loan rates: Generally, rates are lower and available loan terms longer for newer boats and larger loan amounts. However, each is dependent on a variety of factors including model year, loan amount and down payment. Be prepared for lenders to require larger down payments, have higher rates and offer shorter terms on older boats, especially those over 20 model years. There could also be a .25% rate difference between some model years, so be sure to talk with your lender and understand their rate and term structure.

4. Don't be fooled by ads: You may see rates advertised as low as

3.99 percent, but there usually will be some small print that could make that loan less attractive. For instance, the rate might only be fixed for a few years or the loan period might be only seven years.

5. Get pre-approved: Ask if you can get preapproval, or if your lender allows you to start the underwriting process before you have a signed sales agreement. This may save some time.

6. Consider a HELOC: Thinking of using a home-equity line of credit (HELOC) to buy your boat? This might work if you have equity in your home and you plan to pay the boat off while interest rates remain relatively low. Unsecured loans (loans not secured by your boat) are also an option for well-qualified individuals.

7. Explore tax benefits: A boat can qualify as a second-home loan interest deduction if it has a berth, head and galley, so buying a boat just large enough to have these features could offer a tax advantage. There's an overall limitation on the second-home deduction. You can only deduct two homes, and it can't total more than \$1 million in loans. If you count the HELOC, the threshold is \$1.1 million.

8. Get it surveyed: So you've secured the loan and found the boat you've wanted. While you might think the boat is perfect, hire a qualified marine surveyor to inspect the boat to ensure it is in good condition and you won't have any unexpected repair bills. A list can be found at BoatUS.com/surveyors.

9. Ask about closing costs: As with any loan, there are some fees involved—sales tax, processing fee, and title and registration fees are common. Check with your lender to find out what to expect.

10. Calculate your monthly payment: Wondering how much of a loan you can afford? Check the BoatUS online calculator at BoatUS.com/calculator to compute

monthly payments. Your lender will also review your debt ratio and other criteria.

For more info: www.BoatUS.com/boatloans. ✧

New freshwater fishing regs

Continued from page 1

compressing the three existing seasons into two while expanding opportunities to use live bait and harvest one large bass per day during a special season;

- Greater protection for northern pike in the St. Lawrence River due to the declining abundance of spawning adults and poor recruitment of young-of-year fish in the Thousand Islands region;

- Relaxing of special regulations for trout and Atlantic salmon for various waters in DEC Region 5 (Adirondack Region) due to poor survival; and

- Multiple updates to clarify existing regulations.

For a summary of the regulations changes, visit DEC's website at www.dec.ny.gov/outdoor/109353.html. ✧

Genesee River angler diarists wanted

Observations will help shape future fisheries management actions

New York State DEC welcomes angler observations as DEC begins its angler diary program on the Genesee River in Allegany and Wyoming counties. The diarist program aims to record dates for trout and bass fishing trips on the Genesee River from the Pennsylvania line downstream through Letchworth State Park **March 1st - October 31, 2017**. Those who fish the Genesee River (even once) and are able to contribute observations by keeping a fishing diary for DEC can contact the Region 9 Fisheries Office at (716) 372-6372 or by e-mail at fwfish9@dec.ny.gov. ✧

New USGS Maps identify potential ground-shaking hazards in 2017

The central U.S. faces continued hazards from human-induced earthquakes

New USGS maps identify potential ground-shaking hazards in 2017 from both human-induced and natural earthquakes in the central and eastern U.S., known as the CEUS. This is the second consecutive year both types of hazards are forecasted, as previous USGS maps only identified hazards from natural earthquakes. This research was published in [Seismological Research Letters](#).

Approximately 3.5 million people live and work in areas of the CEUS with significant potential for damaging shaking from induced seismicity in 2017. The majority of this population is in Oklahoma and southern Kansas.

Research also shows that an additional half million people in the CEUS face a significant chance of damage from natural earthquakes in 2017, which brings the total number of people at high risk from both natural and human-induced earthquakes to about 4 million.

“The good news is that the overall seismic hazard for this year is lower than in the [2016 forecast](#), but despite this decrease, there is still a significant likelihood for damaging ground shaking in the CEUS in the year ahead,” said Mark Petersen, chief of the USGS National Seismic Hazard Mapping Project.

The 2017 forecast decreased compared to last year because fewer felt earthquakes occurred in 2016 than in 2015. This may be due to a decrease in wastewater injection resulting from regulatory actions and/or from a decrease in oil and gas production due to lower prices.

Despite the decrease in the overall number of earthquakes in 2016, Oklahoma experienced [the largest earthquake](#) ever recorded in the state as well as the greatest number of large earthquakes compared to any prior year. Furthermore, the chance of damage from induced earthquakes will continue to fluctuate depending on policy and industry decisions, Petersen noted.

“The forecast for induced and natural earthquakes in 2017 is hundreds of times higher than before induced seismicity rates rapidly increased around 2008,” said Petersen. “Millions still face a significant chance of experiencing damaging earthquakes, and this could increase or decrease with industry practices, which are difficult to anticipate.”

Important Note: In the west, USGS scientists have focused on the hazard from natural earthquakes. Induced earthquakes have been observed in California as well, but they don't significantly change the regional hazard level, which is already high due to frequent natural earthquakes.

What are Induced Earthquakes?

[Induced earthquakes](#) are triggered by human activities, with wastewater disposal being the primary cause in many areas of the CEUS. Wastewater from oil and gas operations can be disposed of by injecting it into deep underground wells. Injected fluids cause pressure changes that can weaken a fault and therefore bring it closer to failure. Most injection wells do not trigger felt earthquakes, suggesting that a combination of many factors contribute to such events.

“By understanding the relationship between earthquakes and wastewater injection, informed decisions can be made on processes such as controlling the volumes and rates of wastewater injected and determining which wells are most susceptible to inducing earthquakes,” said Petersen.

Many questions have been raised about [hydraulic fracturing](#)—commonly referred to as “fracking”—and more information can be found by reading [common questions](#).

States with High Hazard

The maps indicate an especially high ground-shaking hazard in five areas of the CEUS in 2017. These same

areas were identified in the 2016 forecast. Induced seismicity poses the highest hazard in two areas, which are Oklahoma/southern Kansas and the Colorado/New Mexico area known as the Raton Basin. In those areas, there is a significant chance that damaging levels of ground motion will occur in 2017. Enhanced hazard from induced seismicity was also found in Texas and north Arkansas, but the levels are significantly lower in these regions than that forecasted for 2016. While earthquakes are still a concern, scientists did not observe significant activity in the past year, so the forecasted hazard is lower in 2017.

There is also a high hazard for natural earthquakes in the New Madrid Seismic Zone. The NMSZ is the only one of the five identified areas that has not experienced induced earthquake activity. The NMSZ had a higher rate of natural earthquakes in the past three years, leading to a slightly higher hazard potential compared to previous years in portions of Arkansas, Missouri, Illinois, Kentucky and Tennessee.

“The 2016 forecast was quite accurate in assessing hazardous areas, especially in Oklahoma,” said Petersen. “Significant damage was experienced in Oklahoma during the past year as was forecasted in the 2016 model. However, the significantly decreased number of earthquakes in north Texas and Arkansas was not expected, and this was likely due to a decline in injection activity.”

“There is specific concern in parts of the central U.S. since the forecasted hazard levels are higher than what is considered in current building codes, which only incorporate natural earthquakes,” said Petersen.

People living in areas of higher earthquake hazard should learn how to be prepared for earthquakes. Guidance can be found through [FEMA's Ready Campaign](#).

Spotlight on Oklahoma

Between 1980 and 2000, Oklahoma averaged about two earthquakes greater than or equal to magnitude 2.7 per year. However, this number jumped to about 2,500 in 2014, 4,000 in 2015 and 2,500 in 2016. The decline in 2016 may be due in part to injection restrictions implemented by the state officials. Of the earthquakes last year, 21 were greater than magnitude 4.0 and three were greater than magnitude 5.0.

USGS research considers a magnitude 2.7 earthquake to be the level at which ground shaking can be felt. An earthquake of magnitude 4.0 or greater can cause minor or more significant damage.

The forecasted chance of damaging ground shaking in central Oklahoma is similar to that of natural earthquakes in high-hazard areas of California.

Protecting Communities

The new report is valuable for making informed decisions to reduce the nation's vulnerability and providing safety information to those who may be at risk from strong shaking. For example, the 2016 forecast has been used by engineers to evaluate earthquake safety of buildings, bridges, pipelines and other important structures. Risk modelers have used data in developing new risk assessments, which can be used to better understand potential impacts on insurance premiums. The U.S. Army

Sporting license buyers – Beware of opportunistic websites

Anglers and hunters should be aware of at least two currently active non-DEC websites where one can, purportedly, purchase a fishing license, hunting license, or receive hunter education training that meets New York requirements:

- Fishinglicense.org
- Hunting-license.org

Money being charged by these websites is not a 'credit' toward the purchase of any New York license.

For all New York licensing info: www.dec.ny.gov/permits/365.html. ✧

Corps of Engineers has used the information to provide guidance on updating their safety assessments of selected facilities.

Continuing collaborations between regulators, industry, and scientists will be important toward reducing hazard, improving future forecasts, and enhancing preparedness.

Central versus Western U.S.

In recent years, the CEUS has experienced a significant increase in induced earthquakes. Therefore, in the 2017 and 2016 forecasts, scientists distinguish between human-induced and natural seismicity only for the CEUS. Scientists also used a historical catalog of seismic events dating back to the 1700s, putting a strong emphasis on earthquakes that occurred during the last 2 years.

Future research, noted Petersen, could take a more detailed look at induced seismicity in the west, including in California at The Geysers, Brawley and small areas of the Los Angeles Basin.

Distinguishing Between Induced and Natural Earthquakes

To determine whether particular clusters of earthquakes were natural or induced, the USGS relied on published literature and discussions with state officials and the scientific and earthquake engineering community. Scientists looked at factors such as whether an earthquake occurred near a wastewater disposal

well and whether the well was active during the time the earthquakes occurred. If so, it was classified as an induced event.

One-Year Outlook

The one-year outlook is chosen because induced earthquake activity can increase or decrease with time and is subject to commercial and policy decisions that could change rapidly. The 2016 and 2017 forecasts employ identical methodologies; the only difference is that the 2017 forecast includes an updated earthquake catalog with 2016 events. This allows for a direct comparison from one year to the next.

In contrast, the [USGS National Seismic Hazard Map](#) assesses natural earthquake hazards and uses a 50-year forecast. That timeframe was chosen because that is the average lifetime of a building, and such information is essential to engineering design and the development of building codes.

USGS Science

The USGS is the [only federal agency](#) with responsibility for recording and reporting earthquake activity nationwide and assessing seismic hazard. These maps are part of USGS contributions to the [National Earthquake Hazards Reduction Program](#), which is a congressionally established partnership of four federal agencies with the purpose of reducing risks to life and property in the United States that result from earthquakes. ✧

Minnesota Hunting – March 2017

Hunting dates to remember:

March 1-April 30: Spring [light goose conservation action](#)

March 1-31: [Crow hunting](#) (second season)

April 12-18: [Spring turkey](#) A season

April 19-25: [Spring turkey](#) B season

April 26-May 2: [Spring turkey](#)

C season

May 3-9: [Spring turkey](#) D season

May 5: [Bear hunt](#) lottery deadline

May 10-16: [Spring turkey](#) E season

May 17-31: [Spring turkey](#) F season

✧

Two weekends for Spring Youth Turkey

New for 2017, the Illinois Spring Youth Turkey Season is open two weekends in both the South and North zones – **March 25-26 and April 1-2**. Spring Youth Turkey Season County Permits will available over-the-counter from IDNR license/permit vendors beginning March 7. For info on spring turkey hunting, check the IDNR website at www.dnr.illinois.gov/hunting/Pages/TurkeyHunting.aspx ✧

Other Breaking News Items:

(Click on title or URL to read full article)

[Quebec government concerned by presence of Asian carp in St. Lawrence River](#)

The Quebec Ministry of Forests, Wildlife and Parks confirmed that the Asian carp, a fish that is destructive to the ecosystems in which it settles, has arrived in the St. Lawrence River.

[White House orders Asian carp plan delay](#)

The Trump administration has ordered a hold on the release of a tentative plan to stop Asian carp from reaching the Great Lakes.

[DNR sets reduced allocations of brown trout](#)

The waters of 11 counties along the Wisconsin shore of Lake Michigan will be stocked with a reduced number of brown trout beginning in March under a new strategy of the Department of Natural Resources. The agency recently announced its Lake Michigan brown trout stocking allocation for 2017.

[Wild-born salmon support lakes's fishery](#)

First introduced in Lake Michigan in the mid-1960s, Chinook salmon are reproducing naturally, and wild, naturally produced fish constitute more than 70 percent of the Chinook salmon caught each summer by anglers.

[No lethal control for cormorants in the Great Lakes this spring](#)

For more than a decade, cormorants could be killed in 24 states in the eastern U.S. In the Great Lakes, it was mainly done to protect sport fish like perch and bass. But last spring a federal judge stopped the program, saying the USFWS wasn't doing the research on.

[AG Bill Schuette says vessel discharge bill could threaten Great Lakes](#)

Michigan Attorney General Bill Schuette is among a group of law enforcement officials asking U.S. Senate leaders to stop legislation that commercial shippers on the Great Lakes say will help business but that environmentalists believe could lead to more invasive species entering waterways.

[Low alewife numbers heighten concern over Chinook stocking](#)

Scientists last year found a record low biomass of alewives in Lake Michigan, heightening concerns about the balance of predator and prey fish in the lake as well as Wisconsin's Chinook salmon stocking strategy for 2017.

[U.S. company goes to court to collect \\$28 million in damages awarded after Ontario banned Great Lakes wind farm](#)

The wind power company that won a \$28 million award after the Ontario government's decided to kill its Lake Ontario wind farm is going to court to collect.

[Proposed redesignation of Lake Huron shoreline scaled back](#)

In Ontario, the Plymouth-Wyoming Council has scaled back a proposed redesignation of its Lake Huron shoreline area, now designating about 800 acres from restricted agricultural to lakeshore residential.

[NY's AG leads coalition against bill to strip state authority on ship discharges](#)

New York's Eric Schneiderman and 10 other attorneys general have sent a letter to U.S. Senate leaders urging them to oppose a bill that would eliminate states' authority to protect waterways from ships' polluted discharges, making it easier for non-native species to invade the Hudson River and Great Lakes.

[Unique lake trout could help restore Lake Michigan population](#)

Elk Lake in Northwest Michigan is home to a strain of lake trout that researchers believe can contribute uniquely to restoring that population of fish in Lake Michigan.

[CDC finds first genetic link between Legionnaires' outbreak, Flint water](#)

The Centers for Disease Control and Prevention has discovered the first genetic links between city Flint, Michigan, water and patients diagnosed with Legionnaires' disease.

[Invasive grass carp pose threat to Lake Erie, surrounding wetlands](#)

The Grass Carp, found in several Great Lakes, including Lake Erie, pose a serious threat to the ecosystem of the waters they invade.

[Opposition emerging to DNR Lake-River dredging proposal](#)

In Wisconsin, a new general permit that streamlines approvals for small-scale dredging in the state's lakes, rivers and streams has been drafted to the Department of Natural Resources, and several environmental and sporting groups are already opposed to the action.

[Most of county's lakes still impaired](#)

75 percent of the roughly 90 lakes in Lake County, Illinois, are classified as impaired by the county health department

End