

# Reporter

ST. CHARLES COUNTY

SOIL AND WATER CONSERVATION DISTRICT

## Office Update

The USDA service center in St. Peters closed over the summer, and the agencies housed within the service center are working remotely and/or in various offices in the region. The Natural Resources Conservation Service (NRCS) and the Soil and Water Conservation District (SWCD) are working from the Union USDA office and can be reached by calling 636-922-2833, extension 3. The Farm Service Agency (FSA) is working from the Warrenton USDA office and can be reached by calling 636-922-2833, extension 2.

You can also contact an SWCD employee through email:  
frankie.coleman@swcd.mo.gov  
charles.perkins@swcd.mo.gov  
theresa.dunlap@swcd.mo.gov

An office location has been identified in the Wentzville area on Interstate Drive near the Hwy 64 and Hwy 70 interchange. Work has begun on remodeling at the location, but a definitive move-in date has not been given. Meanwhile district staff continue to service landowners, and conservation practices continue to be installed.

The staff and the Board of Supervisors are wishing all our readers a blessed and happy New Year.

## Board of Supervisor Elections to be held in February for Areas II and IV

The St. Charles County Soil and Water Conservation District's Board of Supervisors will hold an election for Areas II and IV in February of 2022. Voting this fiscal year reflects a procedural change in the voting process across the state, approved by the Soil and Water Districts Commission last June. All Missouri SWCDs will conduct their elections on the same dates. For 2022, areas II and IV in each county will hold an election. Elections for areas I and III will be held in 2024.

In St. Charles County, Area II is described as from the north county line south to Dardenne Creek and west county line east to Hwy Y, Y/Guthrie Road/Freymuth Road/ around Lake St. Louis/south to Dardenne Creek.

Area IV is described as north of Hwy 70, Mid Rivers Drive to Hwy C, Dardenne Creek to Mississippi River east to Confluence; south of Hwy 70, Mid Rivers

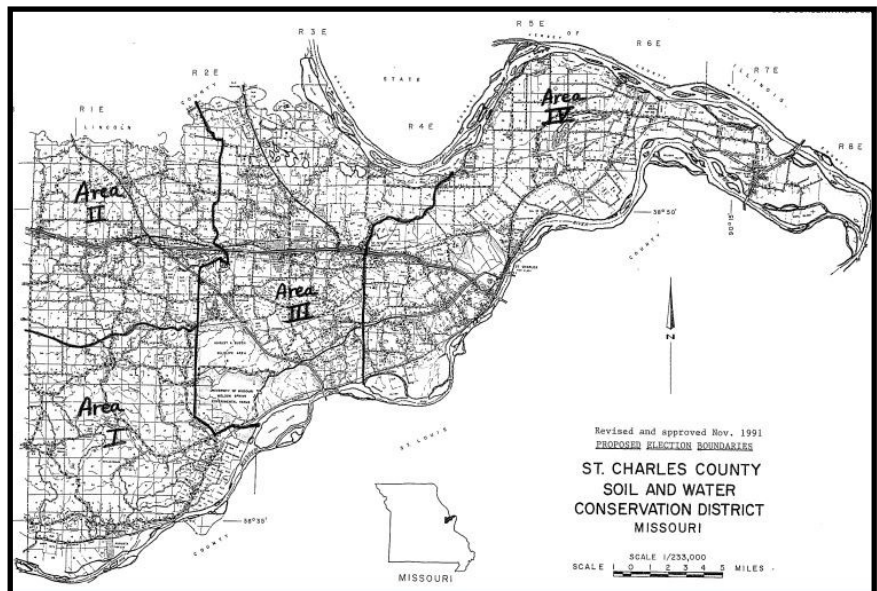


Drive straight south to Missouri River, east to Confluence.

Nominees for Area II are James Petersen and Sam Harris. In Area IV, Board Chairman Adam Bonderer is running unopposed for another term. (See page 4 for candidate profiles.)

Voting will take place between February 1 and February 22, 2022. A ballot will be available on the district's website with instructions on where to mail the vote. Landowners will vote for a candidate in both areas no matter where in the

See [Profiles](#), pg. 4



# News and Notes from the Soil and Water Commission Meeting

The Soil and Water Conservation Commission met for the regular meeting November 29th at Osage Beach, Mo., during the annual training conference of the Missouri Association of Soil and Water Conservation Districts.

## Comments from DNR Director

The meeting began with comments from Department of Natural Resources (DNR) Director Dru Buntin. He spoke about current priorities within the department, including some of the programs Governor Parson has identified for the federal funds coming to Missouri through the American Rescue Plan Act (ARPA). Buntin said that on the list is the implementation of grants through DNR for the protection of water resources. An open call had been made for waste water, drinking water and storm-water projects, and more than 900 proposals had been submitted from across the state. Buntin said that more than \$400 million is available through ARPA, with 150 million for community wastewater and

**Soil & Water  
Districts Commissioners**  
Gary Vandiver, chair  
H. Ralph Gaw, vice-chair  
Jeff Lance, voting member  
Kenny Lovelace, voting member  
Keith Stevens, voting member

**Soil & Water Conservation  
Program Director:**  
Kurt Boeckmann

drinking water, and 150 million for water and waste water grants for businesses and other designated sites. Money is also earmarked for water infrastructure. The director said there will be more programs to come.

Director Buntin said other priorities of DNR in 2022 include the continuation of work with three other states for the Lower Missouri River Flood Planning in which plans are for infrastructure and retention rather than dealing with “end of pipe” issues. Buntin said these efforts could overlap with some of the districts efforts to put conservation practices on the land. Targeted conservation practices that address drought resiliency, bank stabilization and other flood-related issues will be important tools in flood planning.

## SWCD Cost-share Update

The current FY22 (July—November 2021) cost-share charts were presented to the commission. A short discussion was held on the rising costs associated with installing conservation practices. The Soil and Water program will continue to assess rising costs during the second half of FY22, conducting surveys and looking at vendor receipts and completed contracts to provide the commission with information needed to make adjustments to the state average costs list as needed.

## Parks and Soils Tax Revenue Update

The commission received a presentation on Parks, Soils and Water sales tax revenue for the first four months of FY22. There have been considerable increases all four months compared to the same times last fiscal year. Percentage growth in revenue for the four months as compared to that month in FY21 were:

July—7.32% increase

August—14.42% increase  
September—6.45% increase  
October—7.38% increase

## Cost-share Allocation Process

The program reported that the most recent cost-share allocation requests from districts represent the highest (in dollars) ever received, with sheet, rill and gully practices being in biggest demand. Districts receive advanced allocations based on a needs assessment, and can then receive supplemental funds for eligible practices as the need arises. The FY23 process was explained to the commission, and the commission voted to approve the FY23 Cost-Share Allocation Process as presented by the Soil and Water program office.

## District Programs & Operations Committee Report

Program Manager Jim Boschert presented the recommendations of the District Programs and Operations Committee, which had 16 voting members and included district employees, board members and partner agency representatives.

**Elections** : Boschert said the new election procedures may be difficult to implement this year because of COVID and other factors, but he will be looking for suggestions after the first round of voting in February.

**District Employees**: Boschert presented to the commission the dollar amounts for grants to districts for salaries and health insurance. He presented scenarios for health coverage for dependent coverage. The committee will do more research on health insurance options and report back to commission. On salaries, the committee recommended increasing salaries for district staff. Discussion included the reasons for the increase: salaries were comparatively low, districts have been unable to hire at the starting salary, districts are unable to retain employees due to rising costs and more attractive jobs with other agencies, and other reasons. Discussion was also held on providing more training opportunities for employees. It was not necessary for the commission to vote on salaries, as that is a DNR Soil and Water Program office decision, based on available funds and funding formulas.

## Current Practices Committee Report

Program Manager Jim Plassmeyer gave

## St. Charles County

### Soil & Water Conservation District 636-922-2833, ext. 3

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The district is supervised by a board of supervisors made up of farmers from St. Charles County and an University of Missouri Extension representative:

#### Board of Supervisors

Adam Bonderer, Chairman  
Paul Kamphoefner, Vice-Chairman  
Vacant, Secretary  
Sam Harris, Treasurer  
James Borgman, Board Member

#### SWCD Personnel

Frankie Coleman, Manager  
Charlie Perkins, Technician  
Theresa Strunk, Outreach

#### NRCS Personnel

Renee Cook, District Conservationist  
Brandon Rivera, Soil Conservationist  
Michael Edwards, Soil Conservation Technician

The mission of the Soil & Water Conservation District is to conserve the soil and water resources of the county; promote the wise use of these resources through education; protect residents from undue hardship caused by erosion, sedimentation and flooding; protect the agricultural soil base to ensure continued productivity; and preserve the quality of water and water courses within the county.

the Current Practices Committee report. He presented the committee's discussion points on the following items:

Mandatory soil test for N340 Cover Crops: The committee discussed the pros and cons and decided not to support making the soil test optional. While the test does add some extra cost and only represents a small sample of a landowner's field, the lab conducts 11 analyses and provides the operator with a report and recommendations on the 11 items analyzed. It also shows comparison to other parts of the state. While the report may not seem incredibly valuable to the landowner, it is part of a much bigger research project that will help direct information and education within Missouri Extension.

Portable shade: The committee looked again at a resolution for portable shade. The committee discussed the benefits to a grazing system, and the difficulty of monitoring whether or not the portable shade was actually moved on a continual basis. They also questioned how it fit the statutes of the laws governing the program. It was noted that the Natural Resources Conservation Service (NRCS) does not currently offer it in Missouri, but does in other states so there is a national standard. After lengthy discussion, the commission voted to maintain current practices. Commission further asked the program office to look into the costs and a possible maintenance agreement for future consideration next May.

Current Irrigation Practices: Proposals were considered and the committee made recommendations for the commission to consider.

Irrigation Water Conveyance—this practice is for underground pipe. Comments were that prices have increased, and the request was for an increase in the cost-share percentage.

Irrigation Sprinkler—consideration is for whether or not to limit the nozzle number to 4 as is currently in place.

Drainage Water Movement—subsurface—three districts have asked for increased cost-share for land leveling and shaping. Cost-share currently is \$350 per acre but nothing for land leveling. Discussion was held on actual cost of the drainage component, and a comment was made that in the bootheel it can be \$700 to \$800 per acre, depending on slope, soil type and other factors.

The committee recommended the commission consider the above proposals. The program office will bring information to the next meeting concerning policy and dollar

amounts for the commission to consider in making their decisions.

New water management technology: DNR recently reviewed the state water plan and Plassmeyer said they report that 756 billion gallons a year are used in irrigation. Just three to four counties in the southeast use about 100 billion of those gallons. He briefly discussed new technology, such as soil sensors and flow meters that can be monitored from a cell phone. Other new practices to consider are:

- Intensive irrigation management software
- Pump plant installation with remote control and monitoring of equipment
- New irrigation well, instead of running pipe to an old well

The commission said the program office should research cost-share options and present them at a later date. Plassmeyer said that, in the interest of water quality in the state, the program office will look at the dollars and policy options for all the water irrigation proposals.

#### **BMP Nutrients Project**

Kurt Boeckmann, Soil and Water Program Director, presented information about the Nutrient Reduction Strategy supported by the Environmental Protection Agency's (EPA) Hypoxia Assistance Agreement Grant. The Soil and Water Conservation Program and the Water Program within DNR are working together to meet goals set out in a multi-state partnership created to reduce nutrient pollution in the environment. Boeckmann said that 12 states have plans in place, and that in Missouri research is being conducted to measure the nutrient reduction related to farm/land conservation best management practices (BMP). Currently, two pilot watersheds are being evaluated: the South Grand River and the South Fork Salt River.

A modeling program is being developed in which nitrogen and phosphorous reduction from BMPs can be measured. Some of these BMPs would include cover crops, grassed waterways, ponds, water and sediment control basins and terraces. Data is applied based on several factors including soil type, slopes, precipitation, channelization and more. When complete, the program will run the models to show nutrient reduction based on multiple practices installed in an identified watershed area.

"We are looking to quantify our successfulness," Boeckmann explained. "We can show the dollars we spend, but this is a way to show the actual positive impact of the Missouri Soil and Water Conservation

*"The way things are moving in the Gulf, with hypoxia; we (Soil and Water Conservation Program) need to be able to tell our story. When we can track our progress and show nitrogen and phosphorus reduction, we will be able to target (problem) areas by concentrating cost-share dollars where they'll be most effective."*

*Kurt Boeckmann, SWCD director*

Districts' efforts."

He noted the following benefits/uses of knowing the nutrient reduction numbers:

- Evaluate SWCP investments in other watersheds
- Contribute to NRCS' progress tracking
- Groundwork for determining "credit prices" within a point source to non-point source water quality trading program (nutrient trading)
- Inform Targeted Conservation efforts and prioritize funding for practices that are most cost-effective

Boeckmann said it is important for Missouri to tell their story and to show the success of these voluntary programs, and possibly avoid any regulatory decisions that might come from EPA in the future. Among the many other benefits to landowners would be better farm management and reduction of fertilizer costs.

#### **Missouri Department of Conservation Report**

##### MDC Pilot Biodiversity Credit Program

Lisa Potter of the Missouri Department of Conservation Private Lands Division announced the launch of a pilot biodiversity credit program.

The department is partnering with the Corn and Soybean Councils, MFA, and the Ecosystem Marketing Consortium to promote and provide payments for biodiversity practices on private lands. These practices include buffers and pollinator plantings.

It is a two year pilot, paying \$100 per acre. The plan is to have private food companies and coops take over the payments in the third year.

##### Chronic Wasting Disease in Deer

She also gave an update on Chronic Wasting Disease testing, and reported the good news that so far there are zero new cases outside the management zones.

##### Black Bear Hunt

Lastly she gave an update on the Black Bear hunt. Six thousand hunters applied. Four hundred received a permit. Twelve bears were harvested.

county the landowner resides. The website is: <https://mosoilandwater.land/st-charles>

The SWCD is currently without an office, so a ballot box will be at the Extension office, 260 Brown Road, St. Peters, February 1-22.

## Profiles for Area II Candidates

### **Jim Petersen (Area II)**

Jim has two farms in central St. Charles County, one at the junction of Dardenne Creek and the Little Dardenne. He leases ground to a farmer who grows corn and soybeans on the acreage, while Jim manages the conservation on the ground.

"I'm actively involved in the conservation management," he said. "We are strong believers in farming with conservation to protect the land, soil and water for future generations."

Jim said they have incorporated no-till, winter cover crops, wetland reserve tree planting, CRP and forest management. Future plans include native grass and pollinator plantings, and more tree plantings. He said a goal is to use practices that improve soil health, including attention to microbiota and soil structure.

Jim lives on the farm with his wife and sons, and is a member of Missouri Stream Team. He uses his stream team knowledge to regularly check the water quality of Dardenne Creek. Jim also enjoys hunting, fishing and golf.

# Support Your SWCD by VOTING In February

## Board of Supervisor Election

### Areas II and IV

February 1—22, 2022

### Two ways to vote:

1. Print a ballot from website: <https://mosoilandwater.land/st-charles>, and mail to Supervisor Elections, 24201 Pin Oak Rd., Truxton, MO 63381
2. Vote at the University of Missouri Extension office, 260 Brown Rd., St. Peters.

### Voter eligibility:

One vote per independent farm enterprise by a landowner or the landowner's legal representative

(a farm is defined as land which has been assigned a USDA/FSA farm number, or land assessed by the county as agricultural and producing \$1000 or more in agricultural products per year)

### **Sam Harris (Area II)**

Sam has lived and worked on the family cattle farm in Wentzville for over 40 years, and currently raises Black Angus cattle.

"I believe most farmers are conservationists by nature," he said. "Farmers love the land and we value the natural resources."

He explained how using a grazing management system can improve both the health of the land and the livestock.

"Grazing and resting pastureland on a planned sequence gives the more desirable plants a chance to regrow, compete and multiply," he said. "Gradually the number of high quality plants per acre increases. The improved pasture condition increases livestock production, reduces soil erosion and helps to conserve water."

Besides expanding his Angus herd,

Sam also enjoys fishing. He has a son and a daughter who both excel at soccer and compete in private leagues. Sam supports 4-H youth by selling calves to children interested in showing steers in local fairs.

## Profile for Area IV Candidate

### **Adam Bonderer (Area IV)**

Adam is the current SWCD Board of Supervisors Chairman, and is running unopposed in area IV. He has lived on and worked the family farm for 37 years in West Alton, where they grow corn, wheat, soybeans and hemp.

"Farming with conservation is a good fit for many farms," Adam said. "On our land we are starting to implement minimum till and are excited about the benefits that we've already begun to see."

Adam and his wife have three children.



Theresa Strunk

## Energy Grants Available through DNR

The Missouri Department of Natural Resources' Division of Energy is accepting grant applications through February 28, 2022, to reimburse farmers for energy-saving equipment through its Energize Missouri Agriculture Program.

Some examples of eligible projects include solar-powered watering systems and fencers, irrigation upgrades, GPS systems for tractors and applicators, ventilation and insulation.

For more information, visit <https://dnr.mo.gov/energy/energy-loans/energize-missouri-agriculture-program>

# Extension Offers Tips on Reducing Fertilizer Use as Costs Rise

Farmers across the country have been experiencing rapidly rising costs for fertilizer and fertilizer inputs, with some prices jumping more than 250% in the last half of 2021. For example: ammonia increased 210% between September of 2020 and September of 2021. Liquid nitrogen prices increased by 159% during that same period. According to John Lory, University of Missouri Extension nutrient management specialist, current fertilizer prices are the highest they have been over the past decade.

Several factors have been identified as causes, including COVID-19, increased global demand, and supply chain problems. Unfortunately, experts do not expect things to improve any time soon. In fact, costs for fertilizer are expected to remain high through spring of 2022.

With all this in mind, Lory outlined some ideas for reducing fertilizer costs on

the farm:

- Do not apply fertilizer to fields that are at or above optimum soil test levels. Extensive research shows that soils at optimum soil test levels do not see increases in yield from the fertilizer applied that year. A benefit of following soil tests is the flexibility to skip a year of application.
- Not comfortable with going to zero? A second option is to cut fertilizer rate by 50% or less of removal rate. Most yield response to fertilizer is driven by the first 30% to 50% of the fertilizer applied. If you are nervous about going to zero, going halfway will likely provide 100% of the yield benefit this year, even on soils that tested low.
- The most conservative option is to limit fertilizer rate to removal rate. In a high fertilizer price year there is no

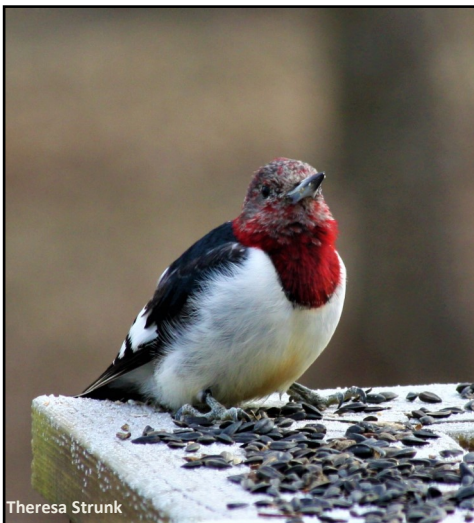
reason to apply more than the crop removal rate.

According to Lory, another option may be enrollment in the "MU Certified" Strip Trial Program and put strips with and without either P or K. If you use this strategy on the whole field, the amount applied will drop by 50%. Strip trial program participants will work with Lory and his team to document if fertilized strips have higher yield than the unfertilized strips.

"Our expectation is a field with optimum soil test will have no increase in yield on the fertilized strips," said Lory. "This test confirms MU Extension recommendations are working as expected on your field and contributes to a statewide effort to document fertilizer responses on Missouri farms."

If you are interested in strip trials, visit [striptrial.missouri.edu](http://striptrial.missouri.edu)

## Winter is For the Birds



Theresa Strunk

Red-headed Woodpecker-*Melanerpes erythrocephalus*

St. Charles County is the winter home of many backyard bird species. Toss out a little bird feed on a snowy day, and you're likely to see cardinals, wrens, finches, sparrows, woodpeckers and more. Providing a nutritional seed option for the birds will not only assist the bird's survival, but has the added benefit of bringing their color and beauty into your winter landscape.

Many hide-aways and roosting spots can also be provided. Some of the best



Theresa Strunk

Tufted Titmouse-*Baeolophus bicolor*

shelters for winter birds are evergreen trees and shrubs, and dense thickets in field rows. An old fallen tree, or a pile of brush are also favorites, not only for birds, but also for small mammals and many insects.

Looking for bigger, more exotic birds? Drive over to Riverlands Migratory Bird Sanctuary in West Alton. The sanctuary is 3,700 acres of floodplain habitat and is part of the Mississippi Flyway. The Audubon Center is open Tuesday through Sunday from 8 a.m. to 4 p.m., and is free. Go inside to use a spotting scope to find a

Bald Eagle, or a Trumpeter Swan. Or explore the grounds on foot or from a car and look for Tundra Swans, Greater White-fronted Geese and a large variety of ducks.

Birds of prey, such as hawks and falcons, are abundant in the area all winter.

Fun and educational events are offered regularly, including Raptor Saturdays and Eagle Sundays. Visit [riverlands.audubon.org/events](http://riverlands.audubon.org/events) for a list of dates.



Theresa Strunk

Northern Cardinal-*Cardinalis cardinalis*

# Could Nutrient Credit Trading be in Your Future?

At the recent Soil and Water Conservation Commission Meeting, Kurt Boeckmann, Department of Natural Resources Soil and Water Program (DNR SWCP) director, spoke about the importance of “quantifying the success” of the program related to nutrient reduction loads to waterways. There are several reasons to put real numbers to nutrient reduction provided by soil and water best management practices, and among them is acquiring data and laying the groundwork for determining prices for credits in a credit trading program.

Missouri Soil and Water District cooperators are not currently participating in nutrient credit trading, but according to Boeckmann there is a real possibility for the near future.

Boeckmann is the Missouri state agency member on the Environmental

Protection Agency’s (EPA) 12-state Mississippi River/Gulf of Mexico Hypoxia Task Force. The Hypoxia Task Force (HTF), which includes members from Missouri, Iowa, Arkansas, Illinois, Indiana, Kentucky, Louisiana, Minnesota, Mississippi, Ohio, Tennessee and Wisconsin, have developed Nutrient Reduction Strategies to reduce nutrient loads throughout the Mississippi River Basin. Federal members on the task force include representatives from EPA, the U.S. Department of Agriculture, U.S. Department of Interior, U.S. Army Corp of Engineers, and the National Oceanic and Atmospheric Administration.

Boeckmann said that the SWCP, the DNR Water Division and other partners are researching ways to track the nutrient reduction effectiveness of SWCP Best Management Practices (BMP) such as



cover crops, terraces, grassed waterways, water and sediment control basins, and others. There are currently two pilot watersheds being evaluated: South Grand River Watershed with 392 conservation practices on the land, and South Fork Salt River Watershed with 692 conservation practices.

While the benefits to having the nutrient reduction numbers associated with BMPs are many, including prioritizing funding for conservation efforts, an interesting possibility is that landowners who are putting conservation on the ground may be able to use those numbers to create “credits” in a point source (e.g. wastewater treatment plant) to non-point source (e.g. farm) credit trading system. There are many examples of credit trading involving various pollutants and various resources. But basically, a “credit” puts a monetary value on habitat preservation and restoration. A farm BMP is an ecosystem service with a tangible value.

Non-point sources, such as farms, are not regulated by the Clean Water Act. Without regulation, the EPA has stated that “a trading program that allows nonpoint sources to generate and sell credits may provide an economic incentive for these sources to implement new or additional best management practices that reduce pollutant loadings to receiving waters.”

DNR, through the SWCP and the Water Division, and alongside other partners, is committed to acquiring the data to move forward with quantifying nutrient reduction through farm BMPs.

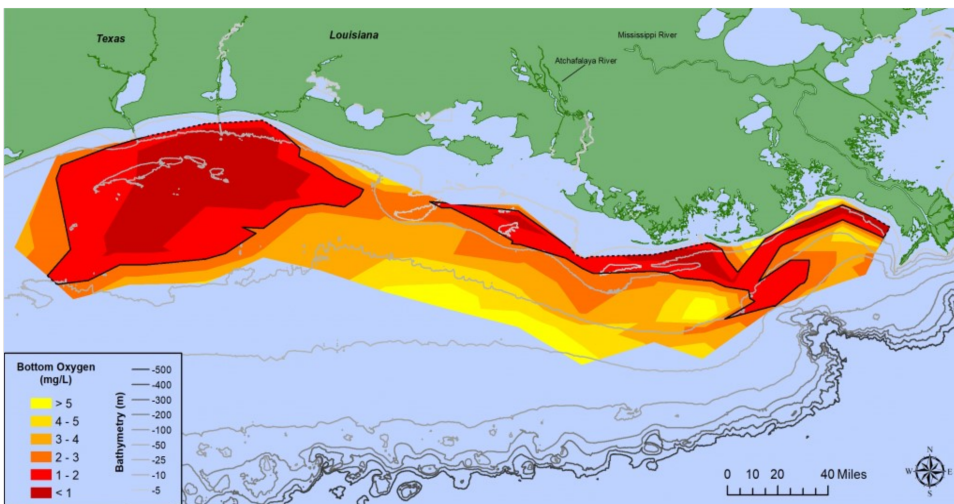
“With progress tracking for different practices,” Boeckmann said, it will be important to tell our story and show the nitrogen and phosphorous reduction that we can achieve through this voluntary program.”

## Why We Need to Reduce Nutrient Pollution

Hypoxia means low oxygen. Water becomes hypoxic when dissolved oxygen concentrations are less than 2-3 mg/L. Low oxygen in water can be caused by various factors, some natural, but when excess nutrients, such as nitrogen and phosphorous, enter the water, a richness of nutrients (eutrophication) causes excessive growth of algae, which decomposes and in the process consumes most of the oxygen from the water.

The Dead Zone is a common term used for the hypoxic waters of the northern Gulf of Mexico. Fish and other aquatic animals, including shell fish, cannot survive in the area. The water also becomes harmful to humans, and adversely affects the environment, the economy and public health.

According to the EPA, the hypoxic zone in the Gulf of Mexico forms every summer and is the result of excess nutrients from the Mississippi/Atchafalaya River and seasonal stratification (layering) of the waters of the gulf.



Map of measured Gulf hypoxia zone, July 25–31, 2021 (LUMCON/NOAA). The darkest areas denote 2 mg/L of oxygen or lower, the level which is considered hypoxic, at the bottom of the seafloor

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