FARMER TRAINING & CERTIFICATION

FOR INTENSIVE SMALL-SCALE FOOD PRODUCTION OPERATIONS

The Maryland Department of Agriculture and University of Maryland Extension will host a Farmer Training and Certification (FTC) module for urban and peri-urban farmers to learn how to write Nutrient Management Plans for their own operations. As a grower, you have firsthand knowledge of your own crops, growing areas, and equipment. Who better to write your nutrient management plan than you? This seven-part series will teach you how to do it!

DATES: March 4, 6, 10, 11, 13, 18 (exam) and 25 (plan development), 2020 (snow date March 12)

TIME: 1 to 4 PM each day, plan development 9 AM to 4 PM

LOCATION: University of Maryland Extension, Baltimore City Office

ADDRESS: 6615 Reisterstown Rd, Baltimore, MD 21215

You will receive:

- A comprehensive training binder – that will be used during the class, serve as a reference during the exam, and used as a valuable resource when you write future plans for your operation;
- Certification – producers who pass the exam will be certified by MDA to write their own nutrient management plans; and
- A discount - on the purchase price of NuMan Pro, Maryland's nutrient management planning software.

Registration Information

- Space is limited and registrations are accepted on a first-come basis; therefore, register early.
- Paid registrations ($20.00) must be received by February 25, 2020.
- For more information, please call 410-841-5959. Classes will be cancelled if there is lack of interest.
- Registration form at bit.ly/2tbTfUE

Anne Arundel Soil Conservation District
2662 Riva Road, Suite 150
Annapolis, MD 21401

THE DISTRICT DIRT

ANNE ARUNDEL SOIL CONSERVATION DISTRICT
2662 Riva Road, Suite 150 • Annapolis, MD 21401
(410) 571 - 6757
aascd.org

SPRING 2020

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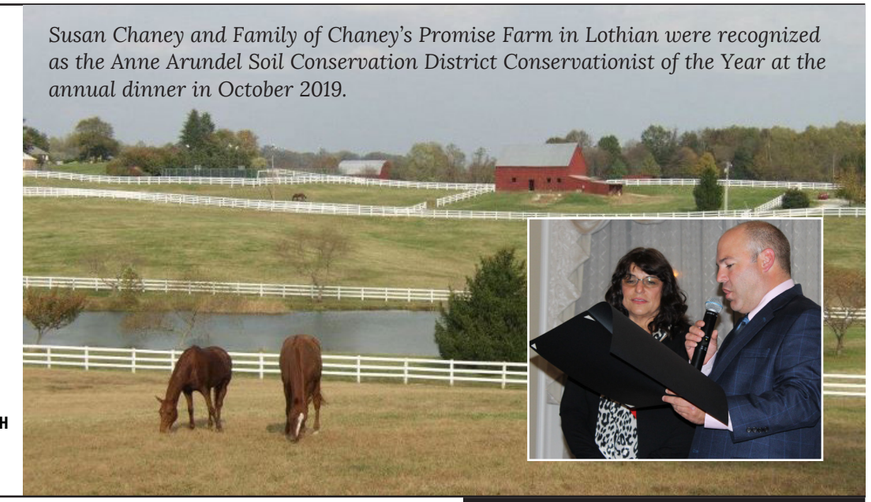

Susan Chaney and Family of Chaney's Promise Farm in Lothian were recognized as the Anne Arundel Soil Conservation District Conservationist of the Year at the annual dinner in October 2019.

NRCS FUNDS LOCAL CONSERVATION PRACTICES

by Heydsha Cordero

NRCS offers voluntary programs to eligible landowners and agricultural producers to provide financial and technical assistance to help manage natural resources in a sustainable manner. In December 20, 2018 the new 2018 Farm Bill was approved, and USDA is currently working on the implementation. Program Rules are being updated nationally and application deadline for the 2020 Farm Bill Programs in Maryland sign up will take place in the early months of 2020.

NRCS financial assistance programs include the following: Environmental Quality Incentives Program (EQIP) provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits; Agricultural Management Assistance Program (AMA) helps agricultural producers manage financial risk through diversification, marketing or natural resource conservation practice and the Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns.

Some of the conservation practices NRCS will be giving priority in Anne Arundel County this year are: watering facilities, pasture renovation, fencing, water well, high tunnels, oyster restoration, access roads, pond renovation and irrigation practices to mention a few. NRCS provides assistance with a wide variety of conservation practices to address many resource concerns. If you are interested in receiving assistance on addressing current resource concerns on your farm operation or future projects, please contact Mitch LeMuiex at 410-919-2334.

IMPORTANT DATES

Field Crops & Pasture IPM Workshop
March 10, 6 - 9pm - Anne Arundel UME
Register at extension.umd.edu/anne-arundel-county

Anne Arundel County Envirothon
April 29 - Arlington Echo Outdoor Education Center

MASCD Annual Meeting
August 2 - 4 - Hyatt Regency, Cambridge

MOVING TO ANNE ARUNDEL COUNTY FROM JUNIATA COUNTY, PA

by Michael Lock

Before relocating to Anne Arundel County, I worked for the Conservation District in Juniata County, PA. Juniata is a rural county nestled in Pennysylvania's central valley with highly productive soils. For context, JCCD is a Level II District which means they have no enforcement authorization or need for an engineer on staff like a Level III District might.

Each of the four District employees handled two programs. Our programs included Erosion and Sediment Control, Dirt, Gravel, and Low Volume Roads(DGLVR), Nutrient Management, Ag Land Preservation, Watershed, and Education.

I managed the DGLVR and Erosion and Sediment Control programs which came with the responsibility of construction inspections. In Anne Arundel County, these programs (and inspections) are managed by different county offices or by the State.

You might wonder how only four employees were able to handle the programmatic workload. Juniata County has a fraction of the population Anne Arundel County does – fewer than 25,000 people versus more than 573,000. The land size differential is a little closer; Juniata County has 394 square miles compared to Anne Arundel County's 588 square miles.

Agriculturally there are many differences between each county. During my time in Pennsylvania, poultry barns seemed to be booming. In recent history, Juniata County was among the top five counties for producing broilers in Pennsylvania. The highest yield per acre crop is corn. Even though the workload might be smaller in Juniata, the size of farms producing animals is comparable, if not larger. Dairy and beef operations were plentiful and

continued on page 4

Photo: National Audobon Society

CANVASBACK: KING OF THE CHESAPEAKE

by David Scheler

This large diving duck is the most sought after duck for sportsman and bird watchers alike. The Canvasbacks identifying marks are pronounced red head crown, white belly; the tail, rump and bib are black. The hen's body is an overall drab gray, with a sandy brown head. On both sexes, the bill is black and the feet are bluish gray.

Canvasbacks breed from the central Alaska through western Canada to Minnesota, and in some of the western states. Most, however, are found in the prairie pothole region.

Earlier in the century, Canvasbacks wintered in Maryland in large numbers. But commercial market hunters reduced populations significantly during the first third of the 20th century. Canvasbacks were the favorite targets of market hunters because their meat was considered the tastiest of any duck. This was the result of eating submerged aquatic vegetation, which was then abundant in our Chesapeake Bay.

Their numbers have rebounded since commercial market hunting was outlawed with the passage of the Migratory Bird Treaty Act in 1918. However, continued destruction of the Canvasbacks' wetland breeding habitat in the prairie region has kept populations relatively low. Canvasbacks continue to be affected by pollution, loss of habitat and increased predator numbers. Canvasbacks no longer spend the winter in Maryland in appreciable numbers, largely the result of the loss of submerged aquatic vegetation like wild celery in Chesapeake Bay and tributaries due to decreases in water quality.

Canvasbacks begin the fall migration in the Eastern flyway in September, stopping along the way on large lakes and rivers, sometimes for several weeks at a time. Around Thanksgiving, or as weather dictates, Canvasbacks can be found in Chesapeake Bay and tributaries. During the winter months Canvasbacks are found feeding on wild grasses, mollusks, crustaceans and fish.

The best locations to view the Canvasback that are open to the public in Anne Arundel County are Downs Memorial Park, Sandy Point State Park, Thomas Point Park, and Beverly Triton Beach Park or obtain permission from a waterfront property owner. So grab some warm cloths and a pair of binoculars and head out and enjoy one of Maryland's many natural resources.

David Scheler, Soil Conservation Specialist, david.scheler@md.nacdnet.net

2019 URBAN VEGETATION ESTABLISHMENT NOTES UPDATE

by Justin Valkos

The Vegetation Establishment Notes are requirements given by the Anne Arundel Soil Conservation District (AASCD) and enforced by the County Inspectors. These requirements are put in place to help permittees and contactors ensure that vegetation growth occurs quickly and successfully on a disturbed site. Vegetation growth on a site is important to help stabilize sediment; therefore, keeping loose sediment from leaving the site.

In 2019, AASCD made two key updates to the Vegetation Establishment Notes. The first update was an additional sentence to Section 1D, which reads, "Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed." Mulching is one method used to stabilize an area while promoting vegetative growth. This updated statement was added to ensure that contractors would not leave exposed soil during the mulching process. An inability to properly mulch disturbed areas could lead to a lack of vegetation growth and create an increase in sediment-laden runoff during weather events.

The second update was the addition of Section 7, "Use of these Vegetation Establishment Specifications does not preclude the permittee or contactor from meeting all of the requirements set forth in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control." This Section was added to ensure that a permittee and/or contractor were to continue to obey the regulations set by the MDE 2011 Standards and Specifications for Soil Erosion and Sediment Control, while fulfilling the Vegetation Establishments Notes set by AASCD.

The 2019 Vegetation Establishment Notes can be found on our website at aascd.org/urban/ under the Resources for Sediment & Erosion Control section.

Justin Valkos, Soil Conservation Specialist, j.valkos@aascd.org

WHY WE ADD STEEL REINFORCEMENT BARS TO YOUR PROJECT

by John Czajkowski

Steel reinforcement bars or rebar, are used to strengthen concrete as concrete is high on compressive strength (squeezing) but low on tensile strength (bending and stretching). The tensile strength of concrete is ten times less than the compressive strength. Adding the steel bars helps reduce the bending and stretching and provides the tensile strength.

Concrete is highly prone to cracks because of tension forces and rebar helps to prevent the cracks from growing larger by preventing cracked slabs from moving apart. The nobbles or ridges on the steel bars help anchor them firmly in the concrete, reducing the risk of them slipping around inside.

The reason steel is used is because steel expands and contracts in the heat and cold roughly as much as concrete itself. This means it is less likely to crack the concrete that surrounds it as other materials that have different contraction and expansion rates then concrete.

Rebar can also help reduce the thickness of the concrete because it adds strength. Where corrosion is a concern, the reinforcement bar can be coated with epoxy or stainless steel bars can be used.

Welded wire mesh is often used in slabs that are not likely to have heavy equipment driven on it. It is thinner than rebar so not as strong, but it is less expensive.

Rebar is recommended for concrete that is at least 5-inches thick. The steel should be placed in the center or slightly above the center.

When setting rebar for a concrete slab, "chairs" should be used under the rebar to support the reinforcement bar grid. Metal wire is used to fasten the rebar together. Spacing is critical and if not done correctly, it will lead to a reduction in strength.

For example, if we call for #5 bars on 4-inch centers, there should be 3 bars every 12-inches. If the contractor is not careful and places the bars on 5-inch centers, the strength of the structure will be reduced by 20%.

The size of the rebar is important as well. Using a #4 bar on 4-inch centers rather than the #5 that was specified will result in 35% less reinforcing than what is needed regarding structural strength.

Bar sizes are produced in units of 1/8 inch and bar sizes ranging from #3 through #8 are given as multiples of 1/8 inch. So, a #3 bar is 3 x 1/8 or 3/8 inch in diameter. A #5 bar is 5/8 inch. Bar sizes larger than #8 follow the 1/8 rule imperfectly.

For most of our projects we use #3, #4 and #5 bars and welded wire mesh for slabs.

If you would like assistance on constructing a concrete structure such as a waste storage facility, give us a call and we can design one that will not only meet your needs but will be constructed correctly.

John Czajkowski, District Manager, john@aascd.org

MOVING...

Continued from page 2

demanded complex projects like large manure storage tanks and lagoons. Innovation isn't lacking either; Juniata County is on the forefront in Pennsylvania for installation of Anaerobic Waste Digesters.

In contrast, Anne Arundel County's top products are nurseries, vegetables, and soybeans. Having a much higher population and urban setting, Anne Arundel has a high demand for farm fresh fruits and vegetables. Farmers' Markets are easily accessible during the summer months throughout the county. With many small farms a simple waste storage facility with wood or concrete walls are prevalent.

I'm excited to learn more about Anne Arundel County and meet landowners and farmers as I continue working for the District designing best management practices!

Michael Lock, RC&D Grant, Soil Conservation Technician, michael.lock@usda.gov

ZANG JOINS MDA NUTRIENT MANAGEMENT PROGRAM

Tim Zang, a lifelong Anne Arundel County resident, joins the Maryland Department of Agriculture (MDA) as a Nutrient Management Specialist providing urban record assessments, reviews of Nutrient Management Plans written by consultants, and on-farm evaluations. Tim grew up on a diversified family farm in Harwood that produced tobacco and hay and raised cattle. The farm later transitioned to fruits and vegetables. Tim worked for the Green Industry for many years and was formerly employed at Southern States. He currently operates Zang's Farm, an orchard and cut flower farm in Harwood. The farm has participated in the Anne Arundel County Farmers' Market for many years and recently hosted the AAEDC's Arundel Grown "Taste of Anne Arundel County" dinner.

You can reach Tim through the MDA Nutrient Management Program at 410-841-5949 or by email: timothy.zang@maryland.gov.

District Soil Conservationist Nathan Holsey with a 50" Rockfish caught off Tangier Sound

FISHING THE FLATS: A MILLENNIAL'S VIEW OF THE EVER-CHANGING CHESAPEAKE BAY'S SKINNY WATER FISHERY

by Nathan Holsey

Born in 1992, I was blessed with an outdoor oriented father. From weekend fishing trips to Tangier Sound to afternoons spent walking the grass beds of Eastern Neck Island for soft crabs, the Chesapeake Bay has been intertwined in my life since I was old enough to stand.

Being a millennial isn't easy – the best times are gone. A majority of the world's records for fishing were set in the 1970's. There have been hardly any ever since.

My father was born in 1956 and has experienced the Chesapeake Bay's fall run of big bluefish with sizes ranging from 10 to 20 pounds. These fish come into the bay in summer and early fall and today, it's almost impossible to find any over 4 pounds.

The grey trout was the ultimate sought after gamefish. Large numbers were caught and my father has countless pictures of coolers full of grey trout. I have been fishing the bay for more than 20 years and have yet to catch one. They disappeared – a whole species of fish my generation will not get to experience.

However bleak as it may seem in my short lifetime, I have noticed some improvements. Conservation efforts across the state of Maryland are showing positive results.

Growing up fishing the grass flats of the lower bay I have seen plenty of changes. In my 20 years of experience, I have seen islands completely disappear and high tides flooding places to the point where residents need to canoe to work. And I've seen the rise and fall of grass beds. The beautiful grass flats of Tangier Sound went dead for about seven years, making it tough for fish like speckled sea trout, red drum and rockfish to find appropriate feeding grounds.

Grass beds are lifelines of the bay's ecosystem. Brooding areas for baby crabs and baitfish create a plethora of feeding opportunities for the gamefish of the Chesapeake Bay. Without these healthy grass beds, all species are negatively affected.

The seven-year span from 2003-2010 was the worst in my memory, so bad that the annual father son trips to Tangier Sound all but stopped. Hurricane Isabel in 2003 was the most devastating, causing the most rapid changes to the bay I have ever seen. Islands were created, islands were

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NUTRIENT MANAGEMENT: TEMPORARY MANURE STOCKPILING

by John Czajkowski

Under Maryland's nutrient management regulations, you are allowed to temporarily stockpile dry organic nutrient sources having 60% or less moisture content when you are not able to utilize it or store it properly. This includes manure from beef, equine and swine operations as well as others. If you must temporarily stockpile manure, the following requirements apply:

- Manure storage structures must be completely utilized before starting a stockpile.
- Record the date the stockpile was started.
- Manure in temporary stockpiles must be land applied no later than the first spring following the placement of the stockpile.
- The stockpile area must be:
  - If a vegetative buffer is not in place, at least 100 feet from any surface water and irrigation or treatment ditches, or 35 feet away if a vegetative buffer is in place.
  - At least 100 feet from wells, springs and wetlands.
  - At least 300 feet from a well that is down grade from the stockpile.
  - At least 200 feet away from any residence outside the operator's property.
  - Outside flood prone areas and areas prone to ponding.
  - If located on more than a 3% grade slope and no diversion installed, no further than 150 feet from the top of the slope.
- The stockpile must be stacked at least 6 feet high and peaked to allow it to shed rainfall.
- Materials should be stockpiled in a manner that prevents nutrient runoff.
- If the manure stockpile will be exported from the farm, record the date that the manure was shipped, name and address of recipient, and estimated tonnage exported.
- Following the removal of the stockpile, the ground must be thoroughly scraped or cleaned, and the area restored to its original condition. If necessary, reseed the area with grass or an agronomic crop to facilitate nutrient uptake.
- Subsequent stockpiles should be placed in the same location to minimize environmental impact.

If you are thinking of building a waste storage or composting facility, there are several options as far as design and materials. Contact us for more information.

John Czajkowski, District Manager, john@aascd.org

COMMERCIAL FERTILIZER APPLICATION MAY BEGIN FEB. 15 MANURE APPLICATION ALLOWED AFTER MAR. 1

The Maryland Department of Agriculture announced that farmers who planted small grains for harvest last fall may "top dress" these crops with commercial fertilizer beginning Feb. 15, as long as ground conditions remain favorable and in accordance with their nutrient management plans. The determination follows Maryland's nutrient management regulations and is based on research conducted by University of Maryland (UMD) plant experts. As a reminder, manure may not be applied to fields until Mar. 1.

The University of Maryland recommends split applications of spring nitrogen with the first application occurring on or soon after Feb. 15 and the second application when the crops begin to joint.

MDA BRIEFS

PMT IMPLEMENTATION SCHEDULE PROCEEDS - ALL GROUPS HAVE UNTIL JULY 1, 2022 TO FULLY TRANSITION.

LOW RISK GROUP – TIER A
(*Soil Phosphorus FIV 150-299*)
This group begins transition to the PMT in July 2020. It includes 1,313 operations managing 122,705 acres.

MEDIUM RISK GROUP – TIER B
(*Soil Phosphorus FIV 300-449*)
This group began transition in July 2019. It includes 252 operations (54,271 acres).

HIGH RISK GROUP – TIER C
(*Soil Phosphorus FIV 450-499*)
This group began transition in July 2018. It includes 96 operations (10,894 acres).

$1 MILLION GRANT TO PROMOTE SOIL HEALTH AWARDED TO MDA.

A $1 million grant from the National Fish and Wildlife Foundation's Chesapeake Bay Stewardship Fund will help MDA promote healthy soil practices to farmers including soil health education, outreach, and certain practices, including precision nutrient management. Farmers who are interested in field-testing this practice or other innovative soil health practices can contact our office for details.

CREP NOW OPEN.

USDA is acception applications for the Conservation Reserve Enhancement Program (CREP), a federal-state partnership program that pays farmers attractive annual rental payments to plant streamside buffers of grasses or trees to protect water quality and provide wildlife habitat. Contact our office for more information.

NEW COST-SHARE FOR DRAINAGE PRACTICES.

Several new conservation drainage management practices are now eligible for cost-share funding of up to 87.5 percent through the Maryland Agricultural Water Quality Cost-Share (MACS) Program. The new suite of practices aims to help farmers manage subsurface drainage water in areas with high water tables or artificially drained fields. Contact us for information.


Holsey with 42" Red Drum

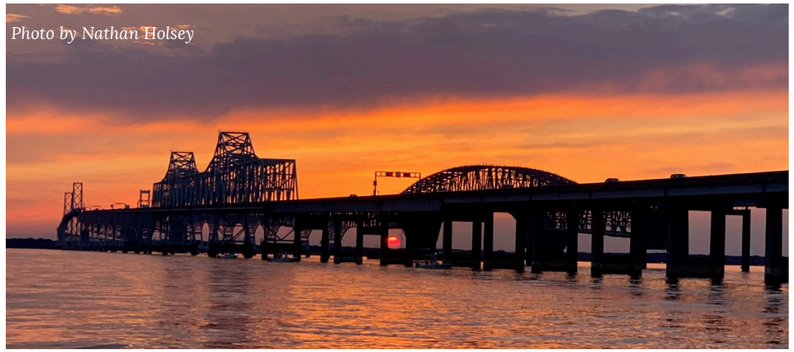


Photo by Nathan Holsey

FISHING...

Continued from page 4

washed away, but worst of all, the grass died. The lifeline of the shallow water slowly disappeared. The exciting speckled trout fishery suffered the most. With the lack of grass beds, we had to switch gears and begin fishing waters closer to home in Queen Anne's County. Jigging for rockfish became the new thing since the shallow water fishery in the lower bay was dying off.

Around 2010, I began to notice positive signs of change – grass beds appeared including eel grass, which is a highly desirable species for shallow water fish. We have begun fishing the flats again and it seems every year there is more and more grass.

The Manokin River in Somerset county was practically an underwater desert after Hurricane Isabel. Now the grass is so thick in places you can't even take a boat through it. The trout have returned, crabbing has improved, and the rockfish are getting bigger.

It's great to see a change for the better, it gives me hope for the future. Conservation efforts to reduce nutrient loads and erosion in the Chesapeake Bay watershed are showing positive results. Natural disasters like hurricanes can not be prevented but with proper conservation efforts we can make our watershed as resilient as possible to natural disasters to reduce recovery time and maintain a healthy marine ecosystem.

Nathan Holsey, Natural Resources Conservation Service Grant, Soil Conservationist, n.holsey@aascd.org

IT'S ALL ABOUT THE SALINITY

by Nathan Holsey

Heavy nutrient loads from agriculture are not the only contributing factor to loss of habitat in the Chesapeake Bay. Natural disasters, pollution and excessive rainwater all impact the dynamic of the bay. Farmers usually benefit when there is plenty of rain for crops. However, an excessive rainfall – like the one we had in Spring of 2018 – can drastically decrease salinity levels in the bay, endangering a fragile ecosystem.

Salinity levels are everything in the Chesapeake Bay's brackish water ecosystem. Shellfish are among the first to suffer. Low salinity levels stress shellfish and can kill whole areas off entirely. Razor clams for example are very sensitive to salinity changes, in wet spring 2018 and into the fall of 2018 there were acres of dead zones for these clams which are an essential bait for catching the Maryland Blue Crab. Oysters get so stressed in low salinity that they don't grow which means these essential bay filters stop filtering as much water. Crabs that usually migrate up the bay in the summer became trapped by large dead zones and were unable to make it into river systems in the upper bay.

Dead zones are created by excess fresh water but also excess nutrients from agriculture, residential, and commercial sources that contribute to algae blooms which reduce oxygen levels in the water.

The past three summers, just above the Bay Bridge, we've seen square miles of dead zones. When the water is adequately oxygenated, fish can swim away and move from place to place making it harder for fishermen to predict when and where they will be. With these summertime dead zones, the fish are trapped and even the most novice fishermen have been able to catch rockfish in large numbers.

People assume this is a sign of rockfish populations are strong. However, everybody catching fish isn't always a sign fishing is getting better. The past three summers boats have pinpointed these trapped schools of fish, where on any given weekend, it's not a surprise to see 300-400 boats fishing all in the same spot. Many boats catching limits of fish – sounds amazing, right? Wrong. The problem is the school of fish that is trapped is the primary resident school of the bay and their numbers are not infinite.

These dead zones can only be combated with conservation efforts to reduce excessive nutrient runoff. We have no control over weather and natural disasters. But we can control what is running off farmland, yards, and commercial properties. Contact our office if you have questions about your property and how it could benefit the Chesapeake Bay.

Nathan Holsey, Natural Resources Conservation Service Grant, Soil Conservationist, n.holsey@aascd.org

WHAT HAS BEEN BUILDING MUD VOLCANOES?

by John Czajkowski

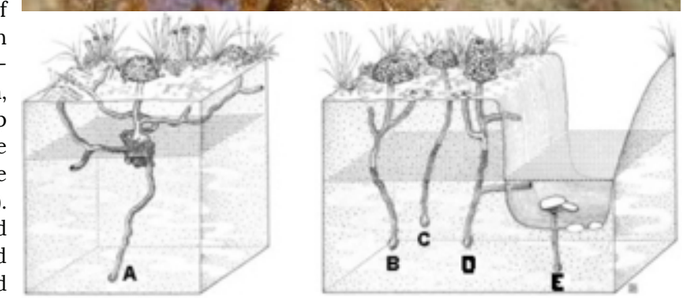
It is most likely one of the fourteen species of crayfish found in Maryland. As a matter of fact, there are more than 500 species worldwide with over 350 species in North America. They range in size from one inch, the Dwarf Crayfish (Cambarellus shufeldtii), found along the Gulf Coastal Plain which includes Alabama, Arkansas, Illinois, Kentucky. Louisiana, Mississippi, Missouri, Tennessee and Texas, to the endangered 31-inch, 13-pound Tasmanian Giant Freshwater Crayfish found in Tasmania, that can live up to 60 years. I am glad we don't have that one here and surprised there isn't a 1950's B-Movie horror movie featuring these giant crayfish as the star.

Of the species of crayfish residing in Maryland, five are non-native (Rusty Crayfish, Virile Crayfish, Red Swamp Crawfish, Southern White River Crawfish and the Little Brown Mudbug). These were introduced by anglers who used them as bait and released unused crayfish. Some have also been released as unwanted pets and others were introduced by commercial agriculture.

The Virile Crayfish is the most widespread invasive species in Maryland. In fact, the Virile Crayfish are now nine times more abundant than all the native crayfish species combined. Non-native crayfish will quickly move into new areas and are aggressive, resulting in a decline in our native species.

Not all crayfish burrow and it is difficult to distinguish burrowing crayfish from non-burrowing ones. The mounds or "chimneys" are cone shaped and made up of mud pellets. Crayfish are nocturnal and so they excavate the soil and create their burrow at night.

The burrows can range from a few inches deep to 36" in depth and can run straight down or be dug on an angle. They will plug the opening with mud during dry times or cold months and remain inactive for weeks or even months. The burrows all have resting chambers which hold water and may have more than one entrance. The burrows are used as a refuge from predators and as a resting place to be used during molting and inactive periods. Females also use the burrows as nurseries. Especially when the water table drops.



Photos (clockwise): Crayfish burrows can be recognized by their cone shaped chimneys; Cambarus diogenes "Devil Crayfish"; and Morphology of crayfish burrows: A (primary burrowing species); B, C, D (secondary burrowing species); and E (tertiary burrowing species).

A female caring a cluster of eggs is characterized as "in berry". After the eggs hatch, the young remain attached to the female for a week or two before dispersing. Only one crayfish occupies a burrow at a time except during breeding season.

There are three categories of burrowers: primary, secondary, and tertiary burrowers. Primary burrowers spend most of their life in the burrow. The burrow may not be connected to a water body but does intercept the water table. Secondary burrowers usually have a connection to an open body of water and spend time in the open bodies of water until they dry up. Once the water source starts to dry up, they retreat to their burrows. Tertiary burrowers don't do a lot of burrowing and only use it when they must find moisture or to breed. Tertiary burrowers have the least complicated burrows while primary burrowers have the most complicated.

Properly stocked fishponds seldom have burrowing crayfish problems since bass, catfish and large bluegills will help keep the crayfish population in balance.

Crayfish also are a food source for bullfrogs, turtles, snakes, waterbirds and raccoons. They play an important role in the aquatic ecosystem as a food source for both aquatic and terrestrial animals. Crayfish help improve water quality by consuming decaying plant material. They also consume worms and insects and have been credited as providing a biological control of nuisance waterweeds. Their burrows help with drainage, providing a direct path for water to flow into the ground and they move oxygen and nutrients deep into the soil profile. Of course, they are also raised for food and bait and play an important role in our economy. Crawfish Gumbo anyone?

For a key to identify what crayfish you may have on your farm go to: bit.ly/maryland-crayfish

John Czajkowski, District Manager, john@aascd.org