# Protecting Wetlands - A Matter of Survival Questions & Answers

Question from Mandeville Jr. 8th grade:

We've heard this area is an important flyway for birds. How many species migrate there? About 400 species of birds have been identified in the Barataria-Terrebonne system, and over 300 of these are migratory. The others are full-time residents. But many of these species are extremely rare and probably not seen every year.

Question from Caleb, 3<sup>rd</sup> grader from Zachary Elementary: Out of all the invasive species in the US, how much damage was done in the last three years? Hard to say, but damage was estimated at \$123 billion per year about ten years ago, and the problem is getting worse, not better.

LPB: What is a wetland? A wetland is an area of land that is flooded at least part of the year.

Do the sprays that they use to combat water hyacinth and other non-native invasive plants negatively impact the ecosystem? When used properly these herbicides control the unwanted plants while not harming the desirable native vegetation. All of the herbicides used to control water hyacinth are tested and approved for use in Louisiana by both the EPA and the Louisiana Dept. of Agriculture. If used improperly these herbicides can damage native plants.

Question from William, 2<sup>nd</sup> grader from Zachary Elementary and Ms. Jeane's 6<sup>th</sup> grade class from Rosepine Elementary: How did hurricane Katrina destroy so much over the marsh? Most of the damage from Katrina was caused by the storm surge, which is basically like a large bulge of ocean water that comes ashore with the hurricane, somewhat like a tidal wave.

Question from Emmy, 3<sup>rd</sup> grader from Zachary Elementary: What makes a swamp a swamp and a marsh a marsh? Both are types of wetlands. A swamp has trees, so it is a forest that is occasionally or permanently flooded. Marshes are flooded grasslands that do not have trees.

Question from Thomas, 3<sup>rd</sup> grader from Zachary Elementary: About how many species of plants and animals are found in the swamp? Well, if you include insects and other invertebrate animals, then the number is probably in the very high thousands or possibly millions of species. But just counting fish, amphibians, reptiles, birds, and mammals, the number of species is probably between 500 and 700. And the number of plant species found in a swamp is probably about the same.

Question from Blaine, 8th Grader from Galvez Middle: Should we be altering nature when we can't be really sure of the consequences? Good question. If humans are going to try to live

here without threat of constant floods, then there are some things we need to do to the system to try to be safe and productive, like building levees. But everything we do has consequences, usually unintended. Considering the critical problem of land loss, I think we must attempt some "altering nature" just to get the system back to a point where it can function without so much of our help. But you're right – We have to be very careful of what the consequences of all of our actions are.

Question from Daniel, 8<sup>th</sup> grader from T. H. Harris: Has the Mississippi Gulf Outlet messed up our wetlands? Short answer – Yes. It allowed salty water to creep into areas that were freshwater swamps and marshes. That kills the plants and changes the habitat. Also, surges from hurricanes or even sustained southerly winds could get pushed toward areas where people live. Fortunately, we are finally closing the MRGO with a dam.

Question from Lauren, Galvez Middle: Can't we just build something along the coast to stop the erosion? Sort of. We cannot build levees or sea walls because these structures hurt the marsh more than they help it. Levees should be for cities, not wetlands. But we can harvest sediments from the bottom of the Gulf or the river using a dredge, and pump them into areas of sinking marsh. That helps restore the marsh and provide protection for people, but it takes time and is expensive.

Question from Hannah, 2<sup>nd</sup> grader from Zachary Elementary: What's the swamp's population? If you mean people, very few. There are many communities that are surrounded by swamp or next to swamp, such as Morgan City or Thibodaux, but only a small number of people actually live full-time in the swamp because it floods so much.

Question from Collier, 3<sup>rd</sup> grader from Zachary Elementary: Does a nutria help the wetlands in any way? Well, I'd put it this way: the wetlands would be much better off if the nutria had never been introduced. They do provide food for alligators, coyotes, eagles, and a few other predators, but these predators would be eating native species like muskrats or raccoons if the nutria population were not so dense. Plus, nutria destroy the marsh by eating all the plants.

Question from Collier, 3<sup>rd</sup> grader from Zachary Elementary: How does an oil spill in the Gulf of Mexico affect the marsh? Sometimes oil spills just drift out to sea, and sometimes they sink to the bottom. But they do wash up into the marsh occasionally, or the spill occurs in the marsh. It can be a very big mess depending on what type of product has been spilled. They usually attempt to soak up the spill with special sponge-like materials, or spray chemicals onto the spill that help it to break down and dissolve. Sometimes they decide to light a fire and burn the spill. Of course, this kills the marsh, but it usually comes back.

Question from Chase, Galvez Middle, Michael Smith (school unidentified), Robert, 7<sup>th</sup> grade from T. H. Harris, and Chine, 3<sup>rd</sup> grader from Zachary Elementary: What can we do to help stop the wetlands from disappearing? We can dredge sediments from river bottoms and from offshore and move them through pipelines into areas of disappearing marsh, and we can nourish the marsh with introductions of river water.

Question from Josh from Egret:

How are they planning to stop the water from going into Baton Rouge? There are many different projects going on. Most involve protecting the marsh or creating new marsh. There are also levee projects underway to protect communities.

Question from Elizabeth, 6<sup>th</sup> grader homeschooler: Is Louisiana disappearing, like flooding? Yes. Coastal Louisiana is the fastest disappearing land mass on earth. There are many reasons. The ground under us is compacting and sinking, and we have also cut channels, dug canals, and built levees that have made the problem worse.

Question from Shaina from Galvez Middle: Will all of Louisiana eventually be destroyed? No, but the coastal areas are definitely threatened.

Question from Tevin, 7<sup>th</sup> grader from McKinley Middle: How did hurricane Katrina affect the wetlands? The storm surge from Katrina was 10 to 20 feet high, so it put all of the wetlands under water, and sloshed them around violently.

Question from Seth Gray from Galvez Middle: What kind of extinct animals used to live in the wetlands? Louisiana used to be home to bison, panthers, and jaguars. These are all still around, but not here. Farther back in time, there were mastodons here too.

Question from Brooke: How long do you think it will be until Louisiana is fully under water? I worry about sea level rise, but I think we will find a way to protect the coast and adapt to the changes.

Question from Cheine, 3<sup>rd</sup> grader from Zachary Elementary: What can we do to help the wetlands? See Chase from Galvez Middle and Josh from Negreet above.

Question from Michael, 8th Grader from Boyet Junior High: Is there any way to protect ourselves from the hurricanes? The smartest thing to do is to restore the coast to rebuild our natural protection from storms using marshes, barrier islands, and ridges. We also need to have levees protecting the communities. Living on the coast, there will always be some risk from hurricanes, but a healthy coast, good levees, and intelligently constructed towns and buildings will help to manage the risk.

Question from Jamie, Zachary Elementary:

How will closing ship channels, like the MRGO, impact the wetlands? Closing MRGO will help the wetlands in that area by keeping saltwater out in the sounds where it belongs, so fresh

## marshes and swamps can recover.

Question from David from Galvez Middle and Sean 5th grade (school unidentified): How long would it take to reform Louisiana's coast? It might take a while. If we are able to devote the resources we need for coastal restoration, it could take 50 years or longer to put all the pieces back in place. And the process would likely never end, as we would have to constantly adapt to a dynamic landscape.

Question from Michael, 8th Grader from Boyet Junior High, Curtis, 8<sup>th</sup> grader from T. H. Harris Middle School, Collier- Zachary Elem:

How many acres of land have we lost since 1990? We've averaged a loss of 25 square miles each year since 1970. So that would be 16,000 acres each year. In the 19 years since 1990, that would be 304,000 acres.

Question from Chance from Galvez Middle: What is the biggest threat to Louisiana's wetlands? I think the biggest threat is that our politicians will fail to devote the resources we need to the problem of coastal land loss. It is a "fixable" problem, but it will take money, effort, and time.

Question from Gracie, 3<sup>rd</sup> grader from Zachary Elementary: Is there any other types of wetlands other than swamps, marshes and barrier islands? There are also bogs and various other flooded grasslands and savannahs, but around here, just swamp and marsh. (Barrier islands aren't considered wetlands because they are elevated and usually dry.)

Question from Robert: Are these man-made issues or natural? Definitely both. The sinking of sediments in a river delta is a natural process, but we have made it much worse by building levees that cut the wetlands off from the sediment source in the river, and by digging canals, extracting oil and gas, and developing where we shouldn't have.

Question from Lane, 4<sup>th</sup> grade Spring Creek Elementary, Blaise 5<sup>th</sup> grade STM, Kylie, Zachary Elementary, Ms. Rodgers' 6<sup>th</sup> grade class from Rosepine Elementary, Chase,3rd grade student from Zachary Elementary, Carolyn 4th grade (school unidentified):

What can individuals do to help? Knowledge is power. Spread the word about coastal land loss. Volunteer with BTNEP or another group doing restoration to help plant trees and marsh grasses, remove invasive species, clear trails, or pick up beach debris. Don't litter. Write to your representatives and express your opinions about coastal restoration, and when you are 18, vote for candidates who support it.

Question from Cheiene, 3<sup>rd</sup> grader from Zachary Elementary: What is doing the most damage

to swamps right now? Hard to say. There are many different problems in the coastal wetlands. In swamps, impounding is a big problem. That's when levees, roads, or other development puts a barrier across the swamp and cuts it off from a fresh water source. Then the swamp water becomes stagnant and the cypress trees become unhealthy. Logging is also a problem.

Question from Adam 5th grade STM: How much will it cost to rebuild our marshes? Well, if we do everything we want to do, including some levees, it could cost between \$50 and \$100 billion.

Question from Michael: What kinds of plants are unique to wetlands? Many. The US Fish and Wildlife Service uses a grading system that says whether or not a plant is found only in wetlands, sometimes in wetlands, or never in wetlands. It is called the Wetland Indicator Status. Look into it.

Question from Faith, Galvez Middle: Do all states have wetlands? Probably, but states with lots of mountains or deserts have very few wetlands. Remember that even a small pond can be considered a wetland if it is wet sometimes and dry sometimes. But coastal wetlands are different, and Louisiana has more than any other state.

Question from Travis 5th grade STM: How high was the storm surge in Louisiana during Katrina? I think it reached 20 feet in some places. But it was 30 feet (a record for this area) in coastal Mississippi.

Question from Bella 8th grade Mandeville: Are we losing land because the Mississippi only flows in one direction? No. We're losing land because the sediments in the river are no longer being deposited into the wetlands.

Question from Emily 9<sup>th</sup> grade, South Lafourche: Do you think that we can rebuild the land back to 100% of what it was before? I think it's possible, but it would require incredible amounts of money and effort. More likely, we will find some appropriate "middle ground" that we can afford to restore, that will offer us a reasonable amount of protection from storms.

Question from Jordan, Spring Creek Elementary 4th grade: Where will the money come from to help the wetlands? Who's going to pay? Good question. The federal government should help because Louisiana provides so much oil and gas to the nation, and some of the activities of these industries have led to some of the problems of land loss. But federal actions take time that we do not have, so the state government will have to take the lead on many projects, including with regard to funding. It would be nice if private companies would chip in,

## but very few of them provide significant donations.

Question from Central Middle School 7<sup>th</sup>:

How many miles of land was lost with Katrina? About 210 square miles were destroyed by Katrina and Rita in 2005. That's almost 10 years worth of land loss in just one summer.

Question from Sonny (school unidentified), Emily (school unidentified): Are there places close to Baton Rouge, where fifth grade classes could help restore wetlands? Yes. I would check with the Parish governments of Pointe Coupee, Iberville, and East and West Baton Rouge for starters. I bet there are debris removals, invasive species removal, or trail clearing opportunities. Bluebonnet Swamp may have some opportunities.

LSU Ag Center in Baton Rouge has information about many volunteer and educational programs for kids interested in coastal conservation <u>http://www.lsuagcenter.com/en/environment/conservation/wetlands/Youth+Wetlands+Educ</u> <u>ation/#top</u> and <u>http://www.lsuagcenter.com/en/environment/conservation/wetlands</u>

There are programs for 4H members.

<u>http://www.lsuagcenter.com/en/communications/leads/Environment\_Natural\_Resources/La</u> <u>ndscaping+Louisianas+Coast+Scientists+shore+up+protective+wetlands.htm</u>

Question from Michael: What animals have lost and are losing their habitats because of the destruction of wetlands? As the wetlands disappear, there will be less habitat available or alligators, crabs, shrimp, oysters, redfish, speckled trout, river otters, bald eagles, and many others.

Question from Caleb from Lake Harbor MI:

How come more people are not helping to stop the loss of wetlands? Many people, especially in the cities, go about their lives without thinking much of the wetlands because they do not see them. The problem seems very far away. That is why we must spread the word about this problem.

Question from Michael: Are people losing their homes because of this? Yes! Communities way down river such as Port Sulphur, Empire, Buras, and Boothville have seen drastic declines in population as people relocate for fear that storms will destroy their homes again. Leeville on Bayou Lafourche has mostly disappeared by sinking into the wetlands. The people in many small towns south of Houma such as Chauvin, Dularge, Dulac, Cocodrie, and Isle de Jean Charles no longer feel that their homes can be protected by the wetlands, so they are leaving.

Question from Andrew, Senior from Loyola College Prep: Among some of the projects conservationists have implemented, which ones would you say have been most beneficial? I think the projects that bring new sediments into the system to create new wetlands or barrier islands give us the most bang for the buck. Usually this is done by dredging up sediments from one place and pumping them through pipelines to another. Many barrier islands have been restored this way, but the process can work equally well for marshes and ridges.

## Question from Edward, St. Tammany:

How long do we have to protect the coast line before we see flooding and loss of land? Well, you could argue that we're already too late. Katrina was the disaster we were all dreading. But I think we have the sense of urgency now, and projects are finally getting off the ground. If we can reverse the process of land loss and begin to rebuild land within 10 years, I think we'll be OK.

Question from Ms. Jeane's 6<sup>th</sup> grade class from Rosepine Elementary: What did hurricane Rita do to the marshland? Same as Katrina (see William from Zachary Elementary, and Tevin from McKinley Middle above) except that Rita hit farther to the west, around Lake Charles.

Question from Ms. Bladey's 6<sup>th</sup> grade class from Rosepine Elementary: Do human structures affect the wetlands? Yes. Levees, canals, elevated roadways or railroads, floodwalls, and even drainage ditches can have a negative effect on wetlands by altering the way water is supposed to naturally flow.

Question from Ms. Jones' 6<sup>th</sup> grade class from Rosepine Elementary: What happens to the aquatic life when too much salt water comes in? Some species can tolerate saltwater, and others can't. The plants in a swamp or freshwater marsh are especially susceptible to saltwater damage.

Question from Reaghan, 5<sup>th</sup> grader from SLU Lab School in Hammond: Is it possible to stop erosion? Not really. Erosion is a natural physical process. But we can do things to counteract erosion and put nature back into balance. (See Andrew from Loyola College Prep above.)

Question from Olivia, 11th grade, LCP: What is the effect on the local population of species when there is considerable wetland damage? Loss of habitat usually means loss of population. There are only so many critters that can live in one place. If the place gets smaller, then there will be fewer critters. This is especially worrisome with our commercially important species such as shrimp, crabs, and oysters.

Question from Alex, 5<sup>th</sup> grader from SLU Lab School in Hammond: About how many animals die each year and lose their homes due to erosion? I don't know. Some species seem to be

hanging on and doing pretty well adapting to the habitat changes. But we are sure to see declines in some species if we keep losing land. The Louisiana Department of Wildlife and Fisheries keeps counts of the population numbers of many species.

Question from Carson from Lake Harbor MI: How many animals die when people destroy wetlands? See Olivia from LCP at 9:29 and Alex from SLU Lab School at 9:30 above.

Question from Ray: What can you tell us about the restore or retreat debate? I'm not sure what you're asking, but I assume you are referring to the question of whether we should be focusing our efforts on coastal restoration or instead using our resources and energy to relocate people to safer areas further inland. I think we should be doing a lot of the former and a little of the latter.

Question from John, Zachary Elem: What's the most interesting thing that you've seen in the swamp? After Katrina I saw a school bus in the swamp. Not sure how it got there.

Question from Derek, Galvez Middle: Is there a back-up plan if Louisiana continues to lose its resources because of hurricanes? Not that I know of.

Question from Isabella, 11th grade LCP: Obviously erosion of coastline is sort of unavoidable, but, if these hurricanes such as Betsey and Camille had not have occurred, how much longer would the coastline be? Well, hurricanes have not been the problem historically. In fact, there are some scientists that believe that big storms actually put sediments BACK INTO the coastal wetlands. Now that we have lost so much of the wetlands, storms recently have been more destructive.

Question from Robert, Loyola Prep: If we were to plant more trees and brush would that significantly change the amount of erosion into the gulf? Yes, vegetative plantings are one of the ways we combat the problem. It takes volunteers. Wanna get dirty?

Question from Dalton 8th Grade Negreet: What is an invasive species? They are animals and plants from outside of our area that get imported here and cause problems in the environment. An invasive species is any nonnative plant or animal that becomes dominant in its new environment, usually displacing some native plants or animals.

Question from Megan, 11th grade Loyola: Has the coast of Louisiana been eroding longer than humans have inhabited the area? If so, how far could have the coast extended in the Gulf of Mexico? No, in fact just the opposite. Prior to humans getting here, Louisiana was actually getting bigger! All that sediment coming down the river actually builds land, but when we built the levees, that sediment no longer could get into the wetlands. Instead it just gets

dumped into the deep Gulf. The construction of our river levees was when the land loss problem began.

Question from Shelby, Galvez Middle: Why are our wetlands important? What do we use them for? Our coastal wetlands provide critical habitat for many species of plants and animals, some of which are commercially important. Wetlands filter pollutants out of the water. They offer many recreational opportunities. They are the backdrop to our cultural identity. And they provide protection from storms.

Question from Tyler, 5th grade STM: Where will we get most of the dirt we need to rebuild the wetlands? The best place to get the dirt is from the bottom of the Mississippi and Atchafalaya Rivers, and from offshore shoals.

Question from Faith, Zachary Elementary:

How many different kinds of alligator live in our state? Just one, the American alligator. It's scientific name is *Alligator mississippiensis*.

Question from Olivia, 11th grade, LCP:

Has there been a decrease in local crop production due to the loss of wetlands? Yes. There used to be a lot more citrus trees in Plaquemines and Lafourche Parishes.

Question from Abbie from Bonne Ecole Elementary:

Where do the animals go when the land dries up? Mostly the problem is with flooding, not drying up, but either way, less habitat means fewer critters. (See Alex from SLU Lab School above.)

Question from Katelyn, Galvez Middle: How do the wetlands protect us from hurricanes and natural disasters? Wetlands act as a storm surge buffer. As a hurricane comes ashore, it immediately starts loosing energy when it encounters the friction caused by the wetlands.

Question from Zeb, 3rd grade Zachary Elementary:

How can we protect the Acadian cultural from being lost? We need to restore the coast and maintain the habitats and communities.

Question from Katie, Junior at Loyola College Prep: Are there any species of plants that could potentially be transported to the wetlands to help prevent the negative effects of natural disasters? There are some plants that are already here that are very helpful in doing that, like cypress trees. But I would not want to risk introducing an exotic plant because it could do more harm than good. Question from Travis, 5th grade STM:

Are there any animals that we are losing with our wetlands? See Olivia from LCP and Alex from SLU Lab School above.

Question from Victoria Ayres:

In what ways could the introduced beetle harm the already existing species? This particular beetle has been studied for over 30 years and does not eat or damage anything but salvinia.

Question from Mandeville Jr. 8th grade:

What's the difference between a swamp and a slough? The word "slough" has several different meanings, but usually refers to an area that is like a small swamp, except that it floods from rainfall, not from an overflowing river.

Question from Katy:

What's your favorite thing about your job? What's your least favorite part? I am always learning new things, and I really love science. My least favorite part is probably the paperwork.

Question from Mandeville Jr. 8th grade:

Is it possible to regain all of the land we have lost over the years? I think it's possible, but it's going to take a lot of money, effort, and time.

Question from Kristen, from Galvez Middle: How do we measure how much land is lost? We use satellite and aerial photography top take pictures of the coast, and we compare the recent pictures to older pictures. This is mostly done by a federal agency called the US Geologic Survey.

Question from Holden, 11 year old at Grace Creek Elementary in Denham Springs: Can we restore land that has been lost in the storms? Yes, it just takes money, effort, and time.

Question from Emily, 5th grader at Riverside Academy : How do the alligators help our wetlands? I don't know that they actually "help" our wetlands. (Well, they do eat nutria, so that is helpful!) But what would our wetlands be without alligators? They are one of the many iconic species in the swamp that helps make our wetlands what they are. They help provide our cultural sense of place.

Question from Lakeshore Elementary, 6<sup>th</sup> grade: Does Louisiana lose more wetlands than Florida or Texas? Yes, much more. Louisiana's coast is geologically different from other states. Our land is young and soft and muddy, and so it disappears more easily than the sandy or rocky coasts of other states.

Question from Jordyn: Tell us some animals that are causing major damage in Louisiana

wetlands. The nutria is an invasive species that burrows into levees and canal banks destabilizing them, and also eats marsh grasses all the way down to the root, exposing the soils to erosion.

Question from Cole, Grace Creek Elementary in Denham Springs: Will the alligators and reptiles move north when their habitat is destroyed? Yes, they will move from areas of declining habitat quality to areas of better habitat quality. (See Olivia from LCP and Alex from SLU Lab School above.)

Question from Mandeville Jr. 8th grade: Why doesn't the marsh grass just float away if it's surrounded by water? Most grasses are rooted, so they tend to stay in place and help the soils stay in place too. But there are floating plants, and they do tend to blow around.

Question from Mackenzie, 5th grader from Riverside Academy: What will happen if the water sweeps away all the land up to Baton Rouge? We hope to prevent that by doing coastal restoration, but if it happens, many people will have to move to safer areas on higher ground.

Question from Nick, 5th grade Lee Road: What can we do to help save the Wetlands? See Lane above.

Question from Michael: How is Louisiana's wetland loss compare to other locations? We are the fastest disappearing land mass on Earth. Louisiana has 40% of the nation's coastal wetlands, and is experiencing 80% of the nation's coastal wetlands loss.

Question from Mandeville Jr. 8th grade: Would you consider the Barrataria - Terrebonne area to have barrier islands? Yes. Grand Isle is a barrier island, and so are Grand Terre, Timbalier, and Isle Dernieres.

Question from Kacie, ACHS: How does the loss of our wetlands affect the animal populations that live there? See Olivia from LCP and Alex from SLU Lab School above.

Question from Emily, 5th grader from Riverside Academy: How did water in the marsh get too high? Most marshes around here sink naturally. That process is called subsidence. In a natural system, new sediments come in and raise the marsh elevation, overcoming subsidence. But we have done things like building levees that keep the new sediments from getting into the marsh, so all we have is subsidence. The marsh sinks, so the water seems to get higher.

Question from Robert, Loyola Prep.: If the effects of human changes are bad why do we keep interfering rather than allowing the environment to fix itself? Not all human changes produce bad effects. Plus, we have to live here, so letting the environment fix itself is really not an

option. For example, if we tore down the levees, we would flood all the time.

Question from Daniel 8th MJH: What's the most common bird in Louisiana? Good question. I don't know, but I would guess European starlings, house sparrows, or rock doves (pigeons).

Question from Dylan, Tchefuncte Middle : How can fifth graders help? See Lane above.

Question from Mandeville Jr. 8th grade: Is the Barrataria-Terrebonne area below sea level? Most of it is not. The only parts that are below sea level are inside of levee systems. When we build levees to protect communities, the land inside often sinks because we pump out most of the moisture and this causes the soils to shrink.

Question from Maddi, 5th grade, Lee Road: Are some wetlands considered as a certain city or parish? The government has decided that wetlands are special places that deserve protection from development. So there may be a wetland surrounded by a city, or a city surrounded by a wetland, but they are almost always separate.

Question from Katie, Junior, Loyola College Prep: Do you think that erosion of the wetlands will continue to increase and worsen exponentially with each natural disaster if no action is taken? Yes. Our current situation is not sustainable. But hopefully we can take action to put some of the pieces back together.

## call in questions 1:

Gabrielle, 3<sup>rd</sup> grade at Zachary Elementary: What are some things we can do to help Louisiana stop sinking? See Lane at 9:21 above.

Question from Macy, 4<sup>th</sup> grade, Oil City: When erosion happens, where does the soil go? A common cause of land loss is subsidence. That's when the particles in the soil shift and settle and compact with gravity. So the soil doesn't actually go anywhere, it just gets smaller – kind of like a bag of chips that gets smushed.

Question from Lacee , Champ Cooper (8th Grade): How does the impact of land loss effect Louisiana's economy? We are having to spend more and more public funds to try to protect our citizens and our infrastructure from storms. We have to build levees higher and higher, which is very expensive. And we are losing habitat critical to economically important fisheries like the shrimp, crab, and oysters.

Question from Vanya, Tchefuncte Middle 5th grade: How are cypress trees important to the wetlands? Cypress trees provide habitat for birds and other animals, they help filter excess nutrients from the water, they help take excess carbon out of the atmosphere, they provide shade and lumber, they help the capacity of swamps to retain floodwaters, and they provide

hurricane protection in the form of reducing both storm surge and wind field.

Question from Alana, Delhi Charter: What is the best we can do to try and protect our wetlands? See Chase from Galvez Middle and Josh from Negreet above.

Question from Mrs. Coates' 6th Grade Class at Denham Springs Junior High: How can we as students help to protect our wetlands? See Lane above.

Question from Victoria:

Is there anything that individuals can do to help prevent the loss of land? See Lane above.

Question from Bella, 8<sup>th</sup> grade, MJH: Are the coasts eroding all over the US or just here? Beach erosion is a common problem everywhere, but Louisiana's problem goes way beyond beach erosion. Our soils are sinking, and the land is disappearing out from under us. (See Michael above.)