



## IN IT TOGETHER – THE FUTURE OF CONSERVATION | NOVEMBER 10, 2020 WEBINAR Q&A SUMMARY

In honor of Texan by Nature's 10-year anniversary in 2021, our Virtual Conservation Wrangler Series held on November 10, 2020, December 10, 2020, February 10, 2021, and March 10, 2021 focuses on the future of conservation. For each webinar, past Conservation Wranglers share their projects, lessons learned, and progress as a starting point for discussion. [Learn more about the Virtual Series.](#)

The future of conservation is collaboration — collaboration between business and conservation communities such that conservation is not a separate project, group, or conversation but part of our DNA. Conservation must be part of who we are — as citizens, family members, leaders, entrepreneurs, humans. It is collaboration that yields innovation and returns that positively shape our resources, health, and economy. Presenters for the first webinar included:

- [Constructed Wetlands](#) – Tarrant Regional Water District
- [Dark Skies Initiative](#) – McDonald Observatory
- [El Carmen Land & Conservation Co.](#) – CEMEX

The presentations were followed by Q&A, all of the questions and answers can be viewed below:

### Q&A - All Presenters

**Q: What do you see as the next step to expand or duplicate your project?**

**A: *Tarrant Regional Water District*** - Our next step will be to finish the design and construction of the Cedar Creek Wetland Project.

**A: *El Carmen Land and Conservation Company*** - The El Carmen Land & Conservation property is located in a unique and strategic area, in reality it really can't expand land wise since we are bordered by the National park and the Texas Parks & Wildlife Management Area in Texas and we are literally on the border with Mexico. However just across the Rio Grande in the Sierra del Carmen's in Coahuila, Mx. Cemex, Mexico has several hundred thousand acres of land either owned or under conservation agreements, which secures a large amount of lands in two countries for conservation of land and wildlife. As far as duplicating the ECLCC, this can be done by other parties with similar lands in the lower Chihuahuan Desert as well as other types of habitat in the Trans-Pecos. This takes commitment, funding, staff, securing lands, etc., but other projects similar to the ECLCC can be developed. We are by no means finished with this project, we are still working on restoration of habitats, water developments, etc. this is an ongoing project that in reality you never finish since there is always something more to do as the project grows and day to day operation takes full time work.



**A: *McDonald Observatory*** - The Observatory is preparing an application to the [International Dark Sky Association](#) for a Dark Sky Reserve for the Greater Big Bend region including protected lands south of the Rio Grande in Northern Mexico. [Learn more here](#). We continue our educational efforts with the oil and gas industry, working to bring some major operators on board.

**Q: What is the one lesson that you've learned from the project you presented about today that attendees can take back and think about applying within their own space?**

**A: *Tarrant Regional Water District*** - Not everyone can spend a lot of money on a giant wetland project. At the heart of the heart, the constructed wetland project treats water that is high in turbidity, sediments, and nutrients and for most of us, we encounter this on a daily basis through storm water. Our wetland project has proven that nature treats stormwater very well without having to build a bunch of concrete and pipes. The resiliency of nature to treat stormwater is the take home lesson. From an urban perspective, this is called green stormwater infrastructure, this is something that TRWD is promoting a lot these days because it just makes sense and it harnesses nature to do what we can't do very well on our own.

**A: *El Carmen Land and Conservation Company*** - I think something that is very important is that we are all in this together. Everybody working together is going to be a win-win in conservation for our land and our waters for future generations. I think we have to look way down the road, our birds are only a small part of that, but our lands and waters are so important.

**A: *McDonald Observatory*** - A project needs to be a win-win situation in order for it to succeed. We are not going to get anywhere beating people over the head with regulation and ordinances. Education, awareness, and showing the people the advantages of dark skies friendly lighting and the proper lighting practices for them in terms of cost efficiency, reduced glare, improved visibility, increased safety, and protecting the dark skies for science at McDonald Observatory -- this demonstrates a win-win

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## Q&A - Tarrant Regional Water District

**Q: Do natural wetlands have the same water filtration abilities as these constructed wetlands?**

**A:** Very similar, yes. Our system has water that is flowing through it continuously, so it sees more loading of sediment and nutrients as opposed to most natural systems. For that reason, we may be removing (filtering) greater amounts of contaminants. Natural systems certainly have the same ability at filtration.



**Q: What is the difference in water between what leaves a sanitation plant as compared to a wetland treatment system?**

**A:** Water that is flowing from a waste water treatment plant will tend to be higher in some contaminants such as nutrients and organic compounds. By the time it makes it down the river to our wetland intake it has also picked up a sizeable load of sediment, just from the upstream watershed.

**Q: Have you considered the cost of working with producers? to also use their lands like wetlands? Is there a cost analysis for that?**

**A:** We have looked at using wetlands in our “portfolio” of watershed best management practices, on private land. They are highly effective.

**Q: What do you do with the soil taken out of the Trinity River water?**

**A:** We only have had to dredge small areas of the project and that was only one time. Dredging can really damage the plant community so we designed the system to allow sediment to drop out early and in areas that would not damage the plants. We design those “sedimentation basins” so that we should be able to go for around 10 years before dredging would need to occur. We test it for organics and other contaminants of concern to make sure we can dispose of it properly. To date, since 1992, we have not seen any issues and have been able to spread it on fields and pastures in upland areas, where that vegetation can take advantage of the natural fertilizer that is now part of that soil.

**Q: Does the design and operation of the Cedar Creek Wetland System differ From Shannon substantially since it's on the mainstem of the Trinity instead of a tributary?**

**A:** They are almost identical in design. Both of the wetlands are (or will be in the case of Cedar Creek) pumping water directly from the river. Neither of these reservoirs is a main stem reservoir. Richland Chambers was constructed on Richland and Chambers Creeks. Cedar Creek was constructed on Cedar and Kings Creeks. Both of them discharge into the Trinity.

**Q: Are there plans to expand or duplicate this project in other states or large Texas cities?**

**A:** The concept has proven successful and is being replicated. The City of Dallas has constructed a reuse wetland project, designed by the same group, that is almost identical. There is another group out of Georgia (Clayton County) that has also constructed a very similar project. If the area has a source of waste water, an appropriate area for wetlands (soil type, vegetation soil bank, topography, etc.) it could make for a great water supply project.

**Q: Were there any initial objections to this project? How did you overcome those objections?**



**A:** The primary concerns were from downstream users (1990 time-frame) to make sure there was going to be enough water in the Trinity to supply everyone's needs. We agreed to do water availability studies and all members of the group were convinced that there was, indeed, enough water to move forward on the project.

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## **Q&A - El Carmen Land and Conservation Company**

**Q: What are the first steps a company should take to begin a project like this?**

**A:** CEMEX has been involved with conservation for many many years (~25-30 years). To get started, you don't have to go out and buy a chunk of land, it helps, but we aren't making any more lands and I think that's important to remember, as far as corporations being able to really help out in that capacity. You can do small projects, for small businesses and urban dwellers it can be as simple as putting out a can of water for birds - that helps! But to get started on a big project it does take quite a bit of funding, staff and staff that is experienced in conservation, it's a process but it can be done. Planning, talking to people from different expertise, and making a decision of what type of project that you want to be involved with are additional steps.

**Q: Are there many Environmental Renewable Energy Wind Generators in this area and do they bother or "kill" the birds?**

**A:** We don't have any of the wind towers in our area, and there are no plans for any. We border the Big Bend National Park as well as the Rio Grande being a Federally designated Wild & Scenic River, the view shed is impressive, from our south end you can see probably 75 miles into the Mexico Mountains. We also border the Texas Parks and Wildlife's Black Gap Wildlife Management Area. I don't foresee the use of wind towers in any of these areas. There have been some reports of birds being killed by the blades which are roughly 90 feet long, however, there is a group working on this and the last report I saw indicated that if the tips of the blades were painted black the birds avoided them. I think that might work in daylight hours, but migrating birds wouldn't see either probably, however birds migrating do get some altitude when they migrating. I haven't seen any reports of huge numbers of birds being killed by the wind towers.

**Q: What is the easiest and most impactful conservation practice a landowner can do?**

**A:** Depending on the size of the property a huge impact that helps all wildlife and birds is water developments that are permanent; ranches have great opportunities since they have water troughs for



livestock that can easily be modified so that they are wildlife and bird friendly; even in urban areas and cities water is critical to wildlife and birds. Planting native vegetation has a huge impact in many areas, fruit and nut bearing trees and shrubs are a huge bonus for wildlife and birds.

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## **Q&A - McDonald Observatory**

**Q: How has the Railroad Commission been involved in the Dark Skies Initiative? How does this affect light pollution?**

**A:** The Railroad Commission has issued a [“Notice to Operators”](#) twice, in 2016 and 2019 reminding them to use night sky friendly lighting. Most O&G operators were unaware that outdoor lighting ordinances existed in the seven counties surrounding the Observatory prior to that. They are also considering adding additional information on protecting night skies to their permitting processes.

**Q: What is the easiest technique for businesses to become dark-skies friendly? Is there anything individuals can do to be dark-skies friendly?**

**A:** Commercial facilities can devise an outdoor lighting plan that incorporates night sky friendly lighting before breaking ground. If a business already has poor lighting installed, the manufacturer of those fixtures may offer optional dark sky shielding. If not, the fixtures may have to be replaced. Individuals and businesses can lead by example; start with your own home or business first. Identify examples of good lighting in your community and hold them up as examples. Visit the [International Dark Sky Association](#) for more information.

**Q: What companies are making the greatest advances with dark skies, and what are they doing?**

**A:** Apache Corporation has been designing new facilities with night sky friendly lighting for years. They have also retrofitted older installations to be compliant. WPX Energy has made adjustments in the field, e.g., aiming adjustable floodlights to point down. [Apache’s](#) and [WPX Energy’s](#) dark skies lighting efforts are Texan by Nature Certified as well. Initial discussions are currently underway with Conoco-Phillips about adopting night sky friendly lighting practices. Numerous drilling contractors have made appropriate adjustments on their facilities including Precision Drilling, Nabors Drilling, Cactus Drilling, and more. Visit the [Observatory’s Dark Skies Initiative website](#) for more information.

**Q: What other types of industry might benefit from the Dark Skies Initiative?**

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**A:** All uses for outdoor lighting, i.e., residential, commercial, industrial, and civic, can benefit from good lighting practices. They are more cost efficient, improve visibility, increase safety and security, and help protect our heritage of a dark night sky. Visit the [International Dark Sky Association](#) for more information.