It was good to see you on the Webex meeting this afternoon regarding the above topic. Williamson County Mayor Rogers Anderson had invited me to participate and I was glad to do so.....to learn more about this issue and offer any assistance that I could.

Following the conclusion of the meeting, I had some general thoughts and observations that I wanted to share with you. You have probably already thought of these or had discussions about them but, I still wanted to throw them out there:

- It was brought up in the general discussion and I concur.....having good
 Planning/Zoning/Building Codes rules/regulations in place may be the best deterrent to these
 types of situations in the future. However, not sure how it addresses existing
 problems.....particularly existing public health/sewage problems. Additionally, enacting those
 "County Powers Acts" like Putnam County did seems like a great tool.
- With regard to property ownership and who to hold responsible, it should be whomever is the owner of record (from the deed and tax card); not really these "tenants". So, I would argue that the NOV's should not go to the tenants but to these landowners. I know that's how we handle it here in Williamson County. TDEC has consistently responded with NOVs to the property owner (Country Places, etc.). That being said, in a number of cases the property owner is an entity that is out of state. If they fail to respond to the NOV it is very difficult to take further legal action with them. In some instances we have sent a NOV to the owner as well as the occupant generating sewage.
- From a purely wastewater perspective to help try to solve an existing sanitation and public health issue of sewage discharge on the ground surface and no qualifying usable soils on the property, have y'all looked at any of the various waterless treatment technologies? Such as:
 - Composting toilets. This is an option for property owners, however, water carried waste from a dwelling must be disposed of properly (septic system or public sewer). Our interpretation of the current law requires public sewer access or a properly permitted septic system in order to establish a residence. There's no prohibition on using such technology inside the home. There are a number of scenarios where we permit or support the use of such technology, but not in support of establishing a residence. Wastewater flow from toilet facilities is a smaller portion of the wastewater flow from a residence. Years ago we gave reductions in system size for the use of composting toilets. However, we discovered that in most cases the residence didn't continue to use it. They would take it out after a while and move back to conventional devices. This was even more evident when the property would change hands.
 - Incinerating toilets see above
 - o Pit privies......still an allowable use under certain situations see above
 - To be clear, I wouldn't necessarily promote the use of these on new construction; but, again if the goal is to address an ongoing public health crisis in a poor, "distressed" area, that's a completely different conversation.....especially if some of these "structures" have questionable water service
- Again, from a purely wastewater perspective (as stated above):
 - Someone in the meeting mentioned the potential of an off-site septic
 easement......that is a great tool in certain situations if usable soils can be found on
 adjacent properties. We issue quite a few permits ever year with offsite easements.
 That is certainly an option where there are available soils at a practical distance.

- O Would any of these properties or situations be good candidates for a decentralized type of system? If only one area of usable soils are found, they could potentially connect multiple properties or multiple "structures" on the same decentralized system. May have to be some form of "regional" system. That could be a viable option if the developer chooses to pursue a State Operating Permit. We have 350 or so decentralized systems across the state. We have a permitting program in place to support them. In the case of the Agri Tourism where the property is owned entirely by one entity even a large capacity septic would be possible. We have a number of campgrounds that utilized large capacity septic systems.
- Are there any grant programs out there that these more rural, economically "distressed" counties would qualify for to help fund some type of wastewater system (either individual systems or a decentralized system) to serve these people? Not many options are available for property owners. One option is through USDA Water and Waste Disposal Loan & Grant Program (https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program/tn). Some local agencies have been able to assist from time to time with repairs but struggle with resources to help. Appalachian Service Project and some associated agencies do assist from time to time.
- Although there are a lot of additional hoops, hurdles and requirements (such as initial installation costs, perpetual O&M, etc.) that may be cost prohibitive, individual ATS systems have a lot of potential. Even used in conjunction with some type of experimental disposal/dispersal method.......we've had some success using ATS systems to clean up the wastewater and then disperse it into LPP fields constructed out of imported soil fill when there is no native/natural usable soil.......again to fix failure types of situations, I don't necessarily promote this use for new construction We permit a number of ATS/drip systems every year. They are more expensive. Most of the ones I've been familiar with recently have been in the \$30k range. The main advantage with such systems is the ability to work with shallower soils than conventional systems. I'm not sure ATS/drip is economically practical in many of these scenarios. In others there's not suitable soils to support any type of system.
- Again, not something that I would typically promote, but to solve an existing public health crisismaybe some type of pump & haul of holding tanks.......better than a pipe discharge on the ground surface Pump and Haul permits are issued by the Water Based Unit in the Central Office. Most are related to commercial enterprises. Pump and Haul sounds good but is cost prohibitive for long term residential support. Most trucks hold from 1000 to 3000 gallons resulting in a few hundred dollars a week to support the normal wastewater flow. They could certainly be considered in the event of a failure or to prevent public health issues, but long term the math doesn't work. Also, the sewage has to go to a legitimate wastewater facility. Wastewater plants are not obligated to accept sewage from a pumper. In most cases they will, but if it becomes a capacity problem or a problem for their treatment system they can stop accepting it and some have in the past.
- I think Dr. John Buchanan at UTK would be a great resource to get involved in this matter. It potentially fits in nicely with Extension's mission.
- Also, please let us know if TOWA could help in the situation. I'm not sure if we can or not; but, we are a resource out there. I will definitely bring it up in our next Board meeting.

Again, in my opinion, there are two completely different perspectives.......1) how to prevent these situations in the first place & 2) how to address a public health & environmental crisis that already exists.

I agree. While there are some existing problems with people establishing a residence without a means of wastewater disposal, to me the most troubling part is the marketing of parcels that are not recorded or simply don't exist on the county's books. When someone subdivides a larger tract into parcels privately and then markets and finances them, it puts the buyers at a real disadvantage. The county is not aware the parcel exists. We are not aware the parcel exists. No one knows in some cases where the lot lines really are. At that point if they realize the parcel is not suitable for septic and stop paying or stop paying for any reason, they lose their investment. They are not always greater than five acres. We've had a number of small parcels that would normally fall under the subdivision requirements that have been subdivided privately. When the new owners come in to get a septic system permit or we get a complaint from their neighbors they realize that it wasn't subdivided properly and soil mapped and reviewed by the Dept. Sometimes they have already started building. In some instances, there's not suitable soils to support the subdivision of the lot.

It's also worthy of note that some of the development companies operate across multiple states, apparently in areas where local planning and zoning doesn't exist or have rules to prevent such practices.

So, just wanted to share my random thoughts for whatever use they are. Please feel free to share these with others as you desire and feel free to give me a call if you wish to further discuss. I'll be happy to assist in any way possible, even if it's just bouncing ideas back and forth.

Thanks Brian. I don't know that Dane and I have the answers either. I'm certainly not an attorney and can't speak to what state rules may or may not apply to marketing privately subdivided parcels. We've always had a few things like this going on, but recently it seems to be much more frequent and widespread across the state. Most of the problem is outside of TDEC's authority or area of practice. During our internal conversations we agreed that we should reach out to some of the local Mayors and let them know what we were seeing. At least they would know everything we do.

Take care and talk to you soon.

Brian