

Is it a storage tank – or is it an antennae platform?

It is becoming a common sight to see some sort of antenna attached to a water tower.

Whether it is Internet service or cell phone equipment, a water tower offers an attractive alternative location for telecommunications companies to install their equipment and it becomes a potential source of revenue to the tower owner.

It was not very long ago that installation of this equipment only meant 'free internet service' to the tower owner. This is slowly changing, for the better, as tower owners are starting to see revenues of several hundred dollars per month for each installation.

This increase in revenue may be causing some tower owners to

be deluded in their judgment. After all it's only a water tower, right?

Right, it's only a water tower. It is not an antenna platform. It is probably the most important piece of equipment a city or rural water district owns and with few exceptions; it is one of the most

expensive pieces of equipment to maintain. Why would anyone want to make it more expensive to maintain? You wouldn't, right?

This is where the deluded judgment comes into play. The revenue from leasing space on a tower is in a way like 'found money' and many cities and RWDs only see the short-term

advantage of this revenue. What they do not see is the increased maintenance costs to maintain the tower for its intended purpose, providing water storage.

Potential for increased maintenance costs

As a water tower contractor, I can assure you, if it is more difficult to access the tower if an

antenna or cables are in the way, more will be paid for maintenance on that tower – a lot more. Sometimes the added maintenance cost far exceeds any revenue gained for allowing the antenna installation in the first place.

Additional maintenance costs are not the only consideration. The potential for damage to the tower from having additional



*James Brookshire
Vice-President,
Cunningham Sandblasting
& Painting Co., Inc.*



A city in north central Kansas did not realize that the subcontractor installed cables and antennae in such a way that prevented access to the tower. It has literally prevented anyone from climbing the tower. The \$400 per month revenue will all but be consumed when this tower is repainted.

equipment installed is increased. Remember the tower was designed to hold water. It was not designed to hold a cluster of telecom equipment.

Wind load is increased exponentially when an antenna is installed. If the installation is not correct or if proper bracing or reinforcement is not in place the risk of damage is much greater.

There may also be warranty considerations regarding the tank's coatings. If the coating is still under warranty and a telecom installer is allowed to weld his equipment in place, this damage will alter and may even void any coating warranty. This could be economically unsound especially if there is an extended coating warranty.

Even if a city or RWD has no warranty issues, is the installer going to properly repair any coating damage? What about damage to the interior coating? Is the installer going to properly repair the interior coating? Is the installer going to sanitize the interior after repairing the coating? Is the installer even qualified to do this? It is imperative that these questions be asked and the system decision makers are satisfied that an antenna installation is going to be done correctly.



This photo shows conduit and cables installed to a tower ladder. Notice the installation hardware, wire and electrical tape. It won't be long before this installation becomes a problem.

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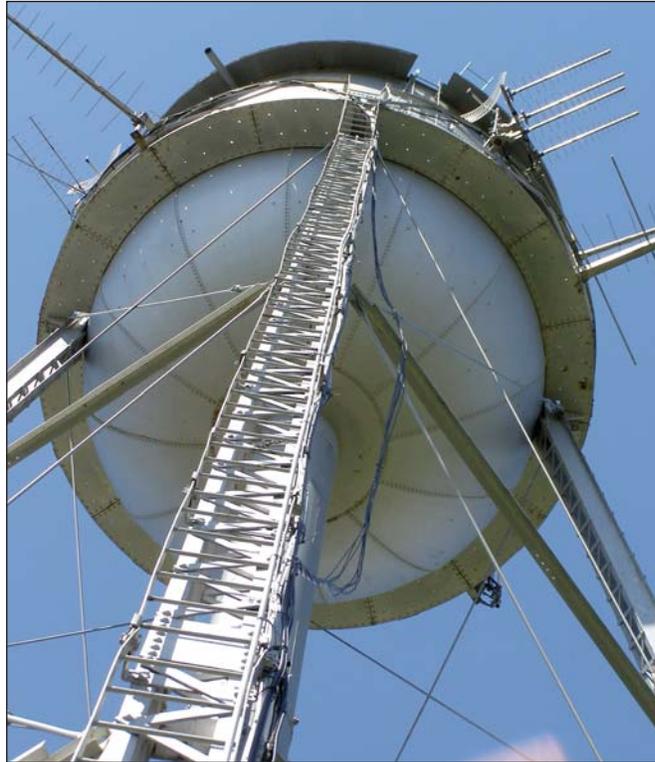
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Is it a storage tank – . . .

Obtain some information

The best advice I can give a city or RWD considering leasing space on a system tower is to contact a water tower contractor. I routinely advise our customers on the best way to proceed. I have even consulted with actual telecom installers while they were in the middle of the installation process. Almost all tower contractors will guide you through the process and almost all will provide that consultation at no charge.

Do not rely solely on a telecom company's representatives to best advise on an installation. Most, if not all of these companies utilize a sub-contractor for installations. As a result, the telecom company can be oblivious as to what is actually happening to a system's tower, even if it is a reputable telecom company. Any agreement to lease space on a water storage tank for communications equipment should contain a damage clause. If this equipment causes damage to a tower it should not be the city's or



Notice the loose coaxial cable under the bowl of this elevated tank. It is causing premature coating failure. The number of antennae attached to the balcony create additional wind load to this tower.

RWD's responsibility to assume repair costs.

Approach the process with a little knowledge. Doing so will

help any city or RWD to use the tower as a good source of residual income.



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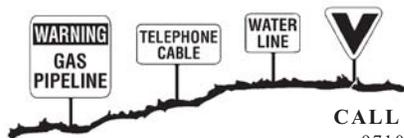
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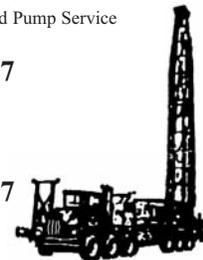
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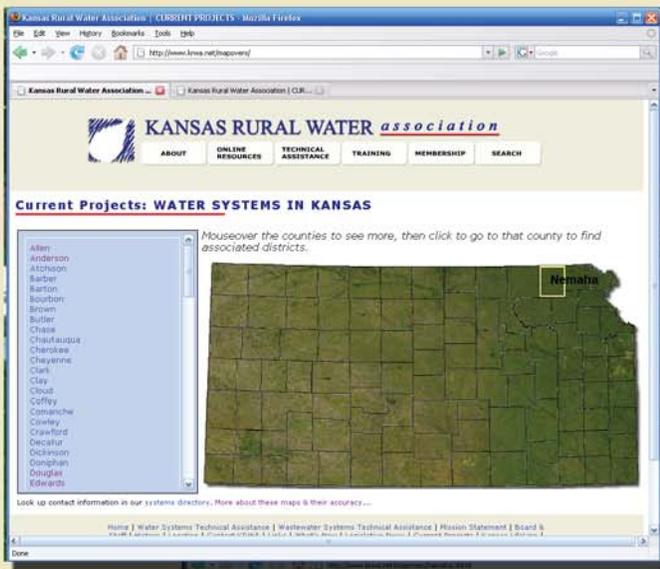
WATER SYSTEMS IN KANSAS

High resolution maps can now be accessed at www.krwa.net/mapovers to be used for planning or general reference purposes.

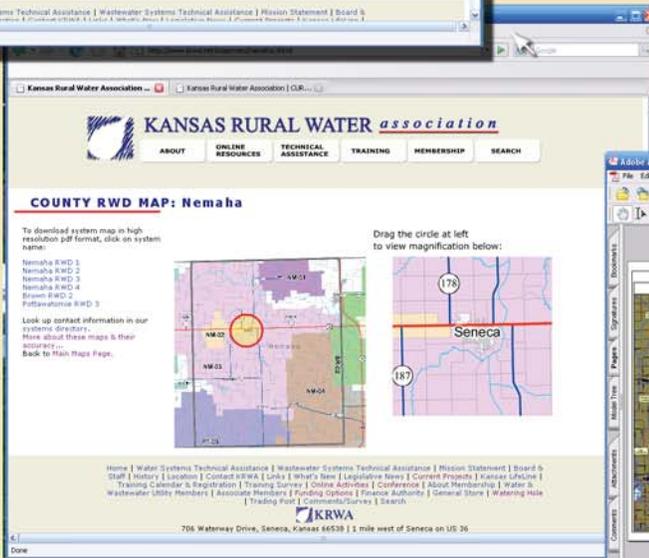
This dataset includes boundaries for most public water supply systems and infrastructure data for rural water districts and public wholesale water supply districts.

Infrastructure includes the general location of:

- the main pipelines in the distribution system
- the source water wells and surface water intakes
- facilities (storage tanks, pump stations and surface water treatment plants)
- interconnections between PWS systems for wholesale water distribution



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