

## National Rural Water Association

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TO: The Honorable Frank Libutti  
Under Secretary for Information Analysis and Infrastructure Protection  
cc: Jim Caverly  
FROM: John Montgomery, Mike Keegan, and Ed Thomas  
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SUBJECT: Draft Concept Security Communication Partnership

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The National Rural Water Association has over 25,000 small and rural community members. We are organized around a common mission of advancing water utility service including protection, security, quality, compliance, and other related issues.

We are writing to inquire if the Department of Homeland Security would like to partner in our objective of developing a water security communication infrastructure with every small water and wastewater supply in the country.

As our in-the-field experience and surveys show, there is not an effective federal government communications effort with small communities regarding water and wastewater security. This was the finding of EPA's own internal report 3 years ago and not much has changed. Our field survey found virtually no small water system has any knowledge of any EPA security personnel (nor have they received any security planning assistance from the U.S. EPA).

For example, most of the Threat Assessment documents that EPA was required to deliver to water systems never made it to the small systems through EPA's initial attempt. In October of 2002, EPA mailed water systems a letter detailing how they could gain access to EPA's Threat Assessment material. Systems were told to reply to the letter by faxing or emailing a request for a password to download the Threat Assessment from the water-ISAC or having it mailed to the system. Our experience shows that many small systems did not receive EPA's letter in October for a number of reasons: many of EPA's addresses were incorrect, the letters never made it to the correct local officials upon delivery, many systems could not get the fax to go through and stopped trying after a number of attempts, after having replied to the letter by fax, many systems did not receive a follow-up password, or received a password that did not function, or could not access the document on the internet, etc.

After having heard numerous cases of systems not knowing about the threat assessment (or not having been able to get it through the password process), rural water advised systems to try again to get the Threat Assessment by using a new fax number, a new simpler form, and providing systems technical assistance to complete the transaction. In the course of two weeks, through their daily technical assistance contacts, Illinois Rural Water Association found over 25 small systems that had not been able to procure the Threat Assessment document. In Illinois, the rural water field technician worked with all these small communities to correct the problem.

EPA staff told us that, after the rural water field staff addressed the issue, EPA has received a "wave" of requests. During a local rural water security training session at the time, one state association found that the majority of the systems, over 3,300, said they did not receive a letter from EPA.

The difficulty in communicating continues. Currently, the EPA is not sharing the only valuable security data they have on small water supplies. Rural water requested the data collected from the communities turning in their vulnerability assessments to EPA. The agency has provided the data on larger systems to other associations, but has not provided the same data covering the small utilities. The irony is that the small systems data is probably timelier, since it is likely that small systems will have more difficulties in completing their assessments and need help. State associations could be using this data to communicate with small communities, directly assisting any communities who have not completed their vulnerability assessment, and working to enhance the initial security plans adopted in their vulnerability assessment. EPA's delay in providing in-the-field security technicians with this data delays the progress in protecting these systems. The lack of sharing of EPA's limited data is allegorical to the overall relationship between EPA and local water supplies – where locals often don't see the EPA as a partner with a common security mission but rather as a bureaucracy that has to be dealt with – and a distraction from solving local priorities.

On the other hand the rural water network is directly engaged and assisted thousands of small communities with security advancements. Most every water system relied on their state rural water association to complete their vulnerability assessment. Most every system that had to complete the vulnerability assessment had direct contact with state rural water association technical staff. And most every small water system in our survey said they relied on their state rural water association for assistance with protecting their water supply.

Most of the security training in small systems, the completion of federal vulnerability assessment, and local education has been a result of the rural water network (the association, on a state by state level, of 25,000 small and rural community members). The outreach assistance of state associations includes numerous, full-time in-the-field technicians in every state. It is common for a rural water field technician to be in over 20 different communities each month. State associations provide hundreds of regional security-training seminars over the last 3 years (i.e. Utah on p.3 - [www.ruralwater.org/report2003/chapter3.pdf](http://www.ruralwater.org/report2003/chapter3.pdf)). Almost all-small systems utilized the rural water security model (SEMS) for completing their vulnerability assessment – and as the core planning tool for security and emergency preparedness. For example, in Minnesota 85% of the state's systems used SEMS to complete their vulnerability assessment. Most other states are finding similar rates of reliance on the rural water SEMS model.

For all the expert studies and analysis EPA has published, when a small system is in immediate crisis – this rarely helps. If data is the plural of anecdote, look at this example in Kansas published in the Nov. 2002 issue of the Kansas Rural Water Lifeline [[www.krwa.net/lifeline/](http://www.krwa.net/lifeline/)]. In the actual incident, a small utility was warned by an anonymous call that the water district had been compromised. What to do? First, what not to do was follow the direction of the local sheriff's office that requested that the system (that produces the water for a number of small systems) shut down and drain all treatment, storage and distribution systems.

The water systems contacted rural water immediately after calling the state primacy agency, the Kansas Dept. of Health and Environment (KDHE). The Kansas rural water technician arrived on the scene within two hours of the threat and about 15 minutes after the state environmental region's engineer. When the rural water technician arrived, he found the local sheriff, and utility managers discussing the situation. He gave a quick review of the facilities and together they began checking the three systems for chlorine residual. All samples were within limits. The inspection of the facilities showed no apparent tampering with the distribution system, storage tanks or the city's treatment plant.

Outside agencies attempting to command the situation threatened to make the situation worse. The sheriff wanted all three water systems to drain their water storage tanks and distribution systems and allow them to stand empty for two days. The rural water technician explained this was not prudent for a number of reasons including the threat of backflow and backsiphonage, much less the increased risks associated with having no fire protection.

The FBI was contacted during this event. However the main lessons from this real-life incident are: that in a real crisis each rural or small community itself is responsible, difficult decisions need be made **immediately** in order to protect the public health, and there is no one resource (state or federal governmental agency) that has the best answer. According to the head of Kansas Rural Water, Elmer Ronnebaum, *"each public water system is liable for all operating decisions and only advice from qualified individuals, such as the state regulatory agency, should be considered by the utility in a situation of this nature. The system must consider all the facts and make intelligent decisions based on the information available considering the liabilities that may be associated with the action it takes... The more you plan ahead trying to anticipate situations, the easier your job will be to respond with appropriate actions."*

This example highlights why rural water believes it is better to increase the preparedness and competency of local officials than to increase uniform regulatory requirements on them in the effort to have them best manage a crisis.

The principled reason that rural water has been the main source of security progress and the main source that communities rely on for help and expertise is because rural water is the only network, organization, or entity that is accountable to small communities. And since every community wants to provide safe water and conduct all security measures to protect their water supplies and communities – rural water has a governing structure that ensures it provides common-sense assistance in a form small communities can understand, use, and access. This is the reason most all rural water technicians are in the field, onsite every day – talking, educating, and persuading their small town peers on what they need to do (and change) to make enhancements. Mailing a complicated manual designed by experts to small communities is not what is needed. If you are not communicating directly with the person in-charge in that small town, you are not making a difference. Without the support of local people, no amount of regulations or experts' reports will protect their water. Successful security plans rely on local responsibility. Only local experts (police, mayors, councils, city managers, long-term community leaders, etc.) can identify all vulnerabilities in a community. Some vulnerabilities can be as specific as where an extra set of keys is hanging – and the possibilities are infinite. EPA agrees with this conclusion and stated to us that they can't determine the best "specific" security plan for any given community.

## Communication System Concept

To enhance the federal government interest in better communicating with local small water supplies on security issues, we are interested in discussing a communications partnership between the federal government and rural water associations.

Specifically, we are interested in designing and building a communications system that will work within the existing rural water network and the DHS Homeland Security Information network. The current network is not designed to meet the special goals of security (timeliness of distribution of new and expert information). To enhance the current communications network to advance security the following is proposed:

- **Link all existing communication databases** (state rural water associations' memberships databases, EPA's database, USDA's database, rural water's field work reporting data, other water supply databases) to create the most comprehensive, quality controlled, and correct database of contact points (phone, fax and internet communication). Such a database must be designed and valuable to the local users. For example, in the recent hurricanes in Florida, the key complement of the communication database was the personal cell phone number of the water operator because the main phone lines were down or there was no one to answer the calls coming in. Florida Rural Water was the only organization with such a list (database) because the small communities trusted them - which allowed them to emergency network with various water systems to distribute generators from water systems who did not lose power to those that had lost power. Emergency communications were also conducted with the movers of the generators to allow the movement from one system to another – a coordinated effort to allow utilities just enough time on the generator to fill their storage before moving the generator to another supply. In this example the state did not have capability or a communication network and was out of the loop during the crises causing some state owned generators to sit idle when they were needed.
- **Build local expertise in the system.** By relying on state associations to execute the communications in an emergency, the system stays “on” continually because their state association is continually in contact with the local supplies even when there is no crisis. This ensures that the same people supplying the federal governments information (in a crisis or in an ongoing manner) are the same people that the local water systems naturally turn to for help and advice. Also in addition to one-time communication of particular information or a specific threat, the system will be plugged into the rural training network, which is the main outreach of education in small communities. For example, Wisconsin Rural Water will conduct dozens of regional training session for small communities by the end of the year [<http://www.wrwa.org/workshops.html>]. Some of the sessions feature security training and emergency response planning – an agenda for the security sessions is on the internet site. These ongoing training sessions in every state in all regions of each state are the main training and professional-networking forum for small system officials. Also these opportunities serve as a forum for neighboring communities to learn from one another (so called peer-to-peer training). This type of peer pressure is one of the main driving forces of progress in rural communities.

- **Utilize the existing databases.** We plan to start sending out information, notices, advisories, and news through the network on a regular basis. The source of the information can be very flexible from federal agencies, experts, and other water supplies. The limiting filter on the information can be determined after discussion. The system can also be utilized to reply to specific questions from individual communities and assist them in the completion of security planning including vulnerability assessment and emergency response plans.
- **Use SEMS as a base.** Most water utilities relied on the SEMS model to complete their vulnerability assessments. SEMS would be incorporated into the database, and advancing the initial vulnerability assessments would be a fundamental mission of the system. We plan on having the software developers of the SEMS software craft and maintain the database – and design the operating platform (internet, service, and access from end users). It will be as simple as possible. Most of the systems will consist of an email distribution system. We are estimating there are 20,000-40,000 email addresses that should be included.
- **Address Urgent Needs.** At our annual conference in October, an industry engineer presented a session on security threats from terrorism. In this presentation, the engineer presented a case study conducted by a military security expert. The military's expert went to the hardware store and purchased simple equipment for less than a few hundred dollars. He then proceeded to rent a house on a small water supply and in a controlled experiment, with consent of the small town, through a process we will not mention in this memo contaminated the entire system in less than a half-day for the surrogate contaminant. The engineer described how it would be simple to double the time it took to contaminate the entire system. This anecdote is just one example of a security topic that we believe small communities need to learn more about to protect their communities.

We estimate such a communication system could be put together in a matter of months and be operating on a daily basis. This memorandum focuses on communications with water and waste water supplies. However, rural water has ideas and plans for protecting water supplies in addition to improving communication. We will be following up with you on additional areas of potential partnerships including: determining a plan for peer reviews of community security plan to measure progress in protection, models to use to measure progress at the local level, ways to move communities to take action after vulnerabilities have been identified, continuing improvement of security modeling software (including SEMS) in order to ensure that security plans are constantly evolving, and other proposals we will detail in the coming weeks.

We appreciate your consideration of our request and look forward to working with you on these issues.