

**INNOVATIVE/ALTERNATIVE SEWAGE DISPOSAL TECHNOLOGIES  
TECHNICAL REVIEW COMMITTEE (TRC)**

**The meeting was held at the South Kingstown Town Hall**

**December 1, 2006 Meeting Minutes**

**Draft**

**Attendees:**

TRC members present: Noel Berg, Russ Chateaufeuf, Joe Frisella, Susan Licardi, George Loomis, Tim Stasiunas and Dennis Vinhateiro

TRC members absent: Ken Anderson and Dave Burnham

Others present: Brian Moore and Deb Knauss, RIDEM

Meeting came to order about 8:50 AM

**Materials distributed:**

- Draft Agenda for today's meeting
- Draft Minutes of 10/18/06
- Notes on poly tanks
- Draft letter to Coon Manufacturing RE: Poly tank application

**Motion:** Noel made a motion to accept the minutes.

**Second:** Susan seconded the motion.

**Vote:** All present who were present at the October 18, 2006 meeting voted in favor (Noel Berg, Susan Licardi, George Loomis and Tim Stasiunas)

Russ introduced the following topics for discussion:

- Perception that I/A technologies are promoting inappropriate development. He suggested proactive development of an information package explaining the pros and cons of I/A technology regarding development of land.
- Draft ISDS Rules
- Jamestown Cumulative Impact Statute

**Poly Tanks**

The draft deficiency letter addressing the issues identified during review of the Coon Manufacturing poly tank application, was distributed for review and additional discussion of these issues was sought.

SeptiTech was approved for use with a poly tank, though no manufacturer's product was identified in the approval. George reported that he used SeptiTech on a Demo site and that the tank used in this installation is easier to weigh down because of its shape, than the Coon Manufacturing tanks considered at the October meeting. The designer of the system for the Demo site had to demonstrate sidewall strength and perform buoyancy calculations.

It was noted that buoyancy calculations are within the purview of a PE, which limits this work to Class III designers.

During review of technology applications, we consider treatment performance, but we do not consider each component individually (Though, when the RX fans were considered carefully, and issues were identified to the manufacturer, it did result in improvements being made to the fan by the manufacturer.). Because of this, proprietary technologies are approved with components for which there are no design standards in the rules, such as two-compartment and poly tanks. We need to require that tanks meet specific requirements / specifications to be structurally safe.

If a technology application is submitted for a septic tank as a component – the tank should meet the tank spec in the rules, or the product must be modified so that it does. Regarding a standard, it was noted that it is not appropriate for us to use concrete as our gauge, because fiberglass tanks may not meet the same standards as concrete, but they function very well. It was suggested that we could adopt an interim standard of the poly tank language in the proposed ISDS rules, though it was noted that the standard is tough; the strengths are an order of magnitude higher than that which are met by the Coon Mfg. Tanks.

Deb will look up whether there are any poly tanks which have met the standard in MA, also whether the Norwesco Bruiser tank cited by the manufacturer as suitable for use as a pump chamber, has been submitted for ASTM testing.

It was offered that when technology applications for proprietary devices with equipment housed in poly tanks are submitted, the onus must be on the applicant to certify that their equipment is sound. If the tank fails the onus is on them to fix it. The Coon Mfg. tanks do not meet the many of the criteria in the ISDS regulations. There was discussion of the ASTM standards the tanks are cited as meeting and the implications for incorporation of such standards in the ISDS rules. If a tank were documented to meet a set standard, it would then not come through the I/A process. We would however, require that the designer ensure that the tank is used in accordance with the manufacturer's requirements.

There was also discussion of the requirement for refilling the tanks when they are pumped. If re-filling is required to prevent floatation, an anti-floatation measure would address this problem. If the manufacturer is trying to avoid the buoyancy issue by requiring re-filling, that is sufficient cause to not approve the tanks for use.

### **Coon Manufacturing Draft Letter**

There was brief discussion of the tank application and the weaknesses of the product with consideration of the tank standard in the current RI regulations, which warrants denying approval. However, if the manufacturer could address the issues identified with the tank, as cited in the letter, the application could be reconsidered. The letter as drafted provides opportunity for reconsideration of the tanks for repairs; this is to be edited by deleting the restriction to repairs.

**Motion:** Noel made a motion to accept language in letter as revised.

**Second:** Joe seconded the motion.

**Vote:** All present voted in favor.

### **I/A Technology and Development of Difficult Sites**

Use of bottomless sand filters has facilitated development of small lots and there is evidence that in the past, without the availability of the BSF, these would not have met the suitability requirements for an ISDS and the lots would have been labeled undevelopable.

Now, approvals are being issued without variances, with use of I/A technologies, and in some cases use of I/A technology with variances can result in overcoming even more siting obstacles. The Department however, disagrees with the perspective that the high level of treatment provided by I/A technologies warrants reducing the setbacks to wells, wetlands, ponds and other sensitive receptors and features with regulation-prescribed setbacks.

#### Discussion of variances

- The Department approves 18-inch watertables with proper treatment, observance of other elements of the regulations and careful evaluation of all site considerations.
- In SK, a variance from the 150-foot setback to a critical resource area requires a special use permit and a variance from the zoning board.
- George has seen sites on which the location of the house and the ISDS has been switched, so that the house is in the buffer and the ISDS meets the regulatory setbacks.
- It was suggested that if there is any variance necessary that I/A technology be required for that lot.
- Since 18-inch watertables are often approved, there tends to be a sense that anything is buildable. There is no longer an understanding of what the limit is beyond which no approval will be issued. Perhaps there should be some specified watertable elevation above which no approval will be issued.

### **Watertable Issues**

There was discussion of high watertables and proximity to wetlands and if the definition of hydric soils should be incorporated in regulation to afford an additional element of regulatory protection in these areas where groundwater is at or within two-feet of the surface. Russ clarified that it is very unlikely that any ISDSs are in hydric soils. Any ISDS near wetlands have to meet the 50-foot setback to the wetland edge and hydric soils are generally at the wetland area.

George reported that Mark Stolt's data show that for 2-foot watertables the actual elevation of the watertable is higher than 2-feet 20% of the time.

BSFs can provide for ISDS suitability, but there is extra engineering necessary to address the issue of drainage in wet areas. Most people want a full basement and building code requires that the bottom of the basement be one-foot above the watertable. This requirement may be met by filling the lot, which increases run off considerations for the lot.

In areas with high watertables the leachfield setback to the foundation could be increased. Implementation of this increased setback would be advantageous with existing homes because of the additional protection, however when applied to new construction, independent of I/A technology, would result in less developable land.

## **Social and Economic Issues**

Economic forces are driving efforts to develop small, difficult lots. The cost of housing is high, so if an inexpensive lot is available, there is an incentive for a developer to get a house on the lot.

Takings issue: Existing lots and subdivisions platted in the 50's are surrounded by homes with cesspools and other forms of substandard systems. The owners of the undeveloped lots want to know why they can't build using I/A technology, which would treat the sewage from their home to a greater extent than that discharged by their neighbor's homes.

The counter issue is the existing homes perhaps should not have been built; if a mistake has been made by allowing them to be built, it does not justify the building of more homes in the same area.

When a variance application is denied, the applicant argues that property taxes have been paid on a buildable lot. It was countered that perhaps the applicant should have looked at whether the lot was buildable or not and then appealed the assessment. The town can decide a lot is buildable or not and buy it as unbuildable or as open space.

## **Municipal Issues**

It was noted that there are issues beyond those associated directly with ISDS (wastewater treatment, and wetlands), such as increased population, pressure on the education system to accommodate these additional children (public schools), storm water, runoff, vehicles, municipal services and additional municipal issues.

Town focus should be on subdivisions and zoning issues with DEM's responsibility being to protect public health and the environment. If a lot is platted, the municipality has a responsibility to serve that lot; in some cases this requires that drainage be provided. Without proactive storm water controls, a home may be built that negatively impacts the area.

Susan reported that in North Kingstown, the provisions of the Low and Moderate Income Housing Act are enabling developers to propose building a duplex on a 5,000 square-foot lot. NK requires a nitrogen-loading study based on the treatment level provided by conventional technology, to ensure that the lot size is adequate for the proposed use.

The **RI permitting process is upside down**, with the state issuing its approval prior to the municipalities' review. It was suggested that DEM should require that the local bodies sign off on an ISDS design application before it is reviewed by the state.

Russ sought ideas regarding potential approaches DEM could undertake to address the growing complaint or perception that DEM and I/A technologies are allowing imprudent development.

## **New ISDS Regulations**

Russ reported that the biggest remaining issue with the proposed draft regulations is the effort to be consistent with the CRMC SAM Plans and to ensure scientifically defensible rule decisions.

## **Cumulative Impact of ISDSs in Jamestown (enacted July 2007)**

This legislation authorizes DEM to develop rules to address the cumulative impacts of ISDS to public health and ecology in Jamestown in areas served by private and public wells. Russ emphasized that the legislation addresses ISDS specifically and exclusively, not stormwater or wetlands. Russ noted that there are areas within the water district which are served by private wells and that the reservoir is not protected because it is not a well.

The rules have not been developed, though there has been in-house discussion of what they may encompass regarding system upgrades, repair standards and new construction considerations.

**Related Issues:** Amphibians are susceptible to great distress and it is becoming evident that they may be indicator species of impacts to humans that are not yet understood. It has been observed that amphibians susceptibility to parasites increases as a function of increase in impervious area. Vernal pools are not protected by statute. 100s of feet of land around the vernal pools are traveled by organisms requiring vernal pools for the breeding phase of their life cycle, as they spend their lives during the non-breeding season a considerable distance from the pools.

**Motion:** George made a motion to adjourn the meeting.

**Second:** Noel seconded the motion.

**Vote:** All present voted in favor.

The meeting adjourned at 11:45 PM.

## **Next Meeting**

Next meeting was scheduled for January 19, 2007, at **8:30** at the South Kingstown Town Hall at 180 High Street in Wakefield.