

## Minutes from the Individual Sewage Disposal System (ISDS) Task Force – Regulatory Working Group Meeting October 3, 2000

In attendance:

Russ Chateauf, Alison Walsh, Lenette Boisselle, Darlene Gardner, Eugenia Marks, Scott Moorehead, Tom D'Angelo, Pat Quinlan, Tom Getz, Rob Adler, Joe Frisella, Deb Knauss

Copies of the agenda for the meeting and bulleted notes on the topics to be discussed were distributed. A sign in sheet was passed around the table

Russ noted that during the meeting the group would discuss items 1, 2, 6, 7, 8, 12, 18 and 23 from the prioritized list of recommendations. These items encompass the topic areas of design and construction of leachfield, soils based siting, existing field data, subdivision and soils, sizing based on bedrooms (with consideration of the changing the way in which bedrooms in homes are accounted, galley s/f requirements and flow velocity in ISDS piping.

Russ also stated that draft language would be prepared for future meetings, that at this point it is more important to focus on issues rather than nuances in draft language. It was stated that it would be nice to have draft language sooner rather than later so that there would be time for input on it prior to the rule-making process. Methods of distributing the draft document were discussed, it was agreed the distribution by E-mail to those who have E-mail was suitable, those who do not will receive the draft via fax or US Postal Service.

Soils based siting, reasons for – current wet season process inherent problems:

- 1) variability of the conditions along a continuum of wet to dry,
- 2) Inexact process of establishing the elevation of the seasonal high water table (application of a factor)
- 3) The wet season workload presents a problem for the Department. Most of the wet season applications are dropped off April 1, resulting in the inability to verify actual wet season depths
- 4) A soil evaluation process based on texture, structure and consistence provides more accurate information about other soil properties.

Currently the Department is using the percolation test to size drainfields. The test is not an accurate method and is a poor measure of the capacity of soil to treat effluent; it may result in systems being undersized.

Russ summarized the February 2000 amendment that set forth procedure for conducting a soil evaluation procedure. He described the soil evaluation process and the modified dry season test hole procedure which licensed class IV soil evaluators are authorized to conduct during the interim period before soil evaluations are required for new building construction.

Frustration and concern for the future was expressed by attendees who hold Class IV licenses that the February 2000 amendment states that the Department will schedule a date for witnessing of test holes within fifteen days, which DEM does, but that the scheduled date is already 8 weeks later than desired and that the period may increase. The soil evaluation process allows wet season evaluation of seasonal high water table, if the soil evaluator and the Department do not agree on the elevation of the seasonal high

water table. Wet season evaluation of seasonal high water table is required if the soil falls into one of the categories of soils whose morphology make it essentially impossible to establish the seasonal high groundwater table using morphological features. The concern is that there may be sites where, if the Department delays in setting an appointment for a witnessed test hole, that the opportunity to go to wet season may be lost.

Russ responded that the Department is not required to witness all soil evaluations, but that DEM will be making an effort to witness as many as we can early in the implementation of the process. He said he would look into opening more times/dates for scheduling test hole work.

George Loomis correspondence generated discussion regarding the issue of pathogens in effluent and how protection of water resources from pathogens is a function of time and distance rather than ISDS systems which do not remove all pathogens from effluent. There was concern about consideration of lateral water movement over confining layers toward water bodies thus short circuiting the treatment process. It was stated that if systems are properly sized and located, and DEM's ISDS setbacks to water bodies are observed, this ought not to be a problem. An exception to this is systems which will receive 5,000 gallons per day or more. Applicants for such systems are required to conduct hydrologic studies as part of the application process so that such conditions and risks may be identified and avoided.

An additional benefit of the soils based approach is that it allows us to develop soil-based standards, performance based rules. Performance based rules would guide assessment of site conditions and risk factors and prescribe types of systems suitable for the combination of conditions and risks identified for a site.

### Nutrients

A topic was raised as to how DEM proposes to handle wastewater management districts, in particular the varying nitrogen standards that some jurisdictions have, under the new rules. Russ indicated that DEM was considering the adoption of the CRMC policy on requiring nitrogen-reducing ISDSs in the SAMPs, and possibly other measures. Further discussion on the topic of nitrogen controls will be held at a future meeting of the group.

There was discussion about the importance of and increasing interest in the capacity of soils to retain phosphorous and impacts of phosphorous in freshwater ecosystems. The problem of a lack of data on phosphorous sorption was identified. The role of wastewater management districts in the protection of surface waters was discussed. Block Island developed a process by which appropriate ISDS systems are selected on the basis of the location in the town and the level of protection required. DEM requires that municipal requirements are met.

Last year the CRMC Special Area Management Plans required the use of nitrogen removal systems when specified conditions are met.

Someone must assume the leadership role to explain the science to municipalities; they will not spontaneously ask for regulation to address phosphorous as a threat to water quality.

MA passed a new law prohibiting the selling of products containing phosphorous: some of these products were making it into RI. There was question as to whether the contents of dishwasher detergents are regulated. Alison Walsh stated that she would check the MA statute.

It was agreed that there is need for an assessment of P – retention capacity of soils.

Whether or not it is possible to permit on an application by application basis, the use of grey water systems to water lawns was asked. RI has one pressurized drip irrigation system.

Phosphorous treatment systems are still under development in the ISDS area.

It was stated that some data indicate that P may move from 25 to 100 feet from a system. It was also stated that the cost of a P reduction system (?) would be \$18,000 to 22,000 and that the financial burden to the public to require such a system is not something we should be insensitive to. It was also stated that it seems premature to pursue an initiative to guard against P inputs given the lack of data available on the subject of P soil relations.

Concern about soil class being the criteria for sizing drainfields was expressed. Such a classification was felt to be too broad, for example there is a range of soil densities in ablation till and spatial variations such as shallow A and B-horizons versus deep A and B-horizons. Russ explained that Department staff is still debating this issue. It was recommended that we consider soil class and texture as well as depth of horizons and in which horizon the system will be installed and depth to limiting layer. It was also suggested that we consult the NH code for guidance.

#### Subdivisions

Russ described a process which has been considered by DEM staff for application of soil based siting to the subdivision suitability process, which involves an on-site meeting with DEM. At this meeting the applicant would indicate the areas which were being targeted for test holes. DEM would then decide which of these were to be witnessed. Concern was expressed about the two test hole per lot requirement. Russ stated that the Department will probably keep the current allowance of one test hole per system/lot for subdivisions because of the amount of information available on most subdivisions is sufficient to not require two or more as is often required for individual lots.

#### Field Data (gathered prior to implementation of soil based process)

An interval of time for which previously collected field data will be allowed to be used must be established. Russ stated that the Department has been discussing one year as a possible window to put forth in draft for individual permits. He explained that Department approved subdivision suitability would expire five years from the date approved, because state law allows the sale of lots within subdivisions with approved suitability as buildable. The exception to the one year window for previously collected field data would be if no perc test had been done. If this were the case, draft language may require a soil evaluation to be conducted. This was objected to, citing that at the time of the soil test, a shallow hole is left in which the perc test may be conducted at a later date using a post hole digger. It was suggested that a simple solution to this would be that if the water table had been established for a lot, get to the lot and do the perc test to lock it in to whatever window is eventually accepted. The one year window was objected to as being too short and concern was expressed that if there is one year of a permits validity remaining and the one year lapses, that a new system may have to be designed. Another suggestion was offered to allow any permit approved after 1987 to stand as valid to the end of its term. Concern was expressed for added cost to

clients of soil evaluations on sites where preliminary testing had already been completed under existing procedures. The approximate estimation provided included \$400 for ½ day backhoe, \$400 - \$500 for the soil evaluation and \$100 application to DEM, for a grand total of \$900 - \$1,000.

It was suggested that DEM notify by mail, those who hold valid permits which will expire in 2001 of the change in process. This however is impractical because lots may have been sold.

It was suggested that for currently valid non-renewable permits, a middleground soil evaluation rather than a full scale soil evaluation be conducted with a shovel rather than a backhoe, to establish the soil class and texture of A and B horizons.

It was noted that watertable data is no longer being updated on the web page. Russ indicated that he would look into this matter.

It was stated that if soil evaluation would provide features not currently known which are important to the system, that it should be required.

Russ stated that Department staff may be able to query the database for watertables which are not associated with an approved application, but the data are only available from 1992 to the present.

#### Future Meetings

It was decided that the next meeting will be held October 18, from 8:00 AM to 10:00 AM.