

## **SUMMARY OF PHASES I-IV**

*17 February 2009*

The Colorado Onsite Research and Evaluation (CORE) Study was conceived in response to a need for the evaluation of current shortcomings in the regulation and oversight of onsite wastewater treatment systems in Colorado. The study was divided into multiple phases with independent objectives. The different phases of the CORE study were all individually valuable studies, although together the phases create a detailed understanding of the many difficulties facing the Colorado onsite wastewater treatment industry. They investigate potential models and solutions, and present suggested state statute and guideline revisions. As a result of these efforts great advancements have been made towards the goal of regulatory revision. In 2009, the Colorado Department of Health and Environment will hire its first full-time employee to oversee the onsite industry in Colorado. The Colorado Professionals in Onsite Wastewater (CPOW) have dedicated time and resources to developing criteria for new regulations. Not only will the regulatory changes provide enhanced protection of Colorado's water resources, but it will improve the industry standards and better protect homeowners.

### **Phase I**

The Colorado Onsite Research and Evaluation (CORE) Survey was developed as the first component of a four phase evaluative study. The survey or questionnaire was a peer reviewed assessment tool with a wide variety of questions developed through numerous meetings with important onsite stakeholders within the state of Colorado. The survey was published online in November 2005 using QuestionPro<sup>®</sup> online surveying software. Either the environmental health official or the appropriate onsite wastewater program representative from each county in Colorado received an email with a link to their own individually coded survey, or a hard copy version. It was hypothesized that the survey would reveal variability in regulatory statutes, would show a lack of practices and procedures that are conducive to providing the best available technology to areas in need, and demonstrate the need and desire for guidance at the state level.

Most counties were eager to respond. Fifty-five counties out of sixty-four total counties in the state responded creating a response percentage of 86%. Data from all respondents was managed in ArcView 9.0<sup>®</sup> which is a geographic information system (GIS) database. This allows the end user of the information gathered to observe geographic trends throughout the state. It allowed for multi-tiered comparisons to be made, and provided limited statistical analysis. Survey questions were queried alone and with other questions in order to highlight counties that fit the desired criteria.

It was the opinion of the authors of this study, based upon the information collected and the interpretation of those data, that the current procedures and practices in the onsite wastewater industry in Colorado are not conducive to providing the best protection of human and environmental health.

## **Phase II / III**

These combined phases of the CORE study focused on outlining various model programs and guides that are currently being used or developed at the national level, in other states, and at the local level in Colorado. Phases II and III of the study are structured so that the most nationally recognized guides are described first, followed by existing state programs in Colorado, Texas, Iowa, and Florida. Programs such as the U.S. EPA's Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment System, NOWRA Model Code and NIOL program, NEHA Certified Installer Credential, NSF Standards and onsite inspector accreditation program, Consortium of Institutes of Decentralized Wastewater Treatment Systems training and certification are summarized and evaluated.

Potential funding options for a sustainable onsite program in Colorado were evaluated, critical components of a basic local onsite program were suggested, and recommendations for and action plan were outlined. It was the intention of this document to be a further impetus for necessary changes in the Colorado onsite wastewater treatment industry's oversight and regulation, and effective protection of human and environmental health.

## **Phase IV**

Phase IV of the Colorado Onsite Research and Evaluation (CORE) Study uses information gathered during Phases I-III of the CORE study, outside models, and the opinions of a professional stakeholder group to create revisions to Article 10 of the Colorado Revised Statutes, and the Water Quality Control Commission Guidelines for Individual Sewage Disposal Systems (Revised Version-Colorado Watershed Protection Code for Decentralized Wastewater Infrastructure). The revisions are suggestions based upon the opinions of many of the best minds in decentralized wastewater treatment in the United States. The documents produced are working documents meant to be used as the framework for a more current regulatory structure commensurate with watershed scale management of resources.