

distribution system. The Stage 1 DBPR monitoring sites identified as the maximum location are selected according to residence time. Because HAAs can degrade in the distribution system in the absence of sufficient disinfectant residual (Baribeau *et al.* 2000), residence time alone is not an ideal criterion for identifying high HAA5 sites. The Information Collection Rule data show that of the four monitoring locations sampled per system, the one identified as the maximum residence time location was often not the location where the highest DBP levels were found. In fact, over 60 percent of the highest HAA5 LRAAs and 50 percent of the highest TTHM LRAAs were found at sampling locations in the system other than the maximum residence time location (*see* section IV). Thus the method and assumptions used to select the Information Collection Rule monitoring sites, and the Stage 1 DBPR compliance monitoring sites, are not sufficiently reliable to select Stage 2 DBPR compliance monitoring sites that will capture high DBP levels.

This data analysis reveals that a reevaluation of monitoring sites is necessary at many systems to capture sites with high DBP levels. The Advisory Committee recommended sample locations (based on distribution disinfectant type) at widely distributed sites (*see* section V.I. for details on IDSE monitoring requirements). Monitoring at additional sites across the distribution system increases the chance of finding sites with high DBP levels and targets both DBPs that degrade, and DBPs that form, as residence time increases in the distribution system. EPA believes that the required number of monitoring locations plus Stage 1 monitoring results provides an adequate recharacterization of DBP levels throughout the distribution system, at a reasonable cost. With a recharacterization of distribution systems that focuses on both high TTHM and HAA5 occurrence, EPA believes that high occurrence sites will be better represented in this standard monitoring program. Systems will be required to take steps to address high DBP levels at points that might otherwise have gone undetected. EPA believes that the decrease in DBP exposure anticipated to result from the transition from an RAA to an LRAA will be augmented by the IDSE.

The frequency and number of samples required for the standard monitoring program decrease as system size (population served) decreases and depend on source water type. The Advisory Committee believed that the number of samples required for large

and medium surface water systems was not necessary for small surface water systems and ground water systems. The majority of small systems have distribution systems with simpler designs than large systems. DBP occurrence in ground water systems is generally lower and less variable than in surface water systems due to lower and less variable precursor levels and much less temperature variation (*see* section IV).

Committee members recognized that some systems have detailed knowledge of their distribution systems by way of hydraulic modeling and/or ongoing widespread monitoring plans (well beyond that required for compliance monitoring) that would provide equivalent or superior monitoring site selection compared to IDSE monitoring. Therefore, the Advisory Committee recommended that such systems be allowed to determine new monitoring sites using system-specific data such as historical monitoring data.

Systems that certify to their State that all compliance samples taken in the two years prior to the start of the IDSE were ≤ 0.040 mg/L TTHM and ≤ 0.030 mg/L HAA5 are not required to collect additional DBP monitoring data because the Advisory Committee determined that these systems most likely would not have high peak DBP levels. EPA determined that this provision needed to be more specific for three groups of systems: (1) Those performing Stage 1 DBPR reduced monitoring, (2) large ground water systems, and (3) small systems required to conduct an early IDSE. Today's proposal clarifies that these systems may use a 40/30 certification. EPA recognizes that these systems may have less compliance data on which to base their 40/30 certifications. However, EPA believes that the data that will be available are sufficient to make a determination on the most appropriate Stage 2B monitoring locations.

c. *Implementation.* Systems are required to submit an IDSE report so that primacy agencies may review the system's IDSE data collection efforts and the Stage 2B monitoring locations recommended by the system. Systems serving at least 10,000 must submit their IDSE report two years after rule promulgation (which may be prior to primacy for some States). The M-DBP Advisory Committee recommended an implementation schedule that would allow systems sufficient time to make site-specific risk determinations and decisions regarding the simultaneous implementation of the Stage 2 DBPR and LT2ESWTR but not stretch out the compliance time frame too far into the

future. This provision requires that medium and large systems conduct and complete site-specific risk determinations (*i.e.*, the IDSE and LT2ESWTR *Cryptosporidium* monitoring) as soon as possible after rule promulgation. Since small systems cannot begin their microbial monitoring until after the results from the large system microbial monitoring have been analyzed, small systems have a longer compliance time frame.

Systems that submit a 40/30 certification are required to submit that certification as part of the IDSE report and to include a recommended Stage 2B monitoring plan. The monitoring plan is required for these systems because the Stage 2B MCL compliance monitoring sites proposed today have fundamentally different objectives than the Stage 1 DBPR monitoring sites. Additionally, many systems are required to have more Stage 2 compliance monitoring sites than Stage 1 sites because high HAA5 site may be different than high TTHM sites.

3. Request for Comment

EPA requests comments on the IDSE requirement and whether it is a good tool to identify sites representative of high TTHM and high HAA5 levels.

a. *Applicability.* EPA requests comment on requiring large (serving 10,000 or more people) nontransient noncommunity water systems to perform an IDSE. Should NTNCWSs serving fewer than 10,000 people be required to conduct an IDSE? EPA also requests comment upon whether States should be able to waive IDSE requirements for very small systems (serving fewer than 500 people). Are there objective criteria that the State should use in waiving the requirement? Should the State be allowed to grant very small system waivers based on some other criterion other than serving a population <500? For example, should the State be allowed to choose a higher population cutoff? Should the State be allowed to use a non-population criterion such as simplicity of distribution system to grant a very small system waiver? If so, what should this criterion be and how should qualification be demonstrated?

b. *Data collection.* EPA requests comment on the requirements for each of the alternatives for data collection under the proposed IDSE including: the standard monitoring program, the system-specific study, and the 40/30 certification. EPA requests comment on whether systems with less than two years of routine monitoring data should be considered to have sufficient data to utilize the 40/30 certification.