

# OVERVIEW OF RECENTLY FINALIZED LT2ESWTR & STAGE 2 D/DBPR

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The US Environmental Protection Agency has recently promulgated the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 Disinfectants and Disinfection Byproduct Rule (Stage 2 DBPR). These regulations were developed through a stakeholder regulatory negotiation process that started in 1992. The objective of the LT2ESWTR is to provide the public with increased protection from illnesses related to microbial contamination of drinking water. The objective of the

Stage 2 DBPR is to build upon current DBP regulations to provide the public with increased protection against harmful DBPs. The Stage 2 DBPR and LT2ESWTR were published in the Federal Register on January 4, 2006 and January 5, 2006 respectively. The compliance timelines for each rule is shown in the tables below. In addition, several guidance manuals, including the UV Disinfection Guidance Manual, already have or will be published to assist utilities with compliance with these new rules.

## LT2ESWTR Background

- The LT2ESWTR requires increased microbial protection for *Cryptosporidium*.
- The level of increased protection is dependent on source water monitoring results.
- This regulation applies to all utilities using surface water or ground water under the influence of surface water.

## Highlights of LT2ESWTR

- Source water monitoring for *Cryptosporidium* will determine the amount of *Cryptosporidium* removal/inactivation required (see table below).
- The Microbial Toolbox contains 15 alternatives for achieving *Cryptosporidium* credit, including options for source protection, prefiltration, treatment performance, additional filtration, and inactivation (including UV disinfection)
- Utilities with uncovered finished water reservoirs must either cover the storage facility or provide treatment for virus, *Giardia*, and *Cryptosporidium* following the reservoir.

## Stage 2 DBPR Background

- The Stage 2 DBPR maintains the maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids (HAA5) of 80 µg/L and 60 µg/L; however, compliance is based on locational running annual averages (LRAAs) at new locations in the distribution system that are representative of high TTHM and HAA5 concentrations- rather than the old system-wide running annual average.
- Consecutive water systems are also required to comply with all of the requirements of the new rule.

## Highlights of Stage 2 DBPR

- All utilities are required to perform an Initial Distribution System Evaluation (IDSE) to identify new Stage 2 DBPR compliance monitoring locations
- The Stage 2 DBPR identifies granular activated carbon (GAC) and nanofiltration (NF) as Best Available Technology (BAT) to comply with the rule for systems that treat their own water.
- Chloramination and hydraulic flow and storage management to minimize water age are identified as BAT for consecutive water systems.

### LT2ESWTR BIN REQUIREMENTS

Bin Number	Average Source Water <i>Cryptosporidium</i> Concentration	Additional Treatment Requirements for Systems with Conventional Treatment and in Full Compliance with IESWTR
1	0.075 oocysts/L	No action
2	0.075 to <1.0 oocysts/L	1-log treatment
3	1 to <3.0 oocysts/L	2-log treatment (at least 1-log by ozone, chlorine dioxide, UV disinfection, membranes, bag/cartridge filters, or in-bank filtration)
4	3.0 oocysts/L	2.5-log treatment (at least 1-log by ozone, chlorine dioxide, UV disinfection, membranes, bag/cartridge filters, or in-bank filtration)

### LT2ESWTR COMPLIANCE TIMELINE

Requirement	Compliance Dates by System Size		
	100,000	50,000 – 99,999	10,000 – 49,999
Submit Sampling Plan*	1-Jul-06	1-Jan-07	1-Jan-08
Begin source water monitoring	1-Oct-06	1-Apr-07	1-Apr-08
Submit grandfathered data**	1-Dec-06	1-Jun-07	1-Jun-08
Report bin classification	1-Apr-09	1-Oct-09	1-Oct-10
Disinfection profiles/benchmarks	Prior to making changes in disinfection practices		
Comply with additional requirements	1-Apr-12	1-Oct-12	1-Oct-13
Submit Sample Plan for Round 2*	1-Jan-15	1-Jul-15	1-Jul-16
Begin Round 2 monitoring	1-Apr-15	1-Oct-15	1-Oct-16
Report new bin classification	1-Oct-17	1-Apr-18	1-Apr-19
Comply with additional requirements	On a schedule approved by the State		

\* Or submit notice of intent to grandfather data or to provide maximum required treatment in lieu of monitoring.  
 \*\* If applicable.

### STAGE 2 D/DBPR COMPLIANCE TIMELINE

	Compliance Dates by System Size			
	100,000	50,000 – 99,999	10,000 – 49,999	< 10,000
Submit IDSE Plan*	1-Oct-06	1-Apr-07	1-Oct-07	1-Apr-08
Complete IDSE	30-Sep-08	31-Mar-09	30-Sep-09	31-Mar-10
Submit IDSE Report	1-Jan-09	1-Jul-09	1-Jan-10	1-Jul-10
Begin Stage 2 Monitoring	1-Apr-12	1-Oct-12	1-Oct-13	1-Oct-13

\* Consecutive systems follow schedule of largest system in combined distribution system.