

# REGULATORY UPDATE

## Temperature Standards

October 19, 2007

*The Colorado Water Quality Control Commission (WQCC) held a rulemaking hearing on January 8, 2007 to determine how temperature standards would be applied to wastewater entities with Colorado Discharge Permit System (CDPS) discharge permits. Temperature standards are considered to be an important limitation for the protection of fish and other aquatic life.*

### BACKGROUND

Temperature standards have been in place in Colorado since 1978; however, ambiguities and inconsistencies in the rules and regulations led the WQCC to adopt a proposal for revised standards in June 2005. With various industrial and municipal entities adamantly objecting to the proposal, a hearing was postponed until January 8, 2007. During this meeting, the WQCC approved the new temperature criteria for Colorado's surface waters and adopted revisions to the basin-wide temperature standards. The interim standard will go into effect on December 31, 2007. Segment-specific temperature standards will be considered by the WQCC at each basin-wide rulemaking hearing. The goal of the new standard is to protect the aquatic community from lethal and sub-lethal effects (such as reduced metabolism, growth, and reproduction) of water temperature fluctuations.

### TEMPERATURE STANDARD CRITERIA

New temperature table values were developed by the WQCC using laboratory-based studies of individual fish species' tolerance to elevated water temperatures [Table 1 in Regulation No. 31 Basic Standards and Methodologies for Surface Waters<sup>1</sup>]. In addition to the table values, stream temperatures shall maintain a normal pattern of diurnal and seasonal fluctuations in order to stay below the applicable Daily Maximum (DM) and Maximum Weekly Average Temperature (MWAT). Finally, wastewater effluent shall not cause any sudden changes in stream temperature. A sudden change is identified as a 1° C temperature change over one hour or a 12° C temperature change in a 24-hour period.

Basin-wide temperature standards are also revised. The WQCC applied 17°C as an interim chronic standard for small, high elevation streams that are likely to be habitat for brook trout and cutthroat trout. An 18.2°C interim chronic standard was designated for waters that are "Gold Medal Fisheries". For the remainder of the cold water segments, the WQCC maintained the current 20°C standard as an interim chronic standard. The WQCC also maintained the existing 30°C warm water standard as an interim chronic standard.

1. For Table 1, and alternative site-specific standards, visit:  
[http://www.cdphs.state.co.us/regulations/wqcregs/31\\_0207ts.pdf](http://www.cdphs.state.co.us/regulations/wqcregs/31_0207ts.pdf),  
Pages 178 to 186.

### TIMELINE

June 2008	Upper & Lower Colorado and North Platte River Basin Rulemaking Hearings
June 2009	South Platte, Laramie, Republican & Smoky Hill River Basin Rulemaking Hearings
June 2011	Gunnison, Lower Dolores and San Juan, Dolores River Basin Rulemaking Hearings
June 2012	Rio Grande and Arkansas River Basin Rulemaking Hearings

### EXCEPTIONS TO THE STANDARD

Numerical standards were established in Table 1 of the Basic Standards; however, utilities may be granted a variance if they can demonstrate that alternate site-specific standards are appropriate. Site specific standards may include ambient quality-based standards or site-specific criteria-based standards based on historical background sampling data. Additionally, several provisions were established that exclude entities from the standard, including discharge of water from a natural hot spring, discharge to an effluent-dependent stream with no evidence of negative effects on the aquatic life, and other special situations.

### BENEFICIARIES

Aquatic organisms will receive the most direct benefit, in addition to the portion of the economy relying on healthy aquatic communities. For example, the recreational fishing industry in Colorado has an economic impact of over \$820 million per year and almost 11,000 jobs.

### POTENTIAL COSTS

Entities which will bear the cost of the new temperature standards will be entities with CDPS discharge permits, entities requiring a 401 certification, and entities that choose to advocate for site-specific standards. In addition to the costs associated with stream monitoring, some entities will be required to install cooling systems. Cooling systems may have capital costs reaching millions of dollars and require additional O&M costs.

### FOR MORE INFORMATION

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