

**CITY OF BRECKENRIDGE AQUATIC CENTER
EMERGENCY POOL PROCEDURES DURING THUNDER AND LIGHTNING STORMS
AND POOL DISINFECTION TIME AFTER FECAL, VOMIT OR BLOOD CONTAMINANT INCIDENTS**

INTRODUCTION

The National Weather Service states that thunder is the result of lightning occurring. Therefore, the following policy is adopted by the City of Breckenridge as the operator of this swimming pool.

CLEARING THE FACILITY

All patrons and personnel will be cleared from the water and surrounding area immediately at the first sounding of thunder. Since lightning is attracted to water, as well as the tallest object in the area, patrons and personnel will not congregate under trees, umbrellas, or other tall objects. Everyone should leave the pool, go indoors, or stay in their automobiles.

RETURN TO THE FACILITY

According to the National Weather Service, a thunderstorm is considered “as ended” when there has been no sounding of thunder within the last 15 minutes. However, an additional factor to consider is whether or not the sky is dark and threatening. Unless there are evident signs of clearing, the storm will not be considered “as ended”, and the pool will remain closed until this determination is made by the pool manager.

POOL DISINFECTION TIME AFTER A FECAL, VOMIT OR BLOOD CONTAMINATION INCIDENT

Figure 1 *Giardia* Inactivation Time for a Formed-Stool Fecal Incident, Vomit Incident (when vomit is more than regurgitated water) or Blood Incident

Free Chlorine Level (ppm)	Disinfection Time*
1.0	45 minutes
2.0	25 minutes
3.0	19 minutes

* These closure times are based on 99.9% inactivation of *Giardia* by chlorine at pH 7.5 or less and a temperature of 77°F (25°C) or higher. The closure times were derived from the U.S. Environmental Protection Agency (EPA) Disinfection Profiling and Benchmarking Guidance Manual. These closure times do not take into account “dead spots” and other areas of poor pool water mixing.

Figure 2 *Crypto* Inactivation Time for a Diarrheal Fecal Incident

Free Chlorine Level (ppm)	Disinfection Time*†
10	1,530 minutes (25.5 hours)
20	765 minutes (12.75 hours)
40	383 minutes (6.5 hours)

*Shields JM, Hill VR, Arrowood MJ, Beach MJ. Inactivation of *Cryptosporidium parvum* under chlorinated recreational water conditions. J Water Health 2006,6(4):513-20.

†At pH 7.5 or less and a temperature of 77°F (25°C) or higher.

APPROVED BY MINUTE ACTION BY THE CITY COMMISSION OF THE CITY OF BRECKENRIDGE, TEXAS, THIS 6th DAY OF APRIL, 2021

Attest:

Heather Robertson-Caraway, CCCII, TRMC
Interim City Manager / City Secretary

Bob Sims, Mayor