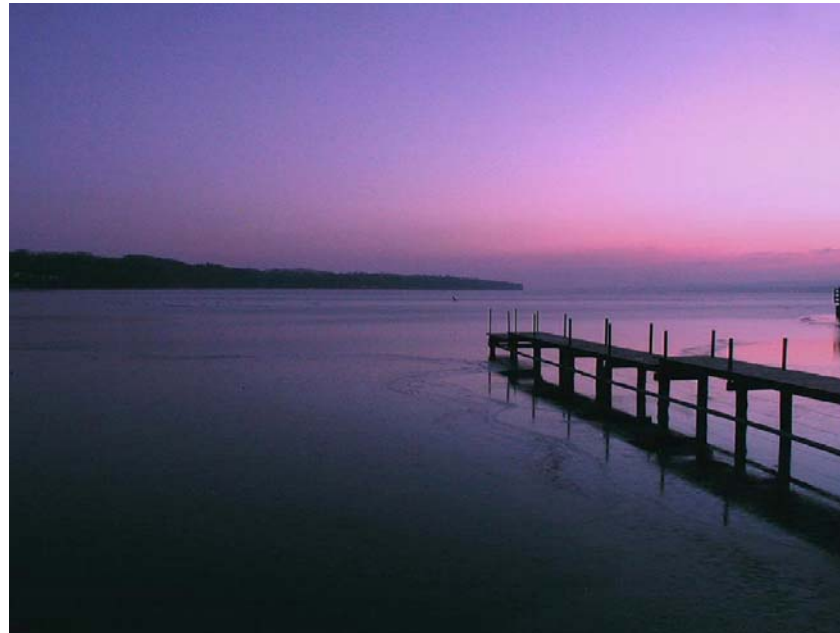


# Arsenic in Emory River



**Is swimming in the Emory River safe?**

- Accidental ingestion of water
- Water absorption through skin



- **Swimmer can ingest as much as 0.05 Liters (1.7 ounces) of water in one hour**

\* 0.05 liters per hour is the recommended incidental water ingestion rate from page 3-2 of Exposure Factors Handbook (EPA, July 2009) and is considered a reasonable maximum exposure (child exposure).



- Highest Concentration of Arsenic in Emory River near Ash Spill (Jan. 09 **Arsenic = 189  $\mu\text{g/L}$** )



## Worst Case on Emory River for Arsenic

- Swimming for 13,500 hours over 30 years approaches unacceptable risk for cancer at the EPA oral slope factor (**Arsenic**) of 1.5 (1/mg/kg – day)
  - 1.2 hours a day for 350 days per year

\* Emory River maximum Arsenic concentration occurred Jan. 2009 next to spill area.

\*\* Based on 10E-4 cancer risk level (assuming 1 hour/day for 45 days/year for 30 years).

# Concentrations on Emory River

**EPA Risk Based Level ( <b>Arsenic</b> )	<b>1,300 µg/L</b>
*Emory River (max.)	189 µg/L
Emory River (avg.)	7 µg/L

\* Emory River maximum Arsenic concentration occurred Jan. 2009 next to spill area.

\*\* Based on 10E-4 cancer risk level (assuming 1 hour/day for 45 days/year for 30 years).

# Other Actions

- Pre-existing “no recreation” advisory area on Emory River
- River closure from ERM 0 to ERM 6
- Phase 3 non-time critical human health and ecological risk assessment to be released this year

