



## *Item 6*

# *San Francisco Bay Enterococcus Water Quality Objectives*



State Water Resources  
Control Board  
April 5, 2011



# Amendments

- New Enterococcus objectives for water contact recreation (REC-1) in marine/estuarine waters
  - New Single Sample Maximum
  - 30-day geometric mean
- Implementation measures



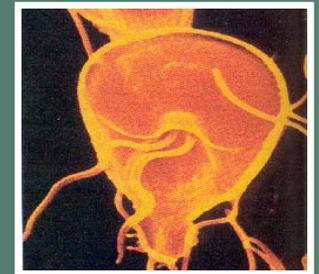
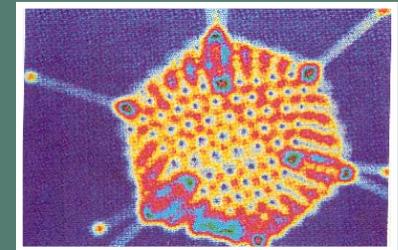
# Comments

- State Board received 4 comment letters
  - 1 supporting
- Staff recommends approval
- Questions?



# Pathogens can cause disease

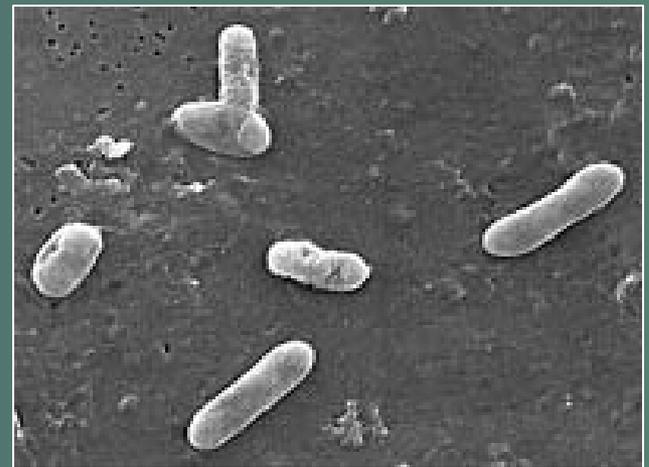
- Microorganisms capable of causing disease...
- ...that enter waterbodies through fecal contamination—human or animal
- Examples include
  - Hepatitis A
  - *E. coli* (some strains)
  - Salmonella
  - Cryptosporidium
  - Giardia



# Why Regulate Based on Pathogen Indicators

Direct monitoring for all potential pathogens is not feasible, so we monitor for several **PATHOGEN INDICATOR BACTERIA**

- Total Coliforms
- Fecal coliforms
- *E. coli*
- **Enterococcus**





# Regulatory Provisions

- new single sample and geometric mean enterococcus water quality objectives
- 30-day geometric mean water quality-based enterococcus effluent limitation in NPDES wastewater permits
- Requires bacteria effluent limits for sanitary waste discharges
- Flexibility to apply either enterococcus or total coliform objectives
- Application of dilution credits



# Non-Regulatory Project Elements

- Weekly wastewater effluent monitoring
- Beach Monitoring
- Foreseeable control measures
  - Urban runoff
  - Non-Point Sources



# Recommendation

- Approve the Amendment to establish new enterococcus objectives
  
- Questions?