

WQ Standards Revisions

- ▶ In conjunction with Implementation Procedures
 - ▶ Coordinated with Advisory Workgroup
 - ▶ Last workgroup sessions: 1/6/09, 4/27/09
 - ▶ Public proposal and comment: ~ Nov 2009
 - ▶ Revisions adopted ~ Apr 2010
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Key Revisions



- ▶ Revised toxic criteria
- ▶ Nutrient criteria
- ▶ Recreational standards
- ▶ Site-specific standards



Human Health Criteria- Recalculation

- ▶ Include child exposure
 - for noncarcinogens
- ▶ Assume more fish eaten
 - 17.5 grams per day



Revised Toxic Criteria

- ▶ 23 new human-health criteria
- ▶ 2 new aquatic-life criteria
- ▶ Numerous revised criteria



Fish Tissue Criteria

- ▶ Methylmercury in fish tissue
 - New EPA guideline
 - First tissue-based criterion
 - TCEQ – 0.7 ppm EPA – 0.3 ppm
 - Consider for PCBs, dioxin



Nutrient Criteria – General Approach

- ▶ Reservoirs → streams → estuaries
- ▶ Main pool of individual reservoirs
- ▶ Chlorophyll a
- ▶ Set on historical conditions
- ▶ Allow for statistical variability
- ▶ Relate chl a to TP



Nutrient Criteria - Assessment

- ▶ Median chl *a*, ≥ 10 dates, ≥ 5 years
- ▶ Main pool station or comparable
- ▶ Options to consider:
 - (a) Chl *a* criteria alone
 - (b) Confirm with TP or Secchi “criteria”



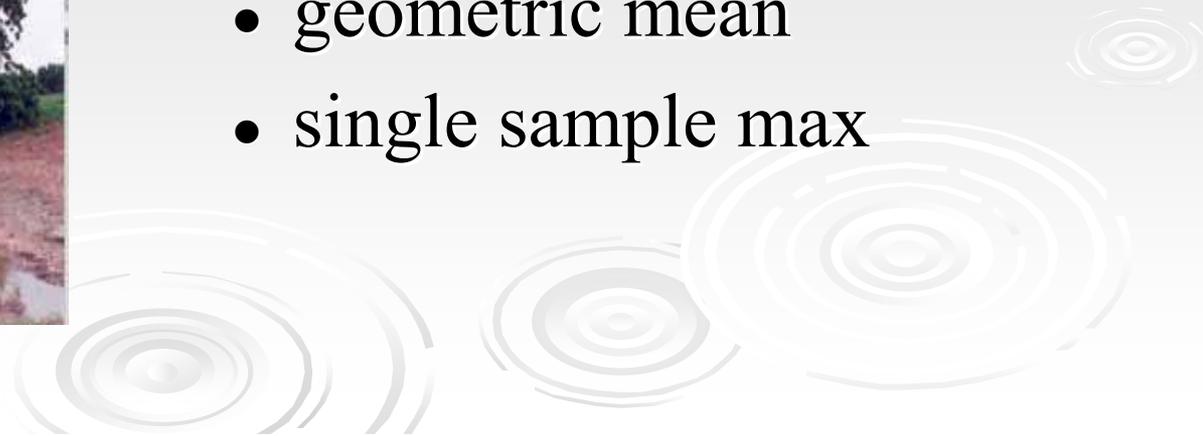
Recreational Use



- ▶ Add subcategories for:
 - primary
 - secondary



- ▶ Criteria changes:
 - geometric mean
 - single sample max



Draft Recreation Criteria

Uses	Geometric Mean Criteria (colonies/100 ml)			
	<i>E. coli</i> (FW)	Enterococci (Salty inland FW)	Enterococci (SW)	Fecal coliform (FW& SW)
Existing Standards:				
Contact recreation	126	--	35	200
Noncontact rec.	605	--	168	2000
Proposed Standards:				
Primary contact	206	54	35	200
Secondary contact 1	630	165	175	1000
Secondary contact 2	1030	270	--	1000
Noncontact rec.	2060	540	350	2000

Implementing Recreation Standards

- ▶ Fecal coliform
 - Phase to *E.coli* or Enterococci in permits
 - Retain in oyster waters
- ▶ Enterococci for high salinity -FW
- ▶ Implementation in UAAs
 - Basic Recreational UAA survey
 - Comprehensive Recreational UAA
- ▶ Assessment
 - Geometric mean only - except beach watch



Site-specific Uses & Criteria



- ▶ Change TDS, etc.- 19 segments
- ▶ Change pH for 7 segments
- ▶ New seagrass use for 22 segments
- ▶ Lower aquatic life use for 2 segments
- ▶ Higher aquatic life use for 3 segments
- ▶ Lower D.O. criteria for 8 segments



Site-specific Uses & Criteria



- ▶ Aquatic-life uses for 59 new stream
- ▶ Toxic criteria for 16 water bodie
- ▶ New appendix listing sole-source drinking water supplies (legislation)



Standards Attainment Proposals

- ▶ Cl, SO₄, TDS – Median of samples
- ▶ D.O. – near-surface instead of mixed layer
- ▶ Limit use of bacteria single sample
 - swimmer notification
 - wastewater permit compliance
- ▶ Chl *a* (confirmed by TP or Secchi?)



Photos Courtesy of:



- ▶ Yahoo.com
- ▶ Google.com
- ▶ O'Henrys Hideaway
- ▶ River Sports Tube
- ▶ USGS
- ▶ Texas Parks & Wildlife
- ▶ University of Texas
- ▶ Florida Dept. of Environmental Protection
- ▶ NABS (benthos.org) Rick Merritt
- ▶ C. Frank Starmer at
http://frank.itlab.us/silverglen_2004/index.html

