

**Iowa Environmental Conference**  
**Chuck Corell**

- 1) Water Quality Standards
  - a) Goals for water quality
  - b) Include designated uses, criteria to protect those uses, antidegradation policy
  - c) Current activities
    - i) Antidegradation
      - (1) Applies to new or expanded discharges covered under a NPDES or 404 wetlands permit
        - (a) Discharges of industrial or municipal wastewater, cooling water
        - (b) Includes discharges of storm water
        - (c) Goal: keep clean waters clean
        - (d) Analogous to Prevention of Significant Deterioration in Clean Air Act
      - (2) Current policy not complete
      - (3) Revised policy and implementation guidance now in rule making process
      - (4) Notice of Intended Action approved by EPC in November 2008
      - (5) Public hearings and public comment period ended in March 2009
      - (6) Legislature considered a bill dealing with antideg but did not pass
      - (7) Making changes based on public comment
      - (8) Notice Of Intended Action was amended in July with revised list of Outstanding Iowa Waters
        - (a) OIWs get more protection from degradation than other waters
        - (b) New list is easier to defend as truly outstanding
        - (c) More public hearings in September (only for OIW list)
      - (9) Final rule to EPC in November
      - (10) EPA review and approval after that
      - (11) More information this afternoon from Adam Schnieders
    - ii) Total Dissolved Solids/Chloride/Sulfate
      - (1) Dropping TDS WQS
        - (a) Uses Whole Effluent Toxicity test results to set TDS limits
          - (i) Not scientifically based
          - (ii) Problems with WET testing consistency and validity of results
        - (b) Better to regulate constituents individually rather than total
      - (2) Chloride
        - (a) Asked EPA for scientifically defensible number
        - (b) EPA ended up doing more toxicity testing
          - (i) Retest sensitive species
          - (ii) Define relationship between chloride toxicity and hardness
            1. As hardness increases, chloride toxicity decreases

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- (c) Iowa Water Pollution Control Association did additional testing
  - (i) Additional species
  - (ii) Expand database of test results
  - (iii) Increase assurance that most sensitive species were identified and tested
- (d) Criterion is less stringent than old EPA standard especially at higher hardness
- (e) Criterion is actually an equation rather than specific value
  - (i) Chronic is about 400 mg/l at default hardness and sulfate
    - 1. Default values are 90<sup>th</sup> percentile values from monitoring data
  - (ii) Increases to about 500 with site specific data more typical of Iowa streams
- (3) Sulfate
  - (a) Dependent on hardness and chloride concentration
    - (i) Less toxic in harder water
    - (ii) Criterion is equation rather than number
  - (b) Equation borrowed from Illinois
    - (i) Only one value, not chronic and acute
    - (ii) About 1500 mg/l at default hardness and chloride concentrations
- (4) NOIA approved by EPC in May
- (5) Public hearings in July
- (6) Final rule to EPC in October
- d) Implementation of “Fishable/Swimmable” WQS
  - i) Adopted by rule in 2006
  - ii) All permanently flowing streams received highest use designation
  - iii) More stringent permit limits for ammonia and bacteria for hundreds of dischargers—mostly cities
  - iv) Law passed in 2006 required DNR to do stream study to determine if “fishable/swimmable” appropriate for each stream. Stream studies called “use attainability analyses” or UAAs
    - (1) About 800 stream segments need one or more UAA
      - (a) Batch #1
        - (i) Through rule making
        - (ii) EPA reviewing since August 2008
      - (b) Batch #2
        - (i) Approval by EPC expected in September
      - (c) Batch #3
        - (i) Start rule making January 2010
  - v) State law says DNR cannot renew or issue permit with new standards until UAA complete
    - (1) Over 500 permits waiting to be renewed (about 30% of all active permits)
    - (2) Permit holder can agree to accept limits based on fishable/swimmable

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- (a) Industries that do not discharge ammonia or bacteria favor this option
- e) Revised metal criteria adopted about a year ago
  - i) Some metals have very low criteria
  - ii) Copper toxicity dependent on hardness
    - (1) Limits generally based on hardness of 100
    - (2) Current standard allows for site specific hardness values
  - iii) Guidance on meeting strict discharge limits
    - (1) Working with Iowa Water Pollution Control Association
    - (2) Discuss various options for adjusting permit limits
      - (a) Data on local water chemistry
      - (b) Mixing zone studies
- f) Future
  - i) Nutrients
    - (1) EPA letter to Florida
      - (a) Narrative nutrient standards not adequate to protect streams, lakes and estuaries
      - (b) One year to adopt numeric nutrient standards for streams and lakes
      - (c) Two years for estuaries
      - (d) EPA will promulgate nutrient standards if Florida doesn't
    - (2) EPA and state regulators convened nutrient committee
      - (a) Looking at more holistic approach
        - (i) Point sources
        - (ii) Nonpoint sources
    - (3) EPA Inspector General report: EPA doing poor job of getting states to adopt numeric standards
    - (4) Iowa
      - (a) Narrative standards on the books for many years
        - (i) Free from nuisance aquatic life, for example
      - (b) Drafting numeric criteria to protect recreational uses in lakes
        - (i) Clarity (one meter Secchi Disk depth)
        - (ii) Chlorophyll a (25 mg/l)
        - (iii) Notice of Intended Action to EPC in October or November
        - (iv) Do not include standards for nitrogen or phosphorus
      - (c) Nutrient standards for streams
        - (i) 3 or 4 years away
        - (ii) Sooner if EPA gets sued
  - ii) Pathogens
    - (1) Have been including geometric mean and single sample maximum for E. coli in permit limits

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- (2) EPA clarification in 2004
  - (a) Sample max for closing beaches not permit limit
- (3) Quick fix to rules
  - (a) Use geometric mean only for continuous discharges
- (4) EPA planning more epidemiology studies
- (5) New pathogen standard in 2012
- iii) Ammonia criteria
  - (1) EPA currently evaluating ammonia criteria
    - (a) Looking closely at mussels
    - (b) Expect new criteria to be much lower
    - (c) Will be released soon
- 2) Storm Water
  - a) National Research Council Report
    - i) EPA Storm water program inadequate to protect water quality
    - ii) Must regulate flow as in post-construction runoff controls
      - (1) Pervious pavement
      - (2) Rain gardens
      - (3) Retention ponds
    - iii) EPA studying report & considering program changes
- 3) NPDES permits
  - a) About 1600 active permits
  - b) 48% expired
  - c) Over 500 waiting for UAA
  - d) Permits for new facilities get priority
- 4) DNR budget
  - a) SFY 2010
    - i) Budget approved
    - ii) No layoffs or furloughs (have unfunded vacancies)
    - iii) Expect 5% cut mid-year
    - iv) Revenue estimating conference expected in October
  - b) SFY 2011: expecting additional 10-15% cut