Nutrient Subgroup

Participants:

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Topics of Discussion:

- **Changes to current Stormwater Management rules' nutrient standard – "maximum extent feasible"**
- **Review of the sources of nutrients in stormwater runoff**
- **Review and investigate the effectiveness of BMPs in nutrient removal**
- **Measures to improve nutrient management**

Discussion and Recommendation:

Changes to current nutrient standard – Maximum Extent Feasible to a Numerical Standard

- **Load Limitation/Reduction or Concentration Standards**
  - Reduce *Nutrient Load/concentration* leaving the development site.
- **Percent Removal Rate Standards for BMP**s
  - Incorporate BMPs to achieve a targeted nutrient removal rate from the development site.
- **Materials reviewed**
  - Regulations from other states were reviewed on how they incorporated nutrient standards in stormwater management.
- **Recommendations**
  - Change to a numerical standard:
    1. Load/Concentration Standard
    2. Percent Removal Rate Standard
    3. Hybrid: Load/Concentration Standard in watersheds that have TMDL identified nutrients and Percent Removal Rate Standard in non-TMDL watersheds

Discussion and Recommendation:

Review of the sources of nutrients in stormwater runoff

- **Source of nutrients in the runoff from roofs, roads, lawns and other developed lands**
  - The significance of different sources contributing to nutrient loads in the runoff
    - To develop measures and best management practices to control nutrients from the source
  - **Dissolved and undissolved phosphorus and nitrogen loads comparison between runoff from roofs, roads, lawns and other developed lands.**
    - Whether the nutrient standards shall be based on total nitrogen/total phosphorus or dissolved forms of nutrients (nitrate, nitrite, NH4-N, organic-p, ortho-p)
- **Options:**
  - Total P and N
  - Target forms of nutrients

Discussion and Recommendation:

Review and Investigate the effectiveness of BMPs in nutrient removal

- **Review of the BMP removal rate of nutrients**
  - Removal rates of a singe type BMP varies in wide ranges
    - Various ages, designs, condition of maintenance, source conditions may cause the variances in removal rates
  - Removal rates of BMPs rely on the design and maintenance

- **Recommendations**
  - **Department to re-evaluate the effectiveness of BMPs**
    - Stakeholder suggestions on how to best achieve this?

Measures to improve nutrient management – Considerations for BMP Manual and MS4 Permits

- Sources of nutrient loads in stormwater
  - Management strategies to reduce source of nutrients
    - Fertilizer application oversight and education
    - Better site design to limit nutrient sources
    - Improved leaf and pet waste ordinances
- Sources of nutrient load from BMP
    - New and improved bio-retention media specifications
    - Plant selection to uptake nutrients
    - Debris removal and organic management
    - Improved BMP maintenance