Planning and Land Development

Section 5.E. of 2nd Draft Permit

Hydrologic Control Issues

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Intertie of Hydrologic Controls

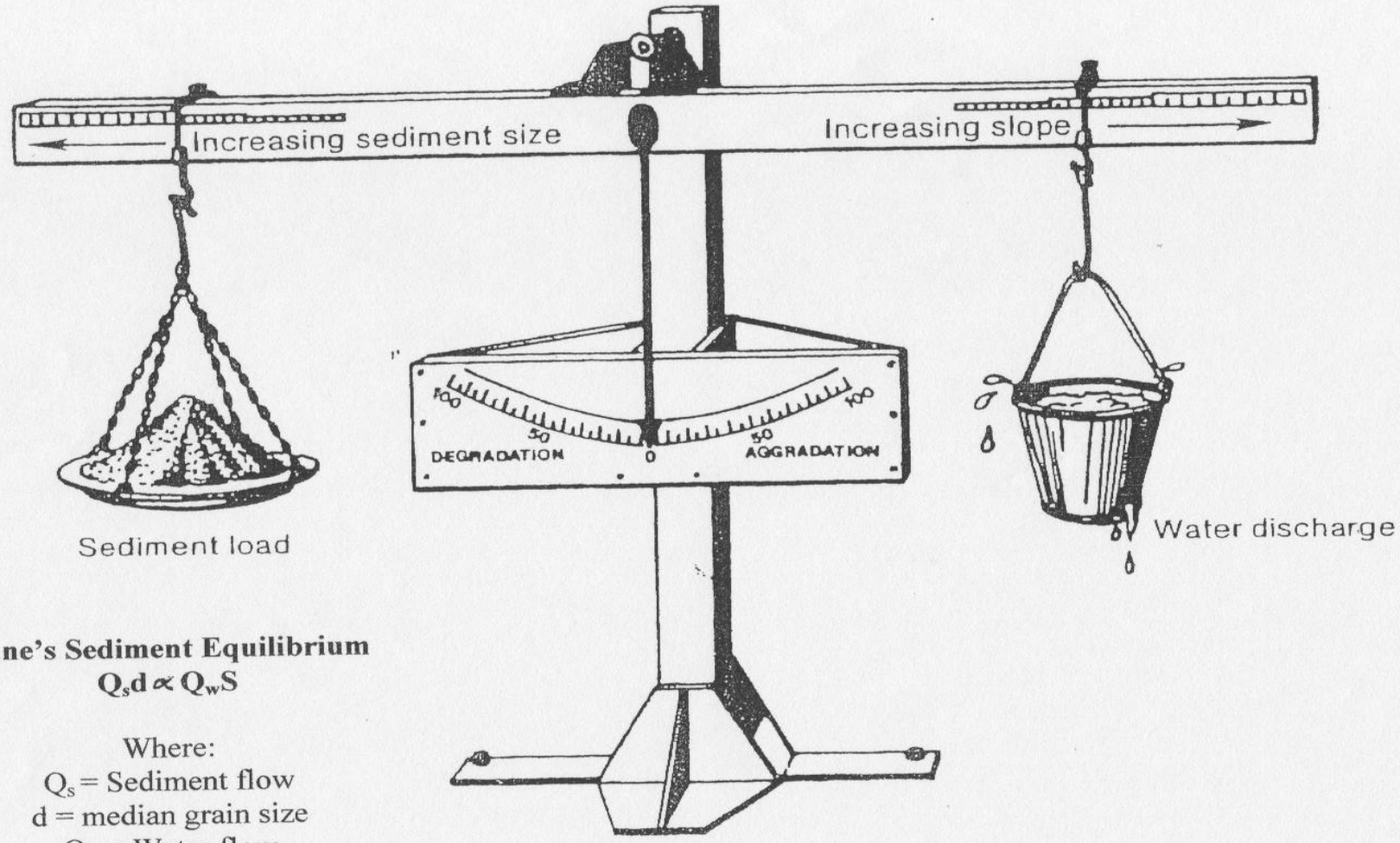
- NPDES Permit – first "flush"
  - LID Controls
  - WQ Treatment controls
  - Hydromodification controls
- Local Agency Permits – for larger floods
  - Flood Control Measures affect runoff, sediment, and water quality.
- Use of any - affects the others

Hydro? or Erosion? modification

- Hydro (water) modification already being addressed by detention strategy
- Now looking at erosion modification, geomorphology, sediment balance
  - A more difficult science than just water
  - SCCWRP has 3-5 year study, Ventura County member of TAC

Southern California Coastal Water Research Project

Sediment Balance



Lane's Sediment Equilibrium

$$Q_s d \propto Q_w S$$

Where:

Q_s = Sediment flow

d = median grain size

Q_w = Water flow

S = slope

Source: Howard Chang, 2004. Sediment Study for Channel Improvements of Calleguas Creek, Conejo Creek, and Revlon Slough. Prepared for Ventura County Watershed Protection District.

Technical Guidance Manual for Stormwater Quality Control Measures

- Include BMPs for stormwater quality treatment
- Includes LID principles
- Includes Hydromodification effects – more stringent than Interim Criteria of Draft Permit

Current Needs for Hydrologic Controls

- County policy for agriculture and open space means watershed level or IRWMP solutions will be needed, and include non-urban runoff.
- Redevelopment runoff not same as new development. Behavior of runoff from infill more related to nearby land use.
- Develop controls that allow sediment transport and provide WQ treatment

Recommendations

Request the Regional Board to :

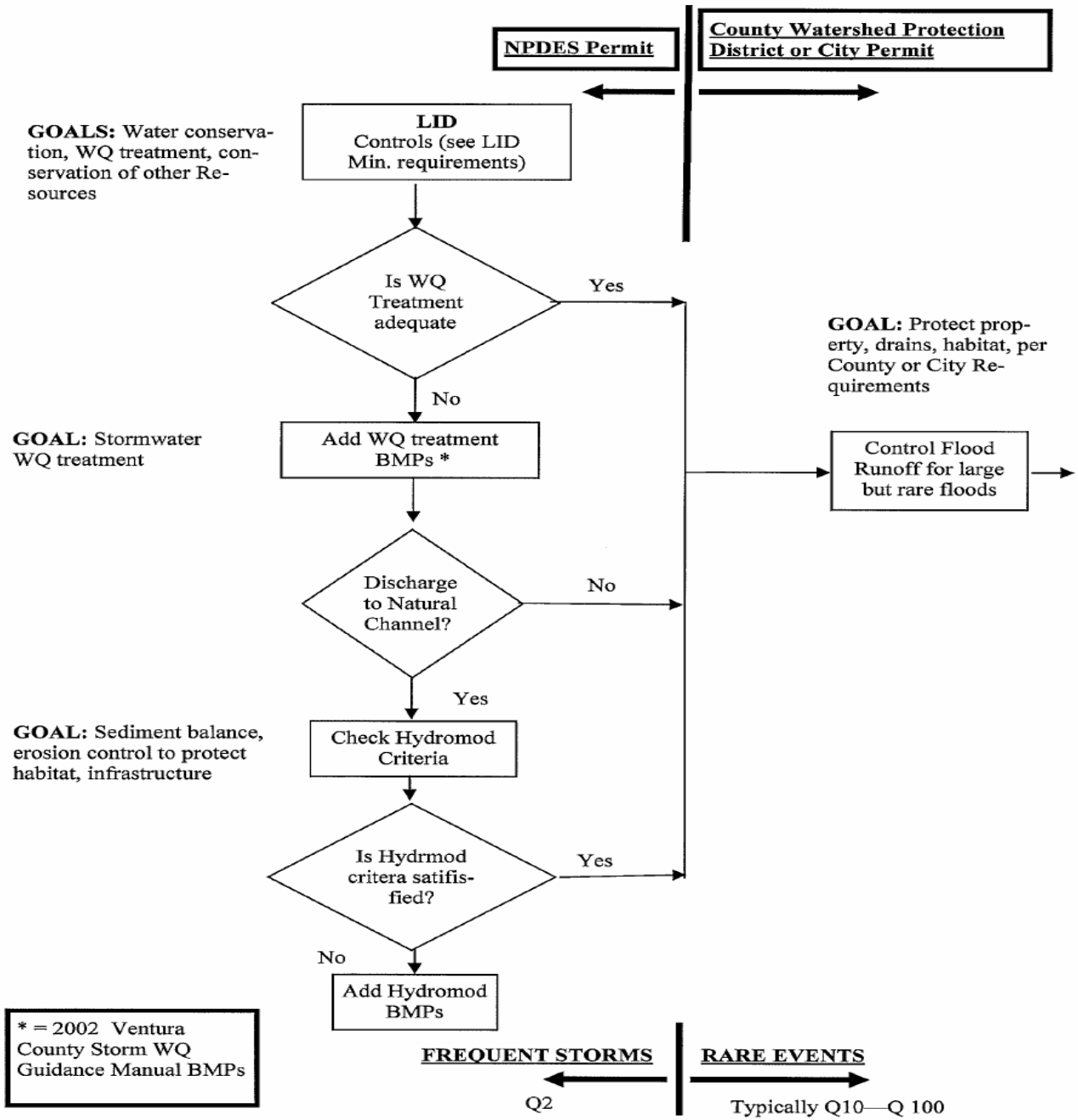
1. Incorporate the interrelationship of hydrologic controls to avoid duplication of regulations.
2. Add amendments for LID and Redevelopment, then use County Stormwater Quality Manual for Interim Hydrologic Controls until SCCWRP Study is completed.

Possible Handouts

Erosion-Modification

- Sediment Hungry Water
  - Current WQ treatment and LID controls create this
  - Causes beach and habitat degradation
  - Shows need to recognize sediment feeding projects (e.g. take debris basin sediment to beach, remove Matilija Dam)
- An SMC Study issue is how to allow sediment transport and provide WQ treatment

Ventura County
HYDROLOGIC CONTROLS



Effect of Hydrologic Controls on Typical Stormwater Hydrograph