



MSAR Bacteria TMDL
Task Force Meeting
May 19, 2020

Potential Next Steps/Actions

Quick Overview For Today's Discussion

- Potential TMDL Related Revisions
- Potential Special Study regarding releases from bottom sediments
- Draft Schedule
- Timing Issues for Consideration
- Request for Task Force Direction

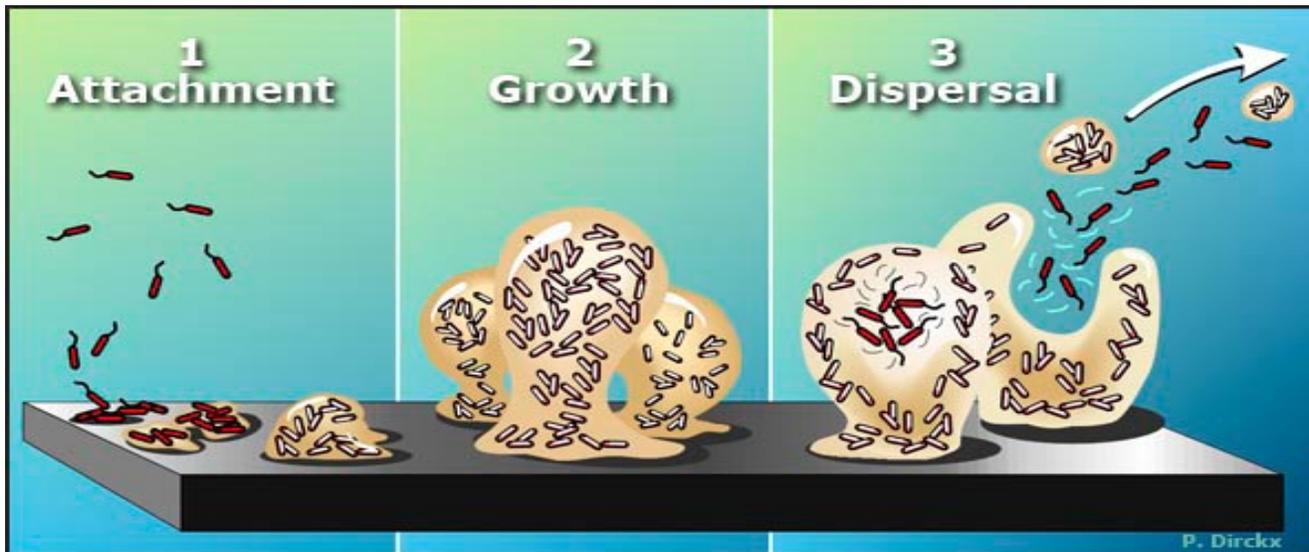


Potential TMDL Related Revisions

- Restructure TMDL
 - Existing
 - Dry Summer Conditions (April 1 – October 31)
 - Wet Winter Conditions (November 1 – March 31)
 - Potential New Conditions
 - Define dry/wet conditions
 - Base compliance on condition rather than season
- Update/Evaluate WLAs & LAs
- Add in new/additional responsible parties
- Adjust compliance schedules
- Update TMDL Implementation Plan

Special Study

- Synoptic study - 77 percent of *E. coli* load in Santa Ana River comes from non-human sources upstream of MS4 inflows
- Recommended study to evaluate potential role of releases colonies in bottom sediment



Free-floating bacteria attach to surface

Bacteria colonize surface, produce complex three-dimensional structure that develops within hours

Bacteria can detach to propagate downstream



Collect site-specific data to assess the extent to which naturalized *E. coli* exists in the bottom sediments or biofilms of the TMDL waters

Sediment samples over different seasons

Multiple sites within focus reaches

Coupled with overlying water samples



Quantification of key factors influencing colony formation, growth, and releases to overlying water (e.g., nutrients, dissolved organic carbon, and temperature, flowrate)

Releases occurring under turbulent (wet weather or large minimum flows) and quiescent (typical dry weather) flow conditions

Special Study

Special Study

General Bacteroidetes analysis provides a measure of fresh fecal biomass in water samples from controllable (human, dog) and uncontrollable (e.g. bird, pig)

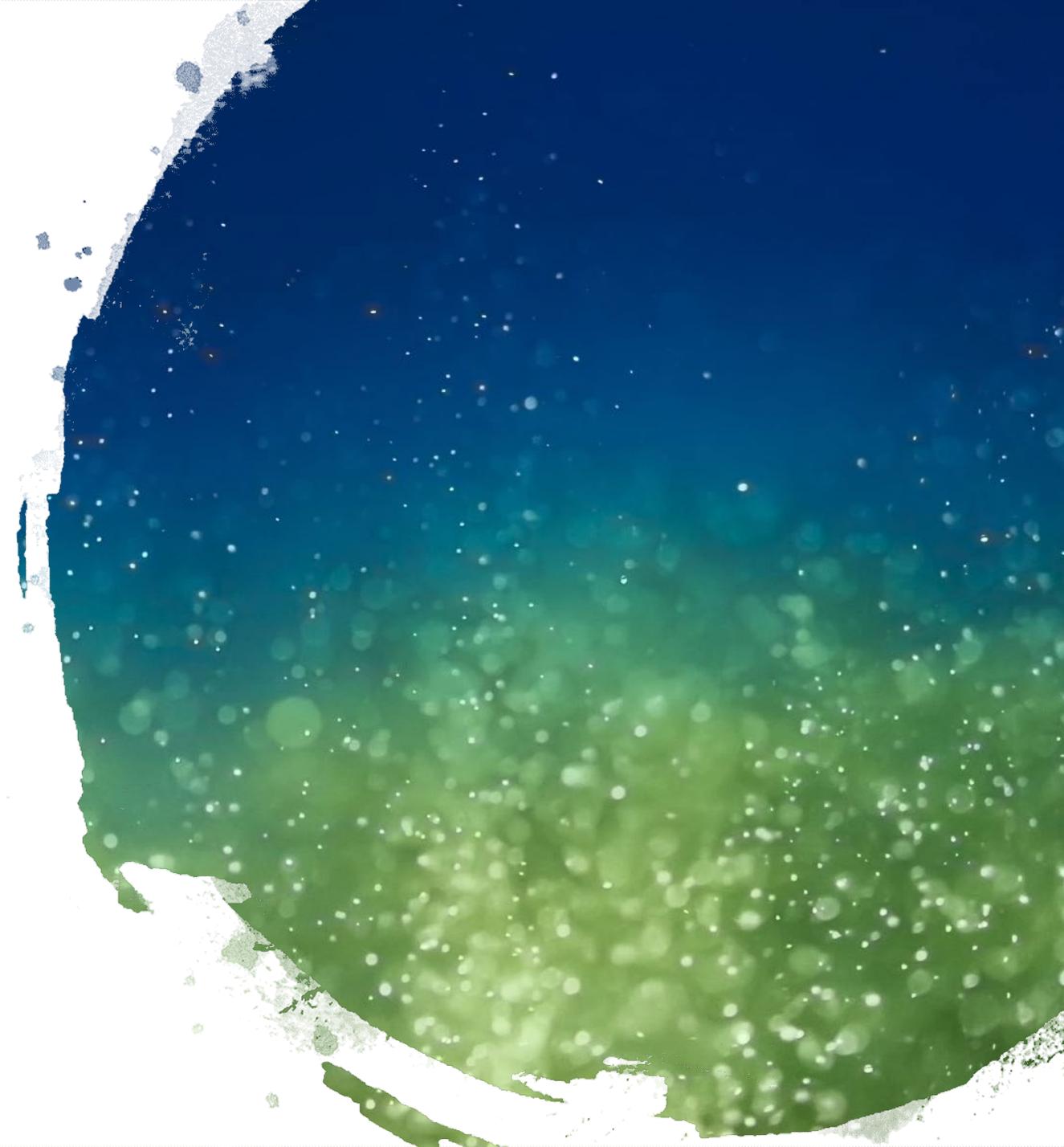
Absence of Bacteroidetes, nearly all of the *E. coli* loading can be deduced as originating from naturalized colonies (an uncontrollable source in Basin Plan)

Timing Issues for Consideration

Santa Ana
Water Board's
Basin Plan
Amendments

Municipal
Stormwater
Permits

Santa Ana
Water Board
TMDL Priorities



Request for Task Force Direction



PREPARATION OF RFP FOR SPECIAL
STUDY



PREPARATION OF RFP FOR PREPARATION
OF TECHNICAL REPORT TO SUPPORT
REVISION OF MSAR TMDL