

RESEARCH PLANNING PROCESS

- **SCCWRP has nine research themes**
 - Those appear in the Executive Summary Research Plan you review each year
 - CTAG helps us select those themes
- **For each theme, we develop a research plan collaboratively with CTAG**
 - They are developed during full-day intersessional CTAG meetings
 - We refer to the outcome as the 20-pagers
 - Nominally, we update those with CTAG every three years
- **We have several new Commissioners who want a deeper understanding of that process**
 - I will provide that using the recent Microbiology intersessional as an example

INTERSESSIONAL RESEARCH PLANNING AGENDA

- **Review SCCWRP accomplishments since last planning meeting**
 - Was SCCWRP successful in addressing CTAG priorities?
 - If not, why not?
- **Define the universe of possibilities**
 - Collaboratively fill the white board with candidate projects for the next 5 years
- **SCCWRP identifies its priorities among that universe of projects**
- **Each member agency vocalizes their priorities**
 - Tries to convince the rest of CTAG to vote for those priorities
- **CTAG's votes on its priorities**
 - Each member agency gets five votes

CTAG'S 2019 PRIORITIES

- **How much HF183 is too much?**
 - Managers are using HF183 human fecal marker to prioritize sites for remediation
 - CTAG wanted a risk-based threshold to help with that
- **Assess suitability of the SHEL microbial standard**
 - Most beaches fail the shellfish waters standard (14 fecal coliform/100ml)
 - CTAG asked us to assess its scientific foundation
- **Bacterial community sequencing and non-targeted chemical analysis to differentiate among human fecal sources**
 - The management question is evolving from “is it human?” to “what is the human source?”

HOW WELL DID WE MEET THOSE PRIORITIES?

- **How much HF183 is too much?**
 - Conducted Quantitative Microbial Risk Assessment and developed a HF183 health risk threshold
 - We even did a regional study that assessed how often that threshold was exceeded
- **Assess suitability of the SHEL microbial standard**
 - Examined relationship between water column fecal coliform and pathogens in shellfish tissue
 - Found no relationship, which is providing an alternative path for the Newport Bay TMDL
- **Bacterial community sequencing and non-targeted chemical analysis to differentiate among human fecal sources**
 - We are at the forefront of transitioning the field from using individual gene markers to using whole-community genetic sequencing for source identification
 - That technique became an important tool in the San Diego sources study

ADDITIONAL ACCOMPLISHMENTS

- **SCCWRP and its member agencies were at the forefront of developing wastewater epidemiology**
 - SCCWRP developed sample processing and analysis methods to detect COVID in wastewater
 - Trained California Department of Public Health Laboratory
- **San Diego County is the first ever to use ddPCR for beach monitoring**
 - SCCWRP trained their lab and assisted with a study to gain EPA approval
- **Conducted study that found sewage transport across US/Mexico border**
 - Helped with US-Mexican cooperation to update Mexican treatment infrastructure
- **Assessed coliphage as a water quality indicator in Southern California**
 - Found coliphage to be a more specific indicator of sewage than Enterococcus
 - USEPA is using study as a consideration in whether to adopt coliphage as an alternative indicator

SUMMARY OF 2024 PLANNING

- **CTAG identified 44 projects that are appropriate to SCCWRP**
 - 15 received votes for prioritization
 - 3 projects rose above others as CTAG priorities
- **Transitioning molecular methods from DNA to RNA**
 - CTAG prioritized it as a means to address the live-dead concern
 - RNA typically degrades faster in the environment
- **Sequencing as a source identification tool**
 - New long-read techniques provide even more opportunity for achieving source specificity
- **Exfiltration**
 - CTAG asked us to focus on confirmatory studies

NEXT STEPS

- **CTAG will hear a verbal outcome at their February meeting**
 - A chance for additional discussion
 - Particularly for anyone who missed the intersessional or sent surrogates
- **CTAG will consider a written document at their May meeting**
- **Commission will consider the Executive Summary research plan in June**
 - The thematic specific research plans (the 20-pagers) developed that year will be included as part of your Commission packet