Healthy Watersheds Partnership Technical Advisory Committee

August 3, 2021 Meeting

1:00 pm – 2:30 pm

Meeting Notes

[Link to Meeting Slides]

Attendees

Healthy Watersheds Partnership (HWP) Team in attendance

- Ali Dunn, HWP Co-Chair
- Corey Clatterbuck, HWP Technical Lead
- Anna Holder, HWP Technical Support

Technical Advisory Committee (TAC) Members in attendance

- Ted Grantham, University of California, Berkeley (UCB)
- Lance Le, North Coast Regional Water Quality Control Board
- Loretta Moreno, California Natural Resources Agency (CNRA)
- Pete Ode, California Department of Fish and Wildlife (CDFW)
- Andy Rehn, CDFW
- Eric Stein, Southern California Coastal Water Research Project (SCCWRP)
- Josh Westfall, Los Angeles County Sanitation District (LACSD)

TAC members not in attendance

- Jeanette Howard, The Nature Conservancy (TNC)
- Raphael Mazor, SCCWRP
- Kevin O'Connor, Moss Landing Marine Laboratories (MLML)
- Molly Oshun, UCB

2013 Assessment Refresher

- California integrated assessment of watershed health (2013)
- Purpose: characterize relative watershed health and identify healthy watersheds across California by conducting three assessments of watershed health:
    - Watershed Condition
    - Stream Health
    - Watershed Vulnerability

- General Process: The group selected indicators under each of these assessments that would best characterize each assessment, indicators were then derived from available datasets, some data modeling was required mostly to fill data gaps of indicators, finally, indicators were ranked, normalized, and put into indices that had comparable scales
- Assessment products were static maps provided in the final report
- Corey has completed a review of variables, datasets, indicators, and indices for each of the three assessments (see table below).

	Watershed condition	**Stream health**	**Watershed vulnerability**
Total no. variables	14	126 considered 107 used in final models	18
No. datasets	8 separate datasets 3 if NHD+V2 counts as a single dataset	30 separate datasets 4 if NHD+V2, StreamCat each count as single dataset	9 (CalAdapt as 1 dataset)
No. indicators for indices	6	6	11
No. indices	3	4	5

Goals of Assessment Update & Associated Dashboard

- Primary goal of the update and dashboard are to:
    - Update indices with data collected since the original assessment or add/replace old datasets with different and more appropriate datasets
    - Make the assessment open, accessible, transparent, and publicly facing so that anyone can use the resource to inform their decision making (i.e. aligned with principles in AB 1755: Open and Transparent Water Data Act (Bill Text) and the Water Boards Open Data Resolution.
    - Align data used, methodology, and analysis workflow with other similar assessment efforts (e.g., California FORESITE, CNRA Data Hub)
        - **Action item:** Corey et al to follow-up with Loretta re: leveraging efforts/resources (HWP/CNRA Data Hub)
- TAC discussed vision/goals they would like to see incorporated into the dashboard
    - See Slide 4 for a screenshot of the brainstormed ideas
- Discussion of datasets to use in update:
    - National Land Cover Database (NLCD) 2019 Data Release
    - StreamCat Dataset

    - CSCI/ASCI (will be available in CEDEN soon)
    - CalAdapt for climate change information
    - Note that even with updated data, permutation/imputation may still be required to fill in data gaps in certain areas of the state.
    - **Need support from TAC members** who are able to provide fine-grain data insights and recommendations.
        - **Action Item:** Corey to follow-up and coordinate with Eric and Ted, who volunteered to provide support.
    - **Action item:** Loretta to connect Corey et al. the USFS ACCEL team who are leading an effort that relates to ours; they are preparing data sets for a statewide application tied to some of the HWP assessment categories.
- Limited resources require prioritizing which of the three assessments we should pursue and complete at this time. TAC discussed and prioritized three assessments:
    - Watershed condition and watershed vulnerability would not take as much resources to replicate/update. Of the two, watershed vulnerability might be more useful/interesting but would require more effort than condition.
    - **TAC Decision** on prioritization of assessments:
        - 1. Watershed Condition
        - 2. Watershed Vulnerability
        - 3. Stream Health
    - **Action Item:** Corey to begin working on developing update for watershed condition

Biological Assessment Discussion

- Lots of new biodiversity data has been collected since the original assessment data was pulled around 2010. Want to incorporate those new data into the HWP assessment.

	Community Diversity	Composition	Abundance	Trophic Structure	Condition	Sensitive Spp.
CSCI	X	X		X	X	
ASCI	X			X?		
FORESITE	?	?	?	?	X	?
ACE	X	X?	X			X
TNC DB	X	X?	X			X

- There is some overlap between the CDFW ACE and a number of other biodiversity datasets (TNC, SWAMP, PISCES, Aquarius, etc.)
    - **Action Item:** Someone (TBD) review what is included in ACE to get a better understanding of overlaps and benefit of using ACE or other individual datasets

- Potential to partner with FORESITE team to look at the interaction between aquatic and terrestrial biodiversity/health indicators

Potential Future Work Ideas

- Time series analyses
- We have yet to tap into community/citizen monitoring datasets, something to look into down the road.
- More complex spatial analyses to complement/include in index calculations
    - examples: spatial autocorrelation, landscape connectivity metrics, patchiness
    - e.g., “how is the health of a certain reach affecting downstream watershed health?”; add condition upstream as a predictor
- Overlay EJ/Racial Equity datasets with assessment results
- Increase functionality to include more user interactivity and customization of analyses/assessment

Next Steps

- Anna: compile TAC meeting notes, share with TAC
- Ali: set up next TAC meetings
- All: to make progress on action items (see below)

Action Items Summary

- Corey et al to follow-up with Loretta re: leveraging efforts/resources (HWP/CNRA Data Hub)
- Corey to follow-up and coordinate with Eric and Ted, who volunteered to provide support.
- Loretta to connect Corey et al. the USFS ACCEL team who are leading an effort that relates to ours; they are preparing data sets for a statewide application tied to some of the HWP assessment categories.
- Corey to begin working on developing update for watershed condition
- Someone (TBD) review what is included in ACE to get a better understanding of overlaps and benefit of using ACE or other individual datasets