San Gabriel River Regional Monitoring Program
Technical Stakeholder Group Meeting
November 15th, 2017

Attendees:
Phil Markle, LACSD
Naoko Munakata, LACSD
Raphael Mazor, SCCWRP
Marcus Beck, SGRRMP
Peter Ode, CDFW
Steven Webb, LARWQCB
Leslie Levy, LACFCD
Stuart Goong, OCPW
Rita Abellar, OCPW
Mark Baker, Physis
Scott Johnson, Aquatic Bioassay
Karin Wisenbaker, Aquatic Bioassay

1. Action Items from August 2017 Meeting
    1. Special study scope of work is complete
    2. 2017 swim site bacteria results have been emailed to the TSG
    3. SGRRMP website demonstration to the LARWQCB is pending
2. Program Update
    1. 2017 Summer Survey Data Status
        i. Chemistry - analysis is complete and QAQC of data has begun
        ii. Bioassessment - data entry is complete
        iii. CRAM – data submission is complete
        iv. BMI – taxonomic analysis has begun
        v. Algae – taxonomic analysis has begun
        vi. Infauna – sorting has begun
        vii. Toxicity – analysis is complete and QAQC of data has begun
    2. Website Update
        i. Physical Habitat data is being added to the SGRRMP data portal
    3. CEDEN Project Status Update
        i. The SGRRMP project is under review by CEDEN
            1. Once the project has been accepted by CEDEN, data uploads may begin

3. Index of Physical Habitat Integrity (IPI) Development
    1. A state-wide index is currently being developed and validated by CDFW and SCCWRP
        i. The goal of this index is to synthesize individual PHAB metrics into an overall measure of physical habitat condition
        ii. The development of this approach was similar to the approach used for the CSCI and ASCI
            1. Predictor variables are similar to those used for CSCI and ASCI (GIS based), however field based metrics may be used as well (e.g. slope, bankfull width)
        iii. Physical habitat metrics are currently being evaluated and the index performance is being tested. The IPI will be included the evaluation of the Landscape Model Case Study.
4. SGRRMP Landscape Modeling Special Study
    1. SCCWRP has developed a provisional landscape model that predicts a range of likely biological condition scores (CSCI), has been developed using predictors from the National StreamCat database (NHD-Plus)
    2. The SGRRMP is evaluating the landscape model in the San Gabriel watershed and this consists of three elements:
        i. Compare model predictions with observed CSCI scores in the San Gabriel watershed
        ii. Assess the value of additional data in determining constraints on biological integrity
        iii. Prioritize streams within the watershed for different management options
    3. Model predictions in the San Gabriel River (SGR)
        i. The model predicted ranges of CSCI scores at sites/reaches in the watershed
            1. SCCWRP is testing the “full” model which is based on 117 StreamCat variables. However, it is likely the State will adopt a simpler model, whose performance is similar to the “full” model
                a. The Landscape Model will be updated using the simpler model and the SGRRMP may provide insight regarding the choice of methods
                b. Where sites and reaches are missing model data (StreamCat), their condition can be calculated, but this would only be reasonable using the simpler model
        ii. Sites were classified based on the predicted range of CSCI scores and then compared to observed scores
            1. The range of predicted CSCI scores were grouped into three categories:
                a. Likely constrained – CSCI < 0.79
                b. Likely high quality – CSCI > 0.79, and,
                c. Intermediate – crosses 0.79
            2. Each sites’ observed performance was evaluated against the modelled range of thresholds as overperforming, expected, underperforming, and NA
            3. Classification of SGRRMP sites

a. Does the likely range of scores extend above or below the threshold and how does this compare to observed data?
b. Sites could be classified by
    i. Observed score vs. the predicted range of scores
    ii. Site type (see summary table on page 65 of Landscape Model pdf)
    iii. The type of management priorities that may be associated with the site
        1. Monitoring, protection, intervention
    iv. Conservation of 'good' sites (not necessarily in terms of regulatory actions)
        1. Anti-degradation

4. Sites were summarized and prioritized in a table (see summary table on page 65 of SGRRMP TSG Presentations pdf)
    a. The SGRRMP TSG should evaluate the summary table and the priority categories (Monitor, Protect, Fix)
        i. Should priorities be changed and/or added?
        ii. How would the SGRRMP TSG fill out this table?
5. Undetermined sites (no model data) – How do we classify these sites?
    a. Calculating 117 model metrics would be very difficult, simpler model using fewer metrics would be easier to calculate
    b. Can we determine classification using available data?
        i. Pictures, PHAB, CRAM, Channel Engineering

iii. Spatial patterns in the watershed

1. Likely scores
    a. Mountains - high (passing); Basin - low (failing); canals, pipelines and isolated tributaries - unknown
    b. Reach class probability (10% likelihood of 0.79 target vs. 25%)
        i. Toggling between probability can modify some classifications (see page 29 and 30 of the Landscape Model pdf)
        ii. What are the pros and cons for each?
    c. Reach class targets (Likely high quality >0.92, likely constrained <0.62)
        i. Is this too conservative?
2. Model overlaid with observed CSCI
    a. Scores classified by relative performance and compared to 10% likelihood of 0.79 target vs. 25%

i. What are the pros and cons of each?

b. Monitoring, protection and intervention priorities

i. Do these match SGRRMP plans?

4. Next Steps

i. Provide SGRRMP TSG with mapping tool to explore sites that are of interest to each agency and incorporate:

1. CSCI scores, water quality, and physical habitat data
2. Will allow the model to be ground-truthed based on data and professional judgement

Action Items

1. Review Site Summary and High Priorities table (see summary table on page 65 of SGRRMP TSG Presentations pdf). How would you fill this out? (SGRRMP TSG)
    1. Would you add to or change priorities (i.e. Monitor?, Protect?, Fix?)
    2. Would you make any changes to "Rel score"?
    3. Likely Constrained Class – "As Expected" priorities are all blank, does this make sense. How should we prioritize these types of streams?
2. Reach classification (SGRRMP TSG)
    1. Compare 10% vs 25 % likelihood of 0.79 target
    2. Compare >0.92 (likely high quality) and <0.63 targets (likely constrained)
    3. Does this depend on your question/priority?
3. Review spatial patterns and monitoring priorities (SGRRMP TSG)
4. Provide landscape model data tool to TSG by January 2nd (Rafi/Marcus)
5. Produce new graphic – CSCI score gradient over the model (Rafi)
6. Create breakout group (Scott/Rafi)
    1. Ground-truth model
    2. Layout flow chart
7. Update Reach Class Names (Rafi/Pete)
    1. e.g. Change undetermined to unknown; change intermediate to undetermined.

Next Meeting – End of January