

## Marine Life Protection Act Initiative



### SAT Evaluation of Water and Sediment Quality of Round 2 North Coast Draft MPA Proposals

Presentation to the MLPA Science Advisory Team  
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California State Water Resources Control Board

## Water Quality Guidance

### SAT Recommendations

- Co-location, where possible, with state water quality protection areas (SWQPAs)
  - Areas of special biological significance (ASBSs) are special subset of SWQPAs
- Avoiding, where possible, areas of water quality concern:
  - Urban stormwater and nonpoint sources of pollution (e.g. harbors)
  - Wastewater point sources
    1. Major sources – ½ mile radius buffer
    2. Intermediate sources – ¼ mile radius buffer
    3. Minor sources – avoid outfall point



## Evaluation Methods

- Two categories of marine protected areas (MPAs):
  1. Bay and estuary MPAs
    - Bays and estuaries are more likely to be associated with storm-water runoff
    - No areas of special biological significance (ASBSs) currently designated in embayments
  2. Coastal MPAs
    - Coast and offshore rocks
    - Large ASBSs provide opportunities for co-location



## Scoring of MPA Proposals

- Scores based on presence/absence of areas of water quality concern and opportunity
- Co-location with areas of water quality concern: Water quality scores deducted if co-located with
  - Stormwater and nonpoint source discharges (-1)
  - Industrial/municipal wastewater discharges (-0.5)
- Co-location with areas of water quality opportunity: Water quality scores increased if co-located with
  - SWQPAs and ASBSs (+0 to 1 based on percent area of overlap)

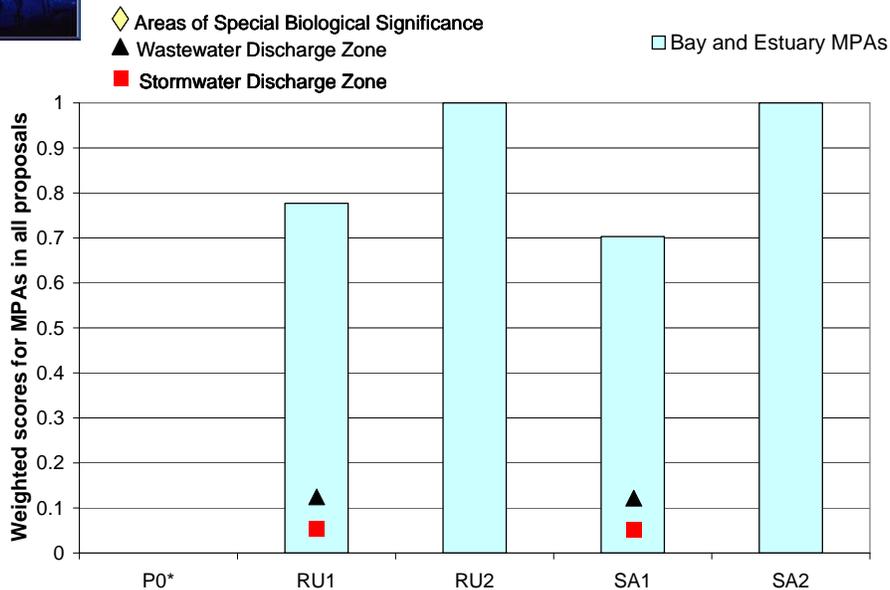


## Evaluation Scoring Methods

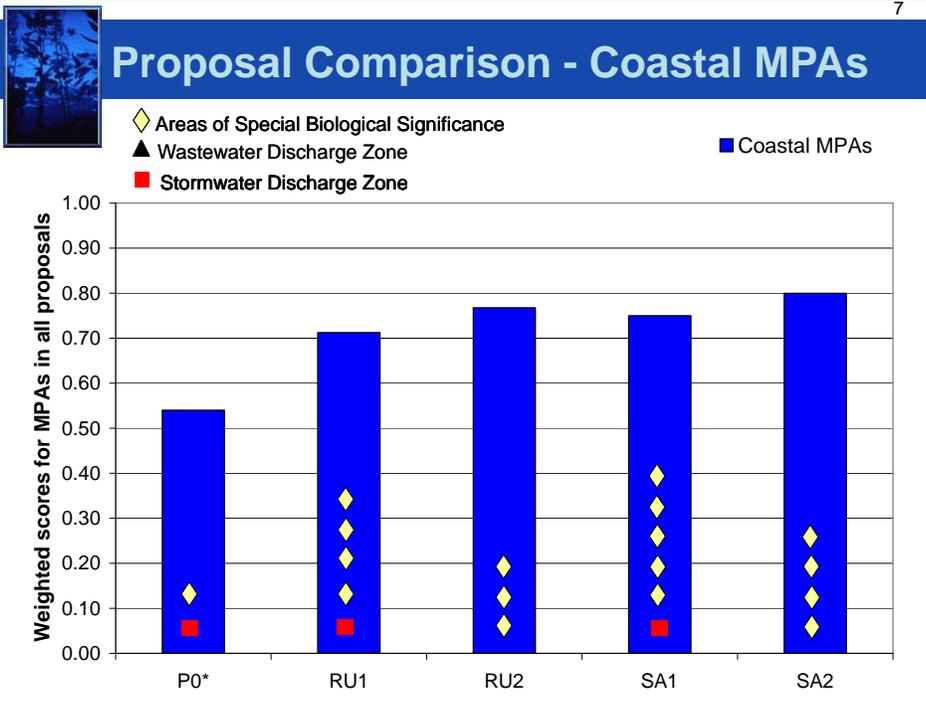
- Embayment MPAs
  - 0.25 is the least desirable and has serious water-quality concerns
  - 1.00 is considered the most desirable, with no water-quality concerns
- Coastal MPAs
  - 0.17 is the least desirable and has serious water-quality concerns
  - 0.67 is desirable, indicating no water-quality concerns
  - A score over 0.67 indicates co-location with an ASBS/SWQPA; a score of 1.00 is the most desirable



## Proposal Comparison - Bay and Estuary MPAs



## Proposal Comparison - Coastal MPAs



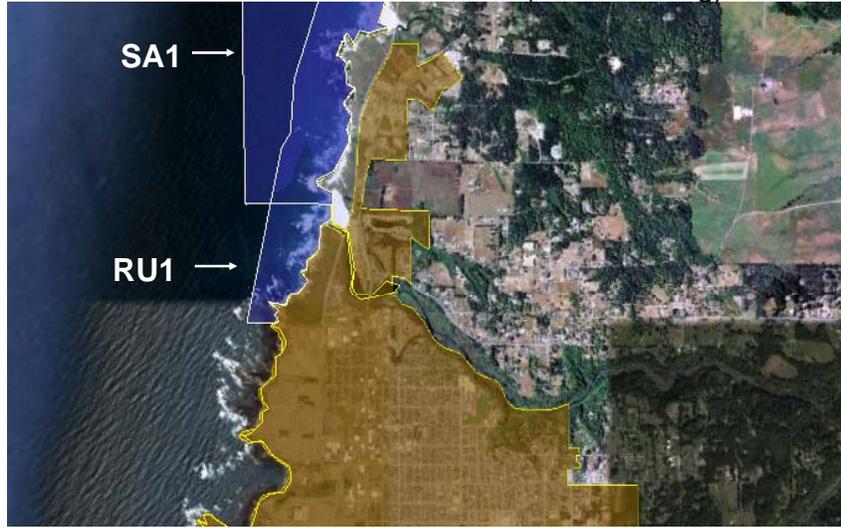
## Areas of Water Quality Concern

- MacKerricher SMCA
  - Ruby Draft MPA Proposal 1 (extends existing MPA further south)
  - Sapphire Draft MPA Proposal 1 (north-south extent is similar to existing MPA, offshore boundary changed)
- Southern boundaries for MPAs in both proposals intersect MS4 drainage area



# Areas of Water Quality Concern

Fort Bragg MS4 Area (brown shading) and MacKerricher SMCAs (blue shading)

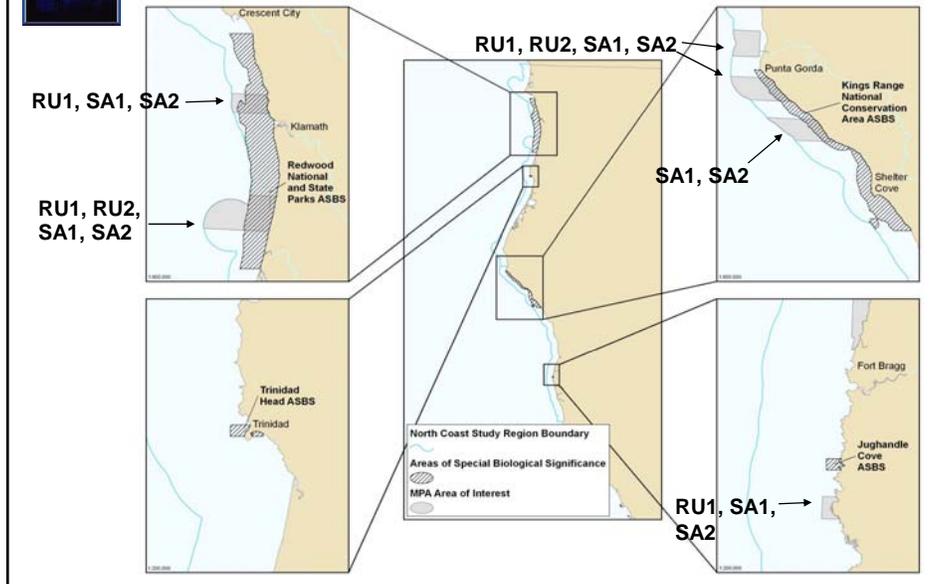


# Areas of Water Quality Concern

- North Humboldt Bay SMRMA (Same shape in both proposals)
  - Ruby 1
  - Sapphire 1
- Urban Stormwater (Brown)
- Intermediate Wastewater Discharge (Pink Circle)



## ASBSs and MPA Placement



## Round 2 Summary

- All proposals did very well with most MPAs avoiding water quality concerns
- Two proposals (Ruby 1 and Sapphire 1) contained one embayment MPA that had water quality concerns
- Two proposals (Ruby 1 and Sapphire 1) contained one coastal MPA that had water quality concerns
- All proposals did well at co-locating MPAs with ASBSs



## Round 2 Summary, conclusion

- *Water-quality evaluations are not mandated by the master plan for MPAs, and should therefore be considered secondary to other MPA design guidelines. Water-quality considerations should be incorporated if other guidelines and criteria have been met.*