

Characterization of the Rocky Intertidal Ecological Communities Associated with Southern California Areas of Special Biological Significance: Phase II

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EXECUTIVE SUMMARY

Two phases of sampling were done to characterize the biological communities at sites near to discharges in ASBS and at reference sites (considered to be unaffected by discharges). Sites were arranged in six geographic groups to account for biogeographical patterns in species composition. In phase I, we concluded, “While there was no indication of a general and similar impact of discharges on biological communities there was an indication that specific locations might be affected by compromised water quality.” In fact, one of the motivations for phase II sampling was to determine if those sites that showed biological communities potentially affected by discharge showed the same pattern in the later sampling period. Using an analytical approach designed to assess site-specific effects, we found that there was no evidence of “persistent” effects and that the likely explanation was natural (or at least not related to discharge) variability in biological communities. None of the four sites that exceeded the prediction limits in phase I exceeded them in phase II. Consistent with the idea of temporal variation, we found that three sites in phase II exceeded the prediction limits and none of the three exceeded them in phase I (note that one, Muddy Canyon was not evaluated in phase I). These results point to the strength of the phased assessment, particularly with respect to the possibility of an uninformed conclusion of discharge related effects. No matter how carefully a survey is designed, there is no way to completely control for the contributions of extraneous factors. In such situations it is often useful to examine if patterns hold over time – as was done here.

Full Text:

http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/818_ASBSRockyIntertidal.pdf