



CHAPTER 7.0 CONCLUSIONS

The following conclusions were developed from the results of this study.

- The City currently implements a variety of storm water pollution prevention and urban runoff regulations pursuant to the Land Development and Health and Safety Codes. The Environmental Services Manager in the Public Works Department is primarily responsible for implementation of these programs with support from the Planning Department and Code Enforcement staff. However, to date these programs do not adequately address/control non-point source pollution from entering the local creeks within the City.
- There is adequate habitat for native fish within the study area. However there is not adequate water quality information to ensure that the reintroduced fish would be able to survive year round.
- The non-native crayfish should be removed from Las Virgenes Creek to improve the survivability of the arroyo chub.
- There are not adequate data on the location and condition of septic systems within the City.
- There are other planning efforts within the City that should be identified at the City planning level. These efforts include: mitigation projects undertaken by private developers; property acquisition by non-profit environmental groups; and trails and parks planning being undertaken by City staff.
- A review of the available, existing data revealed that the water quality data are insufficient to perform a calibration of the model parameters. Continuous flow monitoring and corresponding water quality testing data need to be collected if a calibrated watershed model is to be completed.
- The results of the modeling revealed that human influences account for the majority of nutrient loading to the three creeks. The loading of nutrients (nitrate, ammonia, and phosphate) leaving the City limits under existing conditions with recent human influence was substantially higher than the loading under historical conditions without human influence.
- The results suggest that it is possible to exceed the RWQCB-LA water quality objectives for the study area in the absence of human influence. The overall water quality



objectives are described in the Water Quality Control Plan (Basin Plan), and specific pollutants are described in TMDL development documents but have not been incorporated into the Basin Plan yet.

- The results of the sensitivity analysis revealed that increases and decreases in nutrient loading would result in significant changes in the model results.
- Although several habitat improvement opportunities are available throughout the watersheds, implementation of all the restoration measures identified for creek restoration will not result in meaningful reductions in nutrient loading. This is because the creek restoration alternatives will only change the hydraulics/hydrology of the creek and not the nutrient sources or processes. However, in addition to creating/enhancing wildlife habitat, creek restoration projects can be beneficial for controlling other parameters of concern such as dissolved oxygen levels, water temperature, erosion, and sedimentation.
- Implementation of structural BMPs would probably not be effective at reducing nutrient loading associated with nitrates.
- The results of the modeling indicated that implementation of structural BMPs could be effective at reducing nutrient loading attributed to ammonia and phosphate.
- The results of the modeling revealed that source control could be effective at reducing nutrient loading attributed to nitrate.
- There are numerous sources of GIS information for the City and surrounding area. This information is not easily accessible and in many cases stored in disparate coordinate systems, which may cause delays in projects undertaken by the City.
- The City does not have up to date public utilities infrastructure information in electronic format. This limits the ability to use GIS to identify to the areas that are drained by specific storm drains.
- The current available water quality information is inadequate to identify any potential pollutant “hot spots” within the City.
- The results of this study indicate that substantial reductions in nutrient loading (defined as reductions in nitrate, ammonia, and phosphate) will require implementation of a comprehensive approach involving strategic implementation of structural BMPs and source control measures throughout the watersheds of the three creeks.
- The identified barriers to fish movement are both within and outside the study area. These barriers to movement divide fish populations into smaller segments and make them more vulnerable to small-scale impacts to the creeks.