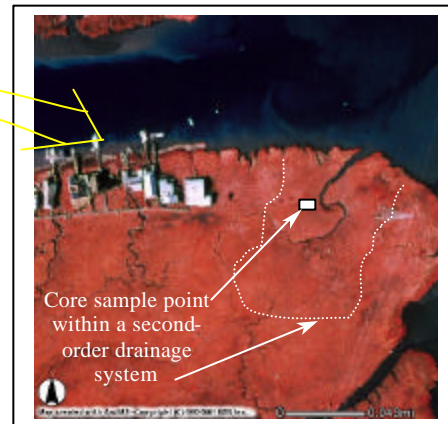
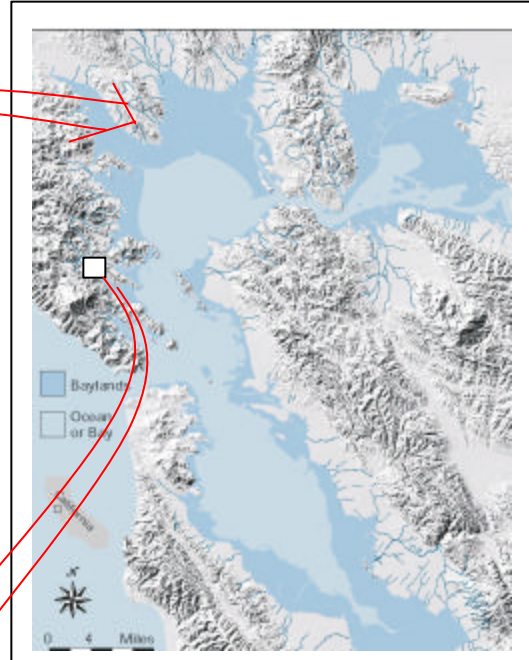
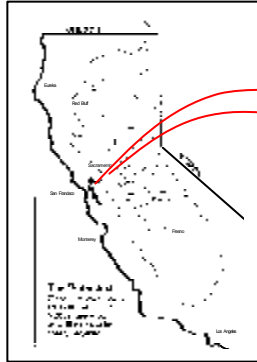


## EMAP California Intensification Project Design Spatial Hierarchy and Its Rationale

The Bay Area project exemplifies the spatial design of EMAP Intensification efforts in California estuaries. The Bay Area consists of a number of watersheds with their own estuaries, and each of these estuaries has tidal marshes and tidal flats. These habitats are mapped as management units or habitat patches. Each patch consists of a number of natural drainage systems. Each randomly drawn EMAP core sample point can therefore be used to identify a unique intertidal drainage system, its encompassing habitat patch, and its contributing uplands watershed.



Managers within the project areas hope that the EMAP Intensification project will begin to answer some of their basic questions about the status and trends in the health of intertidal habitats. Different questions pertain to the different spatial scales of the project. At the watersheds scale and for each project area as a whole, the main questions are about the distribution, abundance, and size of patches of tidal marshes and tidal flats, including restoration and mitigation projects. There is also concern about the effects of watershed outputs on the beneficial uses of individual habitat patches. It is generally understood that the intertidal habitats are physically linked to the rest of the world by the ebb and flow of energy and materials through their drainage systems, which also serve as natural, self-sustaining units of intertidal organization. The condition of these habitats can therefore be assessed based on examination of conditions within their representative drainage systems.