RESEARCH NEEDS

- As with many rockfish, reconstruction of the historical landings is difficult and very time consuming. A standard method should be applied, and historical documentation should be provided to highlight major fishery events to allow more certainty in these estimates.
- Continued genetic studies to confirm that blue rockfish are two species. Some
 major research that is needed related to this topic include: aging to determine
 differences in growth and longevity, fecundity, maturation schedules and their
 spatial distributions.
- More biological sampling, especially age composition information, of the recreational and commercial fisheries to be able to determine changes in life history parameters over time and space.
- Research to help understand the lack of males in the catches. Is this a selectivity issue or a substantial difference in natural mortality between males and females?
- Development of a fishery-independent survey to capture changes in stock abundance. Many assessments have used a recreational CPFV CPUE index to determine this, which is not as reliable considering management changes (i.e. bag limits, closures) that continue to occur.
- Sex-specific length and age information from the recreational fishery. Attempts have been made to gather sex-specific information from sampling the commercial fishery, and even though samples are small, it is informative.
- Environmental factors that affect survival of juvenile blue rockfish need to be explored further. The lack of kelp habitat caused by increasing ocean temperatures (warmer waters) in Southern California since the 1990s led the STAT to believe that the disappearance of blue rockfish in this area was not due to fishing.