

Chapter 14 - The Use of Science in the Restoration of Northeastern U.S. Salt Marshes

1. The authors use restoration to mean “*returning an ecosystem to a close approximation of its condition prior to disturbance. Accomplishing restoration means ensuring that ecosystem structure and function are recreated or repaired, and that natural dynamic ecosystem processes are operating effectively again*” a definition taken from the NRC 1992. Is this possible for salt marsh restoration or salt marsh sparrow restoration? Pragmatic? Do you define or see restoration differently than the NRC definition?
2. Is monitoring the return of natural or native vegetation enough to declare a restoration a success? What about the return of typical salt marsh fish species or bird species? How would you define success?
3. Two, four, eight, and twenty years are mentioned in the chapter as the time it took until specific restorations were complete. Is it reasonable to assume there is enough funding to monitor a site for 20 or even 8 years? Any ideas on how long term monitoring could be accomplished?
4. One of the components of ecological restoration is the return of function. The book lists diversity and abundance of plant and animal communities, biogeochemical processes, and biotic, chemical, and physical links with the estuary as salt marsh functions. Design a simple experiment to test whether the function of your choice has been restored.
5. How important is it to involve the public? The PSEG restoration included walkways and viewing platforms so the public could observe the process, was this wise?
6. The authors say that it is our duty as scientists to describe how marshes work, provide data to inform the decision about which marshes to save, and suggest how that can be done. What criteria would you use to decide which marshes to preserve/restore?
7. On pages 273-274 are listed ten restoration principles developed by the PSEG project. Are they sufficient, lacking, and reasonable? On page 274 are listed seven steps needed for restoration, what are your thoughts on these?

Discussion Questions: Ch. 15 - Conserving the Diverse Marshes of the Pacific Coast

Why are many Pacific management strategies aiming more towards habitat remodeling than marsh restoration? Does this seem appropriate?

Does moving towards large-scale, regional restoration efforts for marshes make sense? Why or why not?

Because of hybridization, it may be impossible to rid San Francisco Bay marshes of the invasive *S. alterniflora* without also removing all of the *S. foliosa* as well. Does it seem worthwhile to completely remove all of the vegetation and start over? What would be the consequences and benefits?

What would be some effective ways of managing for a tidal marsh system that has few physical linkages remaining to allow for species transfer?

Do you believe managing exclusively for federally listed Clapper Rail subspecies is beneficial to Pacific marshes as a whole?

Do you believe that it is worth the time and effort to restore marshes that have been inundated by sediment if this accretion may be of benefit in the future as sea level rise causes a need for higher elevations within salt marshes?