Wetland Restoration Principles

Wetlands are essential for our environmental and economic well-being.

They provide nursery, shelter, and feeding grounds for fish and wildlife; purify water through filtration of pollutants; recycle nutrients; and provide a place where people love to walk, recreate, and learn. Wetlands help buffer against the impacts of climate change by protecting us from flooding, storing carbon from the atmosphere, and maintaining vulnerable plant and animal communities.[i]

Southern California has lost approximately 95% of its historic coastal wetlands, often due to infill and development. Much of the remaining wetland habitat in our densely urbanized region has been filled in and built upon, and is thus destroyed or highly degraded. [ii]

Projects that incorporate the nine fundamental principles of wetland restoration are supported by the following organizations:

Heal the Bay
SURFRIDER FOUNDATION
FRIENDS OF BALLONA WETLANDS
ENVIRONMENT CALIFORNIA
Ocean Conservancy
LOS ANGELES WATERKEEPER
EMERALD NECKLACE
AMIGOS DE LOS RIOS
RIO HONDO
WILDCOAST COSTASALVAJE
FRIENDS OF THE LA RIVER
RIVER LA
The RIVER PROJECT
THE TRUST FOR PUBLIC LAND
LMU|LA Center for Urban Resilience
Friends of Madrona Marsh

See reverse for the full text of the nine Wetland Restoration Principles

wetlandsrestoration.org

Wetland Restoration Principles

The following nine principles are essential elements of any comprehensive wetland restoration program.

1.

Restoration projects should bring back the natural processes and functions of healthy wetlands, using broadly accepted scientific evidence of historic, present and potential conditions to set ambitious and achievable restoration goals and quantifiable measures of success.

2.

Restoration projects should have clear environmental goals and be based on critical scientific evaluation of all feasible alternatives.[iii]

3.

Restoration projects should aim for and achieve outcomes that are representative of the historical ecology of the wetlands before development, take into account the current constraints and adjacent human uses, and maximize the most valuable long-term benefits for plants and animals.

4.

Restoration work should be conducted in the manner that most effectively and efficiently meets restoration goals. Wetland restoration projects can range in size and scale, and may require significant earth-moving activities to restore wetland functions. Short-term disruptive activities should only be employed if sensitive areas and native plants and wildlife are safeguarded in the process (e.g. appropriate seasonal timing, monitoring, temporary relocation of plants and animals when necessary).[iv]

5.

Wetland restoration efforts should consider watershed hydrology that may impact the project site and function, such as upstream water quality and flow volumes.[v]

6.

Restoration efforts should involve sound scientific monitoring to establish baseline environmental characteristics and track site response to the restoration activities.

7.

Restoration efforts should consider climate change projections and be designed with a dynamic climate in mind, taking into account projected sea level rise for coastal wetlands.[vi]

8.

If public facilities are proposed as part of a wetland restoration project, they should be consistent with the restoration goals, and should not impair native wildlife or the planned ecological functions of the wetland. Public facilities, such as public access opportunities for education and enjoyment, should be well regulated and compatible with both the site and the surrounding community in terms of scale, design, and function.

9.

Wetland restoration project planning and implementation should involve all interested stakeholders in a process where public input and discussion opportunities are provided.

References

i. Costanza, R et al. (1997). The value of the world's ecosystem services and natural capital. Nature 387: 253-260.

ii. Dahl TE (2000). Wetlands losses in the United States 1780's to 1980's. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C.

iii. USEPA (2000). Principles for the Ecological Restoration of Aquatic Resources. EPA841-F-00-003. Office of Water (4501F), United States Environmental Protection Agency, Washington D.C. 4pp.

iv. USEPA (2000). Principles for the Ecological Restoration of Aquatic Resources. EPA841-F-00-003. Office of Water (4501F), United States Environmental Protection Agency, Washington D.C. 4pp.

v. Zedler JB (2000). Progress in wetland restoration ecology. TREE 15: 402-407.

vi. Erwin KL (2009). Wetlands and global climate change: the role of wetland restoration in a changing world. Wetlands Ecology and Management 17: 71-84.