

Protected landscapes and cultural landscapes share much common ground: both are focused on landscapes where human relationships with the natural environment over time define their essential character. In protected landscapes, the natural environment, biodiversity conservation, and ecosystem integrity have been the primary emphases. In contrast, the emphasis in cultural landscapes has been on human history, continuity of cultural traditions, and social values and aspirations. Yet in spite of the strong dichotomous tradition, recent experience has demonstrated that in many landscapes the natural and cultural heritage are inextricably bound together and that the conservation approach could benefit from more integration. (Nora Mitchell & Susan Buggey, The George Wright Society)

The dichotomy of culture and nature  
Adopted from Cronon 1995.

In natural resources preservation:

- There is increasing recognition that to protect species and their habitats, it is often important to encompass larger areas than have traditionally been protected. This increase in the size of areas of concern enhances the proximity to where people live and work.
- Ecological research has demonstrated the pervasiveness of human influence and illuminated an appreciation of the role of disturbance –either natural or human-generated – in shaping ecological systems. Both research and management experience illustrate that active intervention in certain situations may be required to sustain habitat for certain species.
- The recognition of the importance of incorporating people into conservation programs is increasing. In many countries throughout the world, the importance of working with local people and their cultural traditions in developing nature conservation programs is receiving increased emphasis.

In cultural resources conservation:

- The recognition of cultural landscapes is representative of the broadening of the definition and scope of cultural heritage. There is specific recognition of the potential natural resource values in cultural landscapes.
- The places of cultural interest may be large –hundreds or even thousands of acres. Cultural landscapes of this size would have tremendous potential to include important natural areas.
- As with nature conservation, there is a growing recognition that the values and priorities of people today are integral to resource evaluation and ultimately critical to the success of any conservation effort.

## Protecting Cultural Landscapes

Cultural landscapes give us a sense of place. They reveal our relationship with the land over time. Whether or not we are directly aware of their influence, landscapes have a profound effect on human life. The aesthetic, economic, and security values of our physical surroundings play essential roles in decisions about where and how we live.

Understanding the relationship between the environment and historic areas is critical for protecting resources and providing for the public's enjoyment. For example, although visitors to historic buildings tend to focus on the building and its interior appointments, the appearance of the surroundings, including various outbuildings, fences, and other structures, as well as plantings, contributes significantly to their understanding of the building's historical context.

In some respects, the management and preservation of landscapes is more complicated than historic structures because landscapes encompass a greater variety of elements, and include plants and structures as well as landforms. But more important, natural elements of landscapes are particularly susceptible to alteration and deterioration. Unlike historic structures, plants and trees can outgrow their space. In time, water may erode the soil and improper pruning and care of plants may hasten damage from disease and pests.

Landscapes are highly vulnerable. New agricultural practices, for example, can dramatically alter the look of the rural landscape. Changing agricultural economics, such as the move from the predominance of family farms to agribusiness, alter both traditional patterns of the land and the ways of life that produced the patterns.

Like other historic properties, America's landscapes are subject to loss and change through inappropriate uses, insensitive development, vandalism, and natural forces such as flooding.

To protect plant and animal species, managers need basic scientific information about their habitats, ranges, life cycles, and more. To protect the historic areas, managers need to understand people –those who establish, visit, support, cherish, use and (sometimes) abuse parks and resources.

Whether they are highly structured parks and formal gardens, or less structured farms, urban landscapes or roadsides, historic landscapes reflect U. S. cultural heritage.

## Planning, Treatment and Management of Historic Landscapes

Historic landscapes can range from thousands of acres of rural tracts to a small homestead with a front yard of less than one acre. Like historic buildings and structures, these special places reveal aspects of our country's origins and development through their form and features and in the ways in which they were used. In fact, almost every historic property has a landscape component. Imagine a residential district without sidewalks, lawns, and trees or an agricultural complex with buildings, but no fields, garden plots, or hedge rows!

Historic landscapes include residential gardens and community parks, scenic highways, rural communities, institutional grounds, cemeteries, battlefields and zoological gardens. They are composed of a number of character-defining features which individually or collectively contribute to the landscape's physical appearance as they have evolved over time.

Wise stewardship protects the character and or spirit of a place while recognizing history as change over time. Often, these changes also involve our own respectful modifications. The potential benefits from the preservation of cultural landscapes are enormous. Landscapes provide scenic, economic, ecological, social, recreational and educational opportunities that help us understand ourselves as individuals, communities and as a nation. Their ongoing preservation can yield an improved quality of life for everyone, and, above all, a sense of place or identity for future generations.

## Definitions

### Ethnographic Landscape

A landscape containing a variety of natural and cultural resources that associated people define as heritage resources. Examples are contemporary settlements, religious sacred sites and massive geological structures. Small plant communities, animals, subsistence and ceremonial grounds are often components.

### Historic Vernacular Landscape

A landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. They can be a single property such as a farm or a collection of properties such as a district of historic farms along a river valley. Examples include rural villages, industrial complexes, and agricultural landscapes.

### Historic Site

A landscape significant for its association with a historic event, activity, or person. Examples include battlefields and presidential properties.

### Historic Designed Landscape

A landscape that was consciously designed or laid out by a landscape architect, master gardener, architect, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition. The landscape may be associated with a significant person(s), trend, or event in landscape architecture; or illustrate an important development in the theory and practice of landscape architecture. Aesthetic values play a significant role in designed landscapes. Examples include parks, campuses, and estates.

## Landscapes and Natural Resources

Nearly all designed and vernacular landscapes evolve from, or are dependent on natural resources. It is these interconnected systems of land, air and water, vegetation and wildlife that have dynamic qualities that

differentiate cultural landscapes from other cultural resources, such as historic structures. Thus, their documentation, treatment, and ongoing management require a comprehensive, multi-disciplinary approach.

Natural resources form natural systems that are interdependent on one another and which may extend well beyond the boundary of the historic property. For example, these systems can include geology, hydrology, plant and animal habitats, and climate. Some of these natural resources are particularly susceptible to disturbances caused by changes in landscape management. Many natural resources such as wetlands or rare species fall under local, state, and federal regulations, which must be considered. Natural systems are an integral part of the cultural landscape and must be considered when selecting appropriate treatment.

Cultural and Natural Resources in California  
(From Streams of the San Joaquin, 2001)

Natural landscapes

- The pristine landscape
  - Pristine ecosystems
    - Pre-Columbian plant communities
      - Drought – a natural phenomenon
      - Shrub plant communities provide natural water conservation
    - Pre-Columbian animal populations
      - The effects of drought
  - Ecological management by the native people
- Fluvial physics
  - Hydrology and the hydrologic cycle
    - Evaporation, transpiration, precipitation, surface runoff, groundwater infiltration, and groundwater flow.
  - The fluvial process
    - Drainage basins
    - The humid (perennial) stream cycle
    - The arid (intermittent) stream cycle
      - The Los Banos phenomenon
      - alluvial fans
      - Piedmont alluvial plains (bajada)
      - Washes
      - Arroyos
      - Sinks and intermittent lakes (playas)
    - Zones of sediment transport – dissolved load, suspended load, and bed load
      - The erosion zone
        - Tributaries
        - Interfluves
        - The effect slope (stream gradient)
        - Erosion directed downward
      - The zone of storage and transport
        - River valleys
        - Valley floodplains
        - Benches and terraces
        - Natural levees
        - The Yazoo phenomenon
          - Cross channels
      - The zone of deposition
        - Floodplains
          - Meandering channels
          - Oxbow and horseshoe lakes
          - Meander cutoffs
          - Meander scars
          - Abandoned channels
        - Deltas
          - Distributaries
          - Braided channels
  - Two diagrams that follow show the zones of erosion, transport, and deposition of typical streams from the Sierra Nevada and Diablo Range. Both are characterized by relatively short stream length and long erosion zones. High Sierra Nevada streams have steep erosion zone gradients.

See Diagram 1

## See Diagram 2

- The Colorado River
  - Head waters and natural mouth
  - The Colorado Plateau and Grand Canyon
- Focusing on the San Joaquin River
  - The natural channel of the valley trough (Streams of the San Joaquin pg 57)
  - The Upper and Lower San Joaquin Rivers
  - The river before Friant Dam
    - Annual flood and drought – the natural pattern
    - High water (December – June)
      - Floodplain conditions
        - Cross channel sloughs, backwater lakes, flooded plains and muddy flats
        - Islands above high water
      - The riparian corridor and main river channel
        - Totally inundated
        - Breaches in the natural levee
    - Low water (June – December)
      - Floodplain conditions
        - Sloughs, potholes, ponds
        - Vernal marsh, vernal pools, and parched summer grassland
      - The main river channel
        - Sandbars, riffles and deep pools
      - The riparian corridor
        - The aquatic ecosystem
        - The terrestrial ecosystem
- Climate and the natural landscape
  - The Californian Climatic Regime
    - The erratic nature of precipitation
    - Dry/warm and cold/wet conditions for plants and animals
  - The Californian floristic province
  - Life zones of California
- Great Valley streams
  - The Sacramento Valley
    - A true river valley
  - The Sacramento/San Joaquin Delta
  - Streams of the San Joaquin
    - A valley of basins
    - Names and Watersheds
    - Sierra Nevada streams
      - High Sierra Nevada Streams
        - The effect of glaciation in the Sierra Nevada on valley landscapes
        - Glacial flour
      - Low elevation Sierra Nevada Streams
    - Arid Streams of the western and southern hills

## Cultural landscapes

- Population growth in California
  - The native people
  - Spanish and Mexican occupation
  - Population growth since 1850
  - Northern population center (San Francisco Bay area to Sacramento)
  - Southern population center (Los Angeles area to San Diego)
  - The San Joaquin Valley – caught in the middle
  - Population growth in the 21<sup>st</sup> century
- Historic transportation routes

- El Camino Viejo
- El Camino Real
- Highway 99
- Interstate 5
- Railroads
- Agriculture in California – farming and animal husbandry
  - The native people
  - Mission farms
  - Ranchos and Spanish land grants
  - American farmers and ranchers
- Historic sites
  - Towns
  - Buildings
  - Parks
  - Cemeteries
  - Zoological gardens
  - Botanic gardens
- 21<sup>st</sup> century transportation routes
  - High speed rail
  - An eastside interstate highway
- 21<sup>st</sup> century predictions

#### The cultural impact on California's natural landscapes

- The historic decline of pristine ecosystems
  - The mission era
    - The impact of domestic livestock (sheep, cattle, horses, swine)
    - The destruction of the native plant community
      - Feast and famine in the Californian Climate
    - The loss of native animals (grizzly bear condor, tule elk, antelope)
  - The impact of alien plants
    - Ecological interlopers
      - The life cycle of alien plants
      - The life cycle of native plants
  - The gold rush era
    - The impact on the natural landscape
      - Mining techniques and gold camps
      - Fuel needs for home and steam engines
    - The impact on the cultural landscape
      - Law and order in the gold camps
      - Ethnic diversity
      - Historic sites
- Lumber for a growing population
  - Redwood for fence posts
  - Cutting the Giant Sequoia
  - Clear cutting
  - Lumber farms
- Water for a thirsty land - Water for a thirsty population – The development of water resources in California
  - Irrigation dynamics
  - Early water supply and irrigation projects
    - The Colorado River
  - Dams and canals
    - The Fresno scraper; its impact on the land
  - Steamboats and river transportation
    - Deep water ship channels
  - Hetch Hetchy Dam (For information ask Goggle for Hetch Hetchy Dam)
  - Colorado River projects

- The All American Canal
    - The Salton Sea
    - New River
  - Focusing on the San Joaquin River [www.usbr.gov/mp/cvpia/sjr/](http://www.usbr.gov/mp/cvpia/sjr/) or ask Goggle for **San Joaquin River Restoration**)
    - Dams and canals
    - The Central Valley Project [www.usbr.gov/mp/cvp](http://www.usbr.gov/mp/cvp) or ask Goggle for **California Central Valley Project**
      - The Delta Mendota Canal
      - Friant Dam
        - Madera Canal
        - Friant Kern Canal
        - Mendota Pool
    - The river after Friant Dam (1945)
      - An abandoned old river channel
    - The Eastside Bypass and levee system (circa 1962)
    - Restoration scenarios
  - The California Water Project [www.publicaffairs.water.ca.gov/swp](http://www.publicaffairs.water.ca.gov/swp) or ask Goggle for **California Aqueduct**)
    - The California Aqueduct
- Land development in California
  - The Spanish missions
  - Spanish land grants
  - Homesteads
  - Railroads
- Maps and Mapping
  - The rectangular survey
  - Topographic maps
  - Base lines and prime meridians
  - Townships and sections

#### Twenty-first century challenges

- High speed rail
- The loss of farmland to urban growth
- Managing California's public lands
  - City and county parks
  - California state parks
  - Federal lands
    - National parks
    - National forests
    - Wildlife refuges
    - Bureau of Land Management lands
- Nurturing the natural landscape
  - Ecological attitudes on private property
  - Managing grassland ecosystems
  - Managing forest ecosystems
  - Managing aquatic ecosystems
  - Restoring riparian ecosystems
  - Restoring the San Joaquin River riparian corridor
  - Protecting and creating vernal pools

#### Learning Objectives and Study Concepts

##### To be able to:

1. Describe the natural and cultural effects that major dams have on streams.
2. Describe the major facilities of the Central Valley Project.
3. Describe the cultural impact of the Central Valley Project on California's economy.

4. Describe the impact that the Central Valley Project has had on the natural landscape of the San Joaquin Valley.
5. Describe the impact that Friant Dam has had on the natural landscape of the San Joaquin River.
6. Describe the significance, both natural and cultural, of restoring the San Joaquin River riparian corridor from Friant Dam to the mouth of the Merced River.

To understand:

1. The values of both cultural and natural resources in the makeup of California's 21<sup>st</sup> century landscapes.
2. Ways to successfully integrate these values into management of these landscapes.
3. What makes cultural and natural landscapes significant?
4. The significance of both aquatic and terrestrial habitats in the restoration of riparian corridors.
5. The significance of knowing the life cycles of alien plants and its application to the restoration of riparian corridors.

## References

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- Mount, Jeffrey F. 1995. California Rivers and Streams. University of California Press.
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- Stokes, Samuel N., et al. 1989. Saving America's Countryside: A Guide to Rural Conservation. Baltimore and London: John Hopkins University Press.

## Suggested Web-Sites for further information

Preservation Brief 36: Planning, Treatment and Management of Historic Landscape  
<http://www2.cr.nps.gov/tps/briefs/brief36.htm>

U.S. Fish & Wildlife Service – Why We Protect Our Past  
<http://refuges.fws.gov/cultural/why.html>

Making Educated Decisions – A Landscape Preservation Bibliography  
<http://www2.cr.nps.gov/hli/makedec.htm>

What Are Cultural Landscapes  
<http://www.icls.harvard.edu/language/whatare.html>

Natural Science and Cultural Landscapes (page down)  
<http://www.icls.harvard.edu/current.html#lang>

## Organizations Active in Cultural Landscape Preservation

Alliance for Historic Landscape Preservation  
 2005 California Envirothon



American Association for State and Local History  
American Folklife Center  
American Folklore Society  
American Rock Art Research Association  
American Society of Landscape Architects  
American Studies Association  
Association of Living History Farms and Historic Museums  
Association for Preservation Technology  
Institute for Cultural Landscape Studies  
National Association for Olmstead Parks  
National Council on Public History  
National Park Service  
Organization of American Historians  
National Trust for Historic Preservation  
Society for Architectural Historians, Chapter for Landscape and Architecture and the Allied  
Arts  
The Cultural Landscape Foundation  
Trustees of Reservations (Massachusetts)