Ecological site group 16-4
Ecological Site Group 4

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Key Characteristics

None specified

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

Climate

This model is comprised of four states, with the first state having two community phases, and the other states having a single community phase each. This group is comprised solely of R016XB002CA.

Vegetation dynamics

This model is comprised of four states, with the first state having two community phases, and the other states having a single community phase each. This group is comprised solely of R016XB002CA.

Major Land Resource Area

MLRA 016X
California Delta

Stage

Provisional

Contributors

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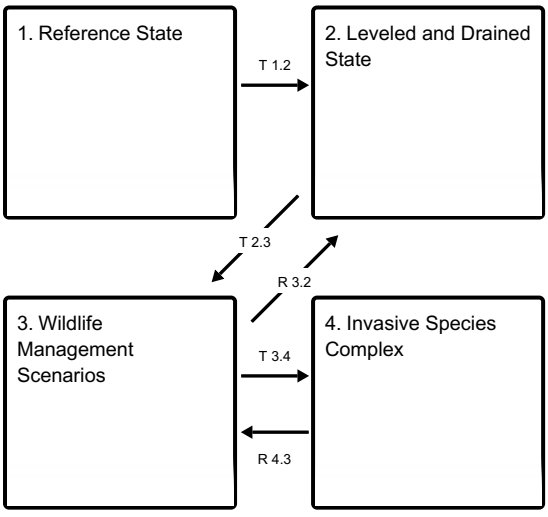
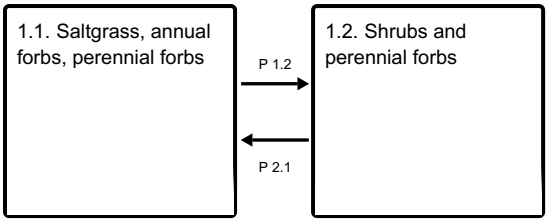
State and transition model

Ecosystem states



State 1 submodel, plant communities



State 1
Reference State

The reference state was likely a patchy complex of shrubs, perennial forbs, annual forbs, and saltgrass and fire is the most likely driver of changes in vegetation dominance. It is conceivable that in the absence of fire, most of the ecological site would eventually become dominated by shrubs such as coyote brush and big saltbush. Interruption of shrub dominance following die-off of shrubs as a result of prolonged flooding, is assumed to be historically infrequent for this ecological site as it occupies a higher position on the landscape and lacks the organic soil properties which would occur under frequent flooding scenarios.

Community 1.1
Saltgrass, annual forbs, perennial forbs

Saltgrass and annual forbs dominate the canopy cover while shrubs and perennial forbs are minor occupants of the site.

Community 1.2
Shrubs and perennial forbs

Coyote brush and big saltbush tend to be most competitive on higher portions of the micro-relief and lower elevations of the ecological site such as swales may have been dominated by blackberry and wild rose. Overall grass and annual forb cover is greatly reduced.

Pathway P 1.2
Community 1.1 to 1.2

Pathway P 2.1
Community 1.2 to 1.1

State 2
Leveled and Drained State

This state represents a recovery of a simplified natural community following abandonment of initial cultivation efforts. While some isolated stands of native shrubs occur on higher positions within the extent of the site, the existing slope is linear-linear and broken up by drainage ditches. The two dominant species are saltgrass and perennial pickleweed and the occasional native shrub stands typically are dominated by coyote brush and big saltbush. This is a managed state with burning and water management occurring to reduce preponderance of undesirable vegetation. Manual control of smaller extents of undesirable vegetation is ongoing. Saltgrass remains subdominant and annual forbs may be apparent in Spring. While restoration may be possible, it has not been demonstrated on this ecological site. It is assumed that the primary methods for restoration would involve reshaping the soil surface to simulate the historic low-relief landscape and thereby increase the diversity of niches which might be exploited by native species.

State 3
Wildlife Management Scenarios

This is a highly managed state for waterfowl cover and/or food plots. This is the representative state. This state may be comprised of many different species planted in blocks with differing cover quality and rates of maturation to

provide a diverse habitat conditions to meet the needs of many species, not just waterfowl. Due to the complexity of adaptive management and social priorities, these scenarios are not described in detail here and the user is directed to contact the California Department of Fish and Wildlife for current and historic details of vegetation management. Invasive species are actively managed through water management, fire and complementary control methods.

State 4
Invasive Species Complex

This invaded state is dominated by a complex of invasive species with resident desirable species in decline. Long term eventual dominance would most likely be by fennel or similar tall species, but prior to canopy closure, bull thistle, sea blight, wild celery and perennial pepperweed are likely to appear as equal competitors while canopy gaps are present.

Transition T 1.2
State 1 to 2

The soils of the site have been leveled and drained for agronomic production. Little of the historic topography is intact across the majority of this ecological site.

Transition T 2.3
State 2 to 3

Agronomic and management inputs for habitat management.

Restoration pathway R 3.2
State 3 to 2

Removal of agronomic inputs and in most cases, replacement of resident vegetation with species of the target state would be required to return the condition of the site to State 2.

Transition T 3.4
State 3 to 4

Agronomic inputs manipulate vegetation considerably in terms of structure, cover and composition.

Restoration pathway R 4.3
State 4 to 3

It is assumed that given enough management intensity, as demonstrated by landowners in the area, that some areas can be returned to the previous state.

Citations