



Minimizing impacts to wildlife from rice fallowing

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In the Sacramento Valley - an area that has lost more than 90% of historic wetland habitats - flooded rice fields provide important surrogate habitat for many resident and migratory waterbirds and for threatened wildlife species, such as the Giant Gartersnake. However, drought can reduce water supply and impact the amount and quality of habitat provided by flooded rice.

We interviewed experts and conducted a literature review to provide science-based recommendations to producers, water districts, other habitat managers, and policy makers on how to minimize impacts and maximize benefits to wildlife when rice is fallowed in the Sacramento Valley. These recommendations are intended as guidelines, not regulatory requirements.

While specific management recommendations depend on the species group of interest, the first broad approach for minimizing harm to wildlife when rice is fallowed is to carefully consider the placement of fallowed fields across the Sacramento Valley.

Specifically, a mosaic of actively managed fallowed land (i.e., not remaining as bare dirt) is beneficial for wildlife and avoids large swaths of land with no wildlife benefits. Every block of 3 square miles should have some flooded habitat available within it, and areas without flooding should have a flooded conveyance (e.g., a canal) to a water source within 1 mile.

The second consideration is to allow for a variety of management techniques on fallow fields, as different vegetation and flooding regimes will benefit different species. Specifically, this can include growing cover crops, allowing volunteer vegetation, and providing temporary shallow flooding. Specific recommendations by season, field types, and species groups are provided in the report. The targets are dynamic in both space and time, allowing for some flexibility for land managers.

Lastly, it is important to properly manage canals and ditches. Water should be retained in spring, summer, and fall, vegetation growth should

be allowed along the sides to the degree possible, and the use of heavy machinery should be minimized on banks.

Main Points

Flooded rice fields provide important habitat in the Sacramento Valley where >90% of historic wetland habitats have been lost.

When rice needs to be fallowed due to water limitations, habitat is lost for breeding and non-breeding waterbirds, landbirds, and other species.

To minimize the harm to wildlife from fallowing, rice fields can be managed to provide habitat through managing vegetation and flooding in ways specific to the season, field type, and species group of interest.

Managed fields should be distributed across the landscape to avoid large, contiguous swaths of bare, unmanaged fields.

Retaining water and some vegetation in canals and ditches in spring, summer, and fall is also important for wildlife.

Iverson, A.R., C. Hickey, K. Sesser. 2024. [Rice fallowing and wildlife: Minimizing impacts and increasing opportunity for wildlife due to rice fallowing and rotation in the Sacramento Valley](#). Report to the Central Valley Joint Venture. Point Blue Conservation Science (Contribution No. 2516), Petaluma, CA.