

**YOLO NATURAL HERITAGE PROGRAM**  
**Agriculture-Habitat interface Working Group**  
**Summary of Issues Related to Agriculture**

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The Agriculture-Habitat Interface Working Group (Ag Working Group) is a sub-group of the Yolo Natural Heritage Program (YNHP) Steering Advisory Committee (SAC). In the 2008-2009 meeting cycle, the Ag Working Group prepared a set of tables on “Agricultural Activities and Practices” for all the major crops in Yolo County (including a “Summary of Potential Impacts of Agricultural Flood Control and Water Supply Activities on Covered Species”). These were provided to the YNHP Executive Director on September 30, 2009, for use in the preparation of the YNHP habitat conservation plan.

In its 2010 cycle, the committee reviewed a set of broader agricultural issues of concern to the overall Yolo County HCP. These include:

- concerns about habitat outside farmland, e.g. around ditches and sloughs
- examining whether tailwater quality standards can lead to practices that destroy riparian habitat as farmers shift to pipes or drip systems to meet regulations.
- What happens when land is returned to agriculture after fallowing? Are new permits needed?
- What is the importance for the plan of the major constraints on agriculture:
  - Climate/climate change
  - Water
  - Soils
  - Cropping patterns
  - Transportation
  - Disturbance/creation of habitat

At its initial meeting on February 10, 2010, The group decided that the issues of climate change and transportation were outside the focus of this group and will be dealt with in other venues for the plan. They delineated four major issue areas for review and discussion by the agriculture/habitat interface Working Group that will be important to the plan:

## **Agricultural-Habitat Issues**

1. Fallowing of land (schedule, patterns, habitat benefits, economic parameters) and its consequences for habitat.
2. Water supply and availability for agriculture and the effects on habitat.
3. Role of government constraints and support for agriculture (e.g. Williamson Act, tax rate, parcel regulations) in shaping agricultural management and practices.
4. The importance of habitat associated with agriculture (e.g. hedgerows, edges, sloughs/ditches) and incentives for creating habitat on farmland.

At their meeting on March 10, 2010, the Agriculture-Habitat Interface also conducted a preliminary review of the report on the “*Pollinator Conservation Strategy*”<sup>\*</sup> for the SAC, which was presented at the March 22, 2010 SAC meeting. This review is available in a separate document. Following is a summary of the discussion for the four agricultural-habitat issues defined above. We recommend that these issues be addressed in the YNHP conservation strategy and plan.

### **Issue 1: Fallowing of agricultural land**

Land that is fallowed on a regular or intermittent basis is difficult to factor into the habitat planning formula, but is likely to be an important component of a Yolo County conservation plan. We need to understand the seasonal components of fallowing, the link with species’ biology, and the role of incentive-based programs that require ground to be fallowed. There are also water cost and availability and economic issues involved in the decisions to fallow.

- Reasons: Benefits and pressures
  - Economic (market prices, government programs)
  - Cost/benefit (e.g. soil fertility)
  - Rotational strategy to benefit soil processes
  - Water availability and allocation (e.g. access to Sacramento River water, access to Clear Lake water)
  - Water transfer potential
  - Government programs (e.g. CRP, WHPP, etc. enrollment)
  - Soil /land management and improvement

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<sup>\*</sup> Report prepared by the Xerces Society for Invertebrate Conservation for the Yolo Natural Heritage Program (November 2009), located at [http://www.yoloconservationplan.org/yolo\\_pdfs/reports/Yolo-pollinator-consvtn-strategy-2009-11-16.pdf](http://www.yoloconservationplan.org/yolo_pdfs/reports/Yolo-pollinator-consvtn-strategy-2009-11-16.pdf)  
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- Which land?
  - Class 3 and 4 lands are more likely to be fallowed than class 1 and 2<sup>†</sup>
  - Per year: Wet vs. dry/normal water years makes a difference
  - Seasonal: factors related to river flow
  - Long term factors include land use regulations, government requirements; and speculation and development pressures.

## **Issue 2: Water supply and availability for agriculture and the effects on habitat**

Before developing an outline of important issues and aspects related to the effects on habitat of water supply and availability for agriculture, the group discussed whether water quality should be included in this review of issues. In general, we agreed that was a topic addressed under the state Water Board jurisdiction and is only included in our topic via the subject area of “water chemistry,” as part of the context and background.

### **A. Factors affecting water supply and availability (context and background):**

1. Drought
2. Allocation: reservoirs, rivers
3. Conservation practices and regulations
4. Availability of groundwater (e.g. wells)
5. Seasonal cycles
6. Runoff: winter and summer
7. Flood
8. Water chemistry

### **B. Water Delivery Systems**

1. Wells
2. sprinklers
3. ditches
4. underground pipes
5. furrow irrigation
6. tailwater (recirculation)
7. drip (various forms)
8. water treatments
9. water infrastructure

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<sup>†</sup> Class rating relates to agricultural productivity of land as measured by a variety of factors.

### **C. Decisions that affect the Agriculture/Habitat Interface (related to water)**

1. crop choice<sup>‡</sup>
2. irrigation method
3. irrigation timing
4. tailwater management

### **D. Questions that affect decision making by farmers**

1. Are you in an active water/irrigation district?
2. What is your soil type/water chemistry?
3. What are the drainage characteristics or capacity (e.g. slope, water table, percolation, compaction of soil)

## **Issue 3: Role of government constraints and support (incentives) for agriculture in shaping habitat friendly agricultural management practices.**

Government policy affects agricultural practices in two major ways: through programs that provide incentives or support for certain kinds of practices or from constraints and regulations that limit, tax, prohibit, or penalize certain practices. These policies have implications for how willing farmers are to include or institute management practices that have benefits for wildlife and habitat.

### **Incentives/Support**

- Williamson Act promotes conservation of agricultural land and lessens the appeal or threat of development (housing, industry, etc.).
- Farm Programs (e.g. WHIP, EQUIP, CREP, CSP)
  - Many of these programs are managed under the NRCS/RCD and reward or support farm practices that conserve/protect water, land, or soil.
- Yolo County “Right to Farm” Act
  - This protects farmers from lawsuits or other actions by neighbors for engaging in normal farming practices that might have some deleterious consequences in terms of noise, discharges, etc.

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<sup>‡</sup> *Crop choice is related to many factors: soil type, water resource and availability, local natural conditions, and economic considerations*

- Awards and rewards (e.g. Farm Bureau and Land Trust “Farmer of the Year”), through which farmers are recognized as adding value to the community
- Yolo County General Plan supports and promotes agriculture
- Positive view of agriculture as part of Yolo County culture throughout county

### **Constraints/Regulations**

- Tax assessment value based on “highest and best use” of land
  - Promotes development
  - Rewards farming to the edge
  - Maximum crop yield is fostered through use of pesticides and fertilizer
- California water allocation and distribution policies
  - Regulation of energy cost and amount
  - Permitting/regulation to fix well/pump
- Other areas of constraints
  - Water and air quality regulations
  - Endangered Species Act
  - Prohibitions on depredation (permits required to destroy mammal and avian pests)
  - Restrictions related to adjacent properties (e.g. new house built next to farmland)
  - Waste management and disposal regulations
- Multiple regulatory agencies and levels (local, state, federal)

Following this discussion, a list of alternative policies was developed that would favor habitat-friendly practices.

### **Alternative Policy**

- Offer incentives based on ecosystem services (tax credits, cost sharing, etc.)
- Appoint an Ombudsman to assist farmers with understanding and completing permitting requirements.
- Provide rewards for good land and natural resources stewardship practices.

## **Issue 4: The importance of habitat associated with agriculture and incentives for creating habitat on farmland.**

A number of areas on farmland (e.g. hedgerows, edges, sloughs/ditches) could be targeted for restoring or maintaining habitat. In some cases, these areas are not normally farmed (“non-production areas”); in others, practices could be adopted that enable multiple purposes to be served.

### **Non-production Area Habitat**

- Edges/fences
  - Hedgerows
  - Ditches
  - Field corners
  - Buffers (e.g. between organic and non-organic crops)
  
- Low corners
  - Tail water ponds
  - Recirculating ponds
  - Sediment traps
  - Wood lots
  
- Non-farmable areas
  - Rocky
  - Poor soil
  - Dry spots (public)
  - wet spots
  - Wood lots
  - Utility or right-of-way areas
  
- Sloughs/canals/other water
  - Riparian
  - Vernal pool

### **Incentives**

- \$Compensation, easements, tax relief
- Farm programs (private, local, state, federal)
- Regulatory reform (county)
- Programmatic permit coordination
- Education (farmers and consumers)
- Agritourism

- Multifunctionality and ecosystem services
  - Erosion control
  - Water conservation
  - Promote pollinators/control predators
  - Leveraging of opportunities (e.g. for funding, grants, insurance)
- Marketing branding (e.g. “Lodi Rules”, “Certified Green”)
- Aesthetic values (e.g. “sustainability”, “wildlife friendly”)
- Public reward and recognition

### **Concerns**

- Loss of production
- Crop damage from depredation
- Costs for managing/maintaining habitat

### **GENERAL ISSUES**

- Some of these practices may result in loss of production, inefficiencies, or damages to farm operations. Associated risks include invasive species, canal clogging, incurring ESA requirements. These need to be taken into account.
- How can our HCP/NCCP create incentives (economic, other) in our plan to encourage rapid adoption of wildlife-friendly practices?
- How can we make our plan “user-friendly” for future generations?
- How can we ensure that there is continuity and longevity for sustainable practices?
- An ombudsman is needed (overall) to provide protection for farmers as they adopt habitat-friendly practices.