



Land Use & Natural Resource Integration (LUNRI) Guide



TULARE BASIN WILDLIFE PARTNER
Creating Opportunities for Nature and People

What is LUNRI?

The Land Use and Natural Resource Integration (LUNRI) program is designed to provide county planners and decision-makers with guidelines to make sustainable, long-term land use choices that *strike a balance between growth and protecting the natural resources* upon which we all depend. The focus is on natural resource conservation and restoration in the non-urban areas of the Tulare Basin in Fresno, Tulare, Kings, and Kern Counties.

Through the LUNRI effort, the Tulare Basin Wildlife Partners (TBWP) has developed seven land use recommendations and guidelines, outlined in this guide. These recommendations are based on an analysis of the best available documents related to farmland conservation, water resource management, and habitat conservation/restoration, as well as discussions with members of the San Joaquin Valley Greenprint, Tulare Basin Integrated Regional Water Management (IRWM) groups, water district managers, federal/state agency staff, non-profit organizations, and field experts. These recommendations work in concert with several other regional efforts—for example, the SJV Greenprint, IRWM, and the Tulare Basin Watershed Connections Working Group—with a goal to *conserve and replenish natural resources in rural areas and support smart growth in urban areas*.

Driving the identification of these collaborative recommendations is the fact that every land use decision impacts the “system.” The system is the watershed and all of its resources (land, air, water, biota) that may be used, transferred, or impacted by various land use decisions. LUNRI advocates that every decision *allocating natural resources in and around our communities should be analyzed from the standpoint of how those choices impact the overall system*. When Valley planners, decision-makers, and the general public can look at land use planning from this whole system perspective, we will be on our way to a smart growth path that finds balance between urban needs and rural resources.

The LUNRI program was made possible by a 2014
grant from the Fresno Regional Foundation
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Recommendations and Guidelines

1 Protect and conserve prime farmland

Utilize the American Farmland Trust's recommendations in "Saving Farmland, Growing Cities – A Framework for Implementing Effective Farmland Conservation Policies in the San Joaquin Valley." AFT identifies six objectives to address agricultural conservation challenges:

1. Avoid development of high-quality farmland
2. Minimize farmland loss with more efficient development
3. Ensure stability at the urban edge
4. Minimize rural residential development
5. Mitigate the loss of farmland with conservation easements
6. Encourage a favorable agricultural business climate

Benefits:

- » Regional economic benefits – agriculture drives much of the region's economy
- » National food security – Fresno, Tulare, Kern, and Kings Counties are among the most productive agricultural counties in the nation (Fresno and Tulare are number 1 and 2)
- » Opportunity for multiple-benefit resource protection, e.g. groundwater recharge

2 Protect ecologically sensitive areas that provide groundwater recharge, storm water management, habitat, and recreation.

Identify and protect creeks/streams and the associated floodplains through the **creation of setbacks and riparian buffers.**

Benefits:

- » Increase groundwater – setbacks help recharge groundwater in years of moderate to high rainfall
- » Riparian vegetation – provides shade, cooler water, reduces evaporation
- » Improve water quality – natural processes filter pollutants such as sediment, pesticides, and other contaminants
- » Mitigate flood damage – well-established riparian vegetation reduces



velocity of flood flows and slows storm water runoff

- » Create habitat – one mile of 50 foot buffer on both sides of a stream protects 12 acres of habitat
- » Nutrient uptake – trees absorb nitrates and phosphates
- » Energy conservation – reduces thermal loading of streams, erosion, pollution, and flooding
- » Stabilize stream banks – root systems of riparian trees reduce erosion
- » Reduce atmospheric pollution – riparian buffers help trap and filter air pollution
- » Improve quality of life – provides recreation and educational opportunities

Identify and protect vernal pool complexes

Benefits:

- » Provide unique habitat for amphibians and invertebrates
- » Enhance water quality with discharges into natural wetlands
- » Enhance watershed function and storm water management
- » Provide groundwater recharge

3 Protect watershed function and linkages between the mountains, foothills and valley floor

Protect water quality, water supply reliability, and storm water management. Develop inter-regional projects with multiple stakeholders (public and private), e.g. the Southern Sierra IRWM, Kings Basin Water Authority, Fresno and Tulare Counties, and landowners to connect upper and lower watershed function.

Benefits:

- » Improve upstream water storage and storm water retention in meadows and streams
- » Improve water supply reliability
- » Increase erosion control and reduce sedimentation downstream
- » Provide floodwater attenuation
- » Improve overall water supply reliability and water quality

4 Protect local groundwater

Disincentivize development of previously unfarmed or “marginal” farmland (classified through land classification and/or other studies) where



there are declining groundwater resources.

Establish a precedent that both residential and farmland development should be subject to a **water supply reliability study** prior to approval.

Benefits:

- » Meet new state requirements with local management of groundwater resources, avoid state control of regional groundwater resources
- » Reduce conflicts between users
- » Long-term sustainability for communities, growers, and others dependent upon groundwater
- » Conservation of wildlife species that depend upon these uncropped lands

5 Engage in regional resource management and planning efforts

Integrated Regional Water Management: A collaborative effort to identify and implement water management solutions on a regional scale. IRWM is a philosophy and practice of coordinating the management of water and related resources for the purpose of maximizing economic and societal benefits while maintaining the sustainability of vital ecosystems.

Benefits:

- » Improve regional and statewide water and flood management
- » Increase regional self-reliance
- » Reduce conflict
- » Manage water to concurrently achieve social, environmental, and economic objectives

San Joaquin Valley Greenprint: The SJV Greenprint is a voluntary, stakeholder-driven project that provides agricultural, water, and environmental leaders with improved planning data and fosters regional collaboration on strategies that promote resource sustainability while enhancing economic prosperity. It focuses on the challenges and opportunities in non-urban land use planning, and how those rural decisions shape the region's economy and environment.

Benefits:

- » Identify regional conservation and growth strategies
- » Better prepare for development impacts and mitigate according to a regional plan
- » Participate in regional planning efforts that prioritize resource sustainability
- » Save planning staff time and resources by accessing a comprehensive database of regional (San Joaquin Valley) maps



6 Provide incentives for the protection/conservation of sensitive species habitat on public and private land

Incentivize creation of habitat on fallowed lands without penalties. Rather than disking, encourage a natural “cover crop” that can provide habitat. Allow the land back into production without penalty under the federal or state law. Other land uses such as grazing should also be considered.

Benefits:

- » Reduce costs
- » Decrease greenhouse gas emissions
- » Provide refugia for wildlife during drought-stricken times
- » Provide assurances that the land can be put back into production without penalties

Develop Regional/County-wide Habitat Conservation Planning/Natural Communities Conservation Plans that can streamline development and land use plans. Identify areas that will be set aside not only for threatened and endangered species (as required for granting an incidental take permit under HCP/NCCP), but for watershed benefits such as groundwater recharge, storm water management, recreation, and water quality.

Benefits:

- » Provide incidental take for otherwise lawful activities under the federal Endangered Species Act, rather than time-consuming individual permits
- » Meet compensatory mitigation under the federal and state endangered species acts
- » Help meet regional endangered species conservation and recovery goals
- » Increase groundwater recharge capacity through land conservation
- » Assist with regional resource management and planning efforts (see 5)

7 Develop a tool to inform development through early engagement rather than wait for a CEQA document that approves projects “after-the-fact”

Regional Advance Mitigation Planning (RAMP) – RAMP is a regional approach to compensatory mitigation planning and works by pooling mitigation needs from multiple projects to acquire fewer, but spatially larger, parcels for project impact compensation. By incorporating regional mitigation planning in the early stages of project development, rather than later, parcels can be acquired before



land prices increase, and costly delays may also be avoided.

Habitat Conservation Planning/Natural Communities Conservation Plans (see 6) and Regional 404 permits (Clean Water Act).

Benefits:

- » Save time and money by eliminating redundancy associated with regulatory processes
- » Improve ecological outcomes
- » Preserve ecological integrity of the land by acquiring less fragmented parcels; also reduces costs
- » Contribute to the implementation of a long-term regional Greenprint; develop conservation priorities
- » Build support from a large array of stakeholders

Next Steps

Data collection and management

Improved data collection, management, and sharing is critical to the implementation of these recommendations. Through efforts initiated by the Counties, IRWMs, SJV Greenprint, and others, the region is enhancing its data options. Publically-available interactive mapping tools facilitate the development of map composites (i.e. those that the TBWP has been developing with Greenprint data), which help identify multi-benefit natural resource conservation/restoration project opportunities.

Build consensus

Conducting outreach and education is a key strategy for building consensus. The TBWP will continue to facilitate collaboration among IRWMs, the Watershed Connections Working, SJV Greenprint, federal/state agencies, County planning departments, California Partnership for the San Joaquin Valley, American Farmland Trust, landowners, and the general public.

Identify pilot projects

The TBWP will work with its partners to identify pilot projects in Tulare Basin counties – Fresno, Kings, Tulare, and Kern – that can test these recommendations and set an example for best management plans (BMPs) that can be replicated.

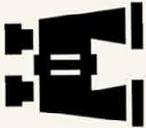


Resource Sustainability in the Tulare Basin

CHALLENGE: POPULATION GROWTH, RESOURCE SCARCITY



Let's take a look at the situation...



By 2050, San Joaquin Valley population is expected to grow almost 3,000,000 to 6,840,000

Farmland is expected to shrink by half a million acres by 2050; 300,000 of those acres are highly-productive, irrigated lands of state importance



More than half of the San Joaquin Valley has seen groundwater elevations drop between 50-215 ft. in the past 50 years

Climate change predicts longer periods of drought, larger floods, and warmer temperatures that will shrink mountain snowpack storage levels



About 69% of the valley floor's native habitat has been converted to agriculture, urban, or other human uses



SOLUTION: CAREFUL LAND USE PLANNING

Farmland

Protect and conserve prime farmland as outlined in "Saving Farmland, Growing Cities" (American Farmland Trust)

Streams

Identify & protect creeks/streams and associated floodplains, create setbacks and riparian buffers to enhance stormwater management and groundwater recharge

Watershed

Protect watershed function and linkages between the mountains, foothills, and valley floor to improve water quality, supply reliability, and storm water management

Groundwater

Residential and farmland development should be subject to a water supply reliability study prior to approval

Advanced Planning

Inform development early rather than waiting for CEQA to approve projects "after-the-fact," e.g. Regional Advanced Mitigation Planning

Habitat

Provide incentives for the protection/conservation of sensitive species habitat on public and private land, i.e. through Regional/County-wide HCPs/NCCPs

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