

Integrated One Water Framework for Water Master Plan – Unincorporated Solano County

Pleasants/Vaca Valley Area Challenges and Potential Actions

December 4, 2023

Meeting Agenda

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INTRODUCTIONS

Purpose of the Solano One Water Framework

2

MEETING PURPOSE AND OUTCOMES

Solano One Water Recap

Meeting Purpose and Outcomes

3

CHALLENGES AND POTENTIAL ACTIONS

Goals, Action Categories, and Actions Recap

Overview of Pleasants/Vaca Valley Area

Potential Future Master Plan Actions

Developing Criteria for Prioritization of Multi-Benefit Projects

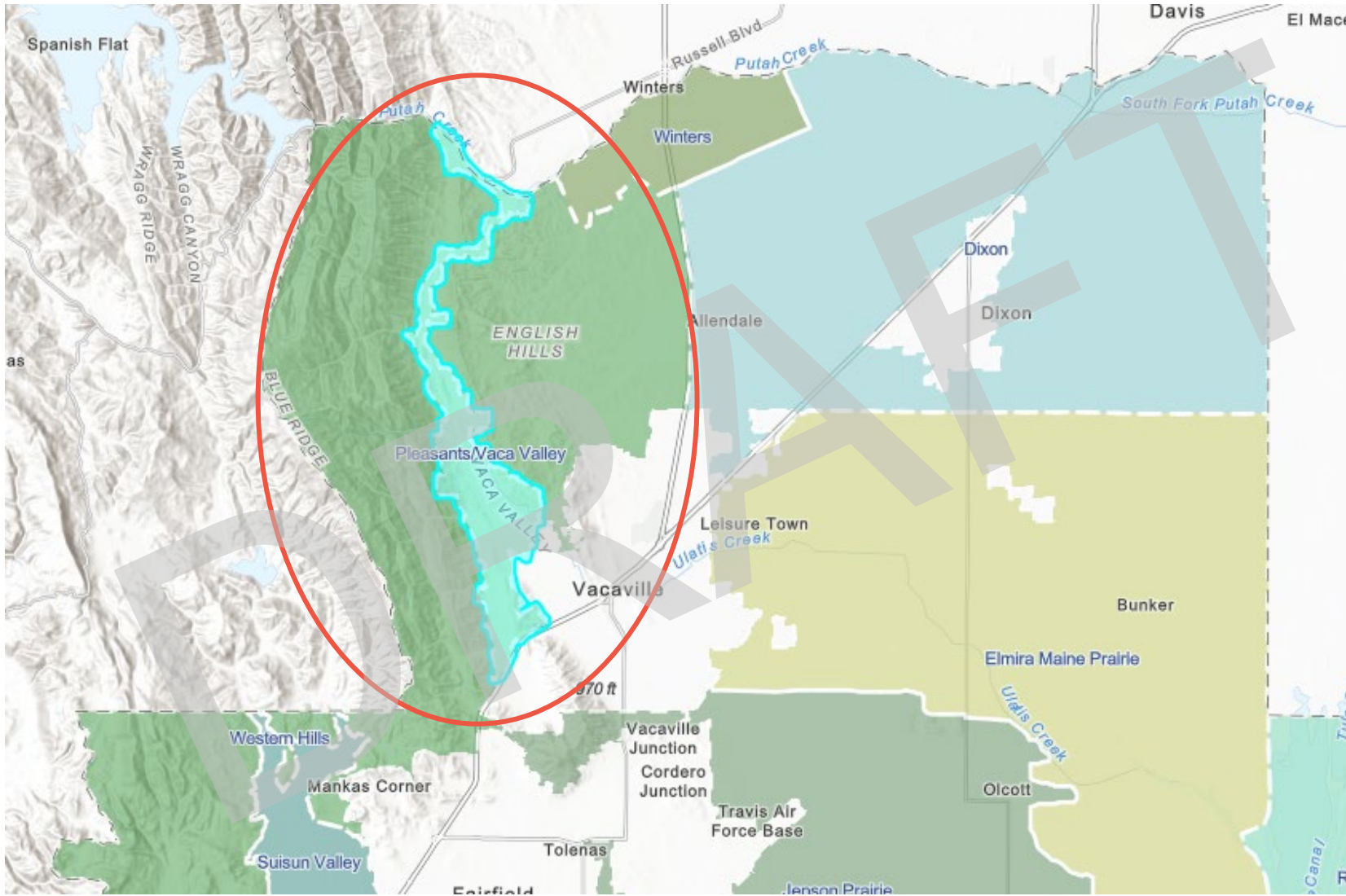
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Pleasants/Vaca Valley Agricultural Area



Purpose of the Solano One Water Framework

- One Water Framework Objective
 - Focus on water resources in unincorporated County
 - Support and align with implementation of Solano County General Plan
 - Identify water-related challenges and opportunities through a stakeholder process
 - Develop One Water concepts and guiding principles collaboratively with goals, objectives, and strategies
 - Establish a process to develop regional, multi-benefit projects that leverage regional cooperation and coordination
- One Water Framework Outcome:
 - Vision, goals, and strategies as a roadmap to future Solano County Utilities Master Plan
- Website:
https://www.solanocounty.com/depts/rm/delta_and_water_programs/one_water_framework/

Introductions

Solano County*

Misty Kaltreider

Dick Tzou

James Bezek

Department of Resource
Management

Cal Water – Dixon*

City of Benicia

City of Dixon*

City of Fairfield

City of Rio Vista*

City of Suisun City

City of Vacaville/Vacaville GSA

City of Vallejo Water Department

Dixon RCD*

Fairfield Suisun Sewer District

Maine Prairie Water District*

RD 2068*

Rural North Vacaville Water District

Solano County Agricultural Commissioner*

Solano County Farm Bureau*

Solano County Water Agency*

Solano Irrigation District/SID GSA

Solano RCD*

Suisun RCD

Vallejo Flood and Wastewater District

*Solano GSA Member

Steering
Committee
Participants



Kennedy Jenks



Sachi Itagaki

Project Manager

Meredith Clement

Deputy Project Manager

Jennifer Larsen

Technical Lead

Nick Watterson, Hydrogeologist/

Groundwater Sustainability Planning

Kennedy
Jenks
&
LSCE

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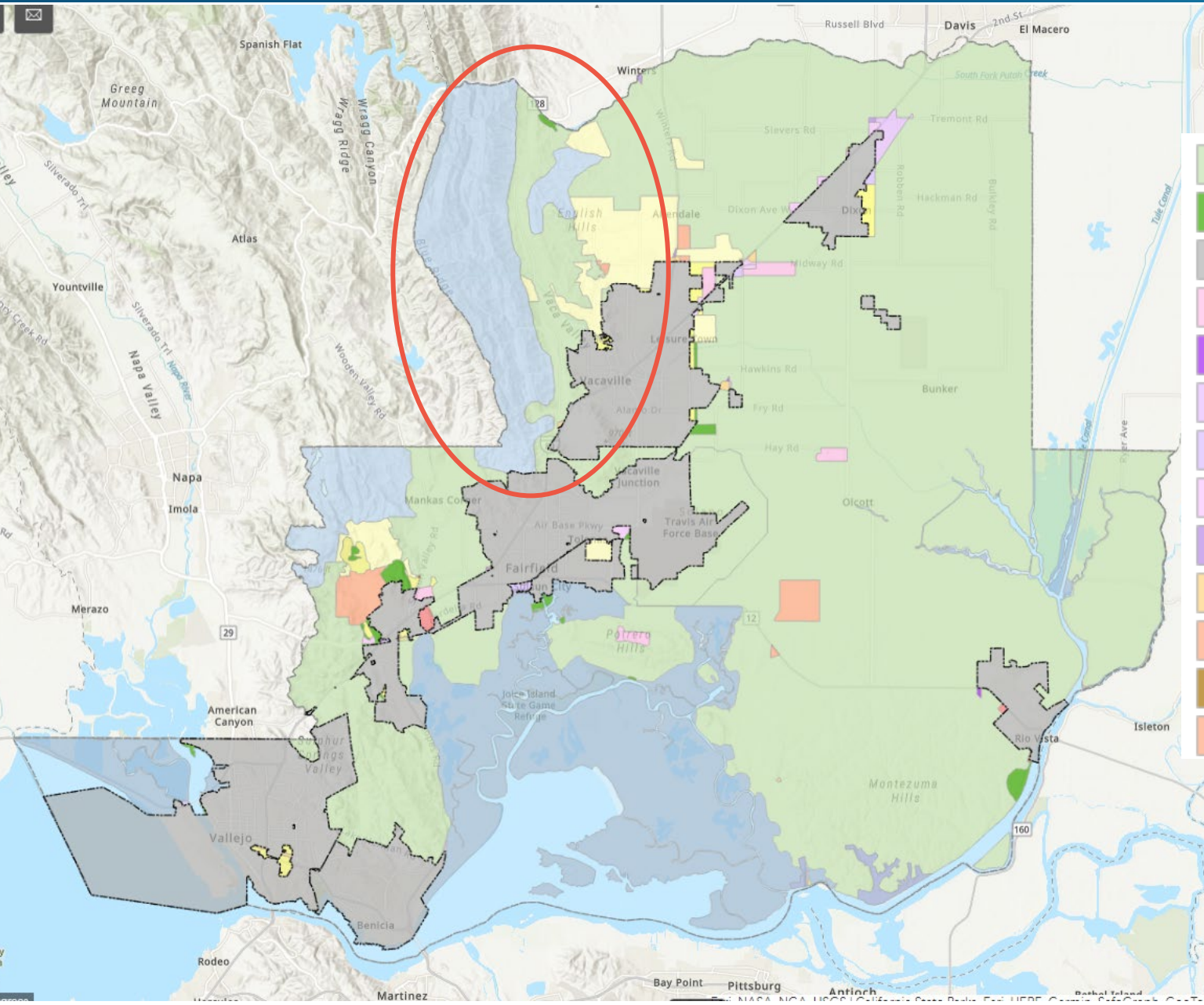
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Solano One Water – Supporting General Plan Implementation



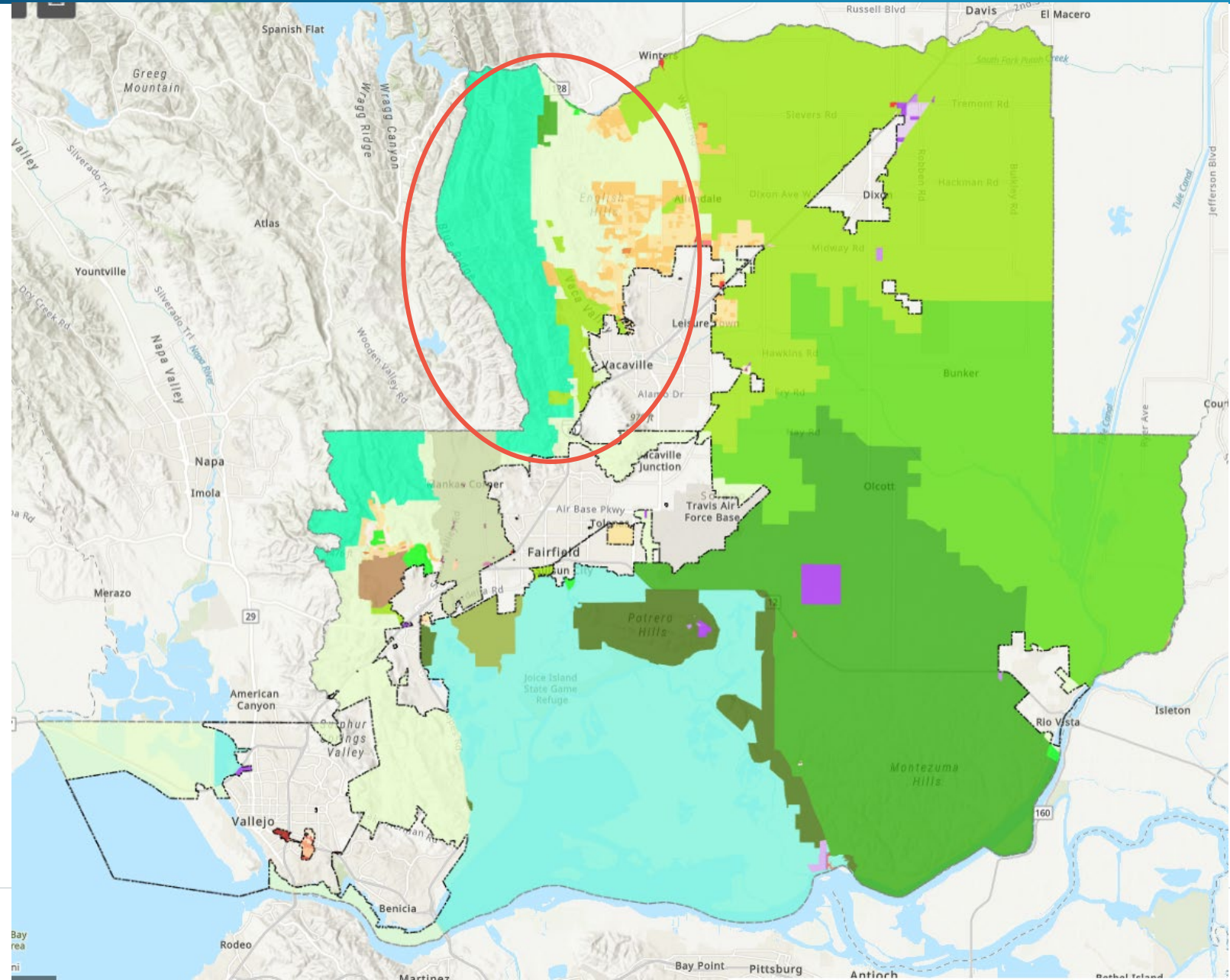
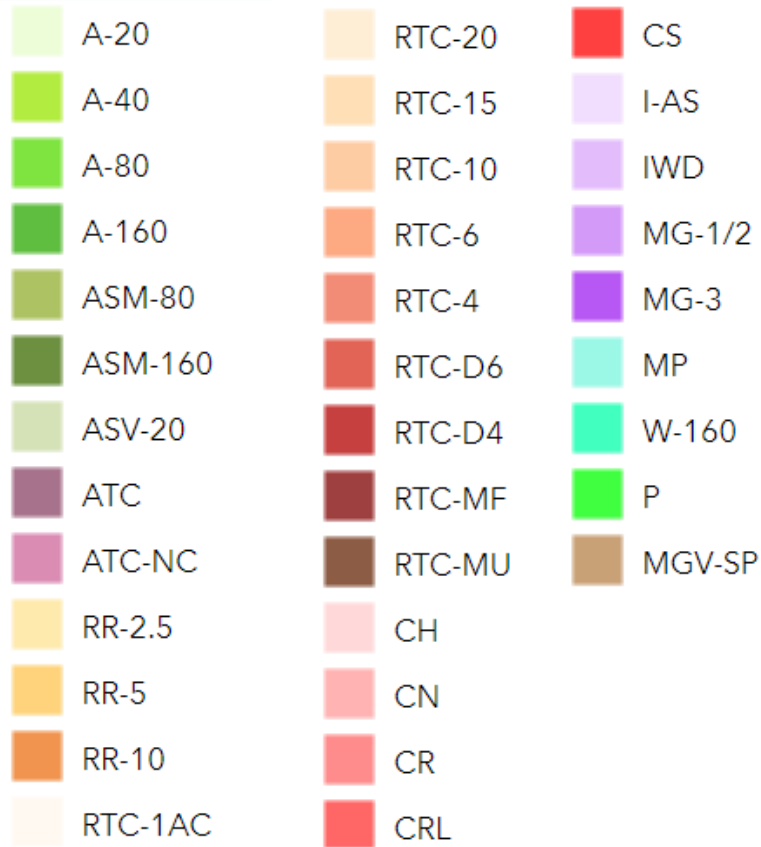
GENERAL PLAN LAND USE DESIGNATIONS – UNINCORPORATED COUNTY

- | | | | |
|---|-------------------------|---|-------------------------------------|
|  | Agriculture |  | Urban Project Area |
|  | Park and Recreation |  | Urban Residential |
|  | Incorporated Area |  | Rural Residential |
|  | Public/Quasi-Public |  | Traditional Community - Residential |
|  | General Industrial |  | Traditional Community - Mixed Use |
|  | Limited Industrial |  | Marsh |
|  | Urban Industrial |  | Water Bodies and Courses |
|  | Urban Commercial |  | Water Dependent Industrial |
|  | Service Commercial |  | Watershed |
|  | Highway Commercial | | |
|  | Commercial Recreation | | |
|  | Neighborhood Commercial | | |
|  | Specific Project Area | | |

Source: Solano County Resource Management Viewer.
 "Solano_County_Unincorporated_General_Plan_2008_Updated"

Solano One Water – Unincorporated County Zoning

UNINCORPORATED COUNTY ZONING



Source: Solano County Resource Management Viewer.
 “Solano County Unincorporated Zoning.”

PURPOSE AND OUTCOMES OF TODAY'S MEETING

Present an overview of existing systems, challenges, and complete/in-progress activities in the Pleasants/Vaca Valley agricultural area

Discuss and refine potential Master Plan actions in addressing challenges

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Framework Goals, Action Categories, And Actions

Recap

Framework Goals, Action Categories, and Actions



Goals consist of broad statements of purpose or direction.



Action categories are strategies to achieve the goals of the Master Plan.



Specific actions are identified for implementation to achieve the stated goals, policies, and plans.

Working Draft - Framework Goals

Goals – Working Draft

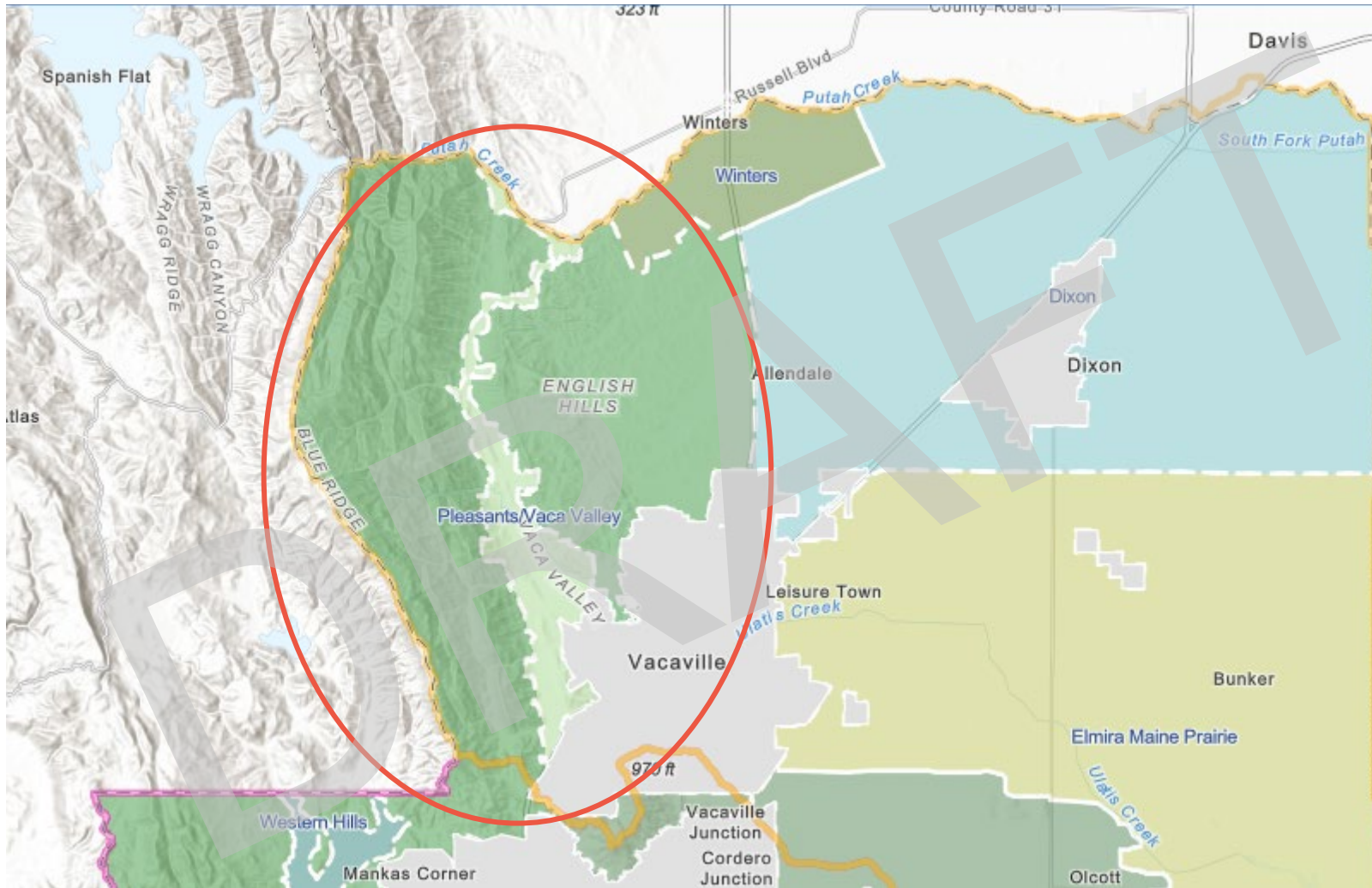
1. Support Implementation of the Solano County General Plan in relation to integrated water resources.
2. Develop governance structures to support regional water resources management through interagency collaboration and partnership.
3. Enhance local sustainable water supply.
4. Improve localized drainage and flood protection.
5. Implement multi-benefit strategies, projects, and programs through the management and integration of all water resources.

Working Draft – Action Categories/Strategies

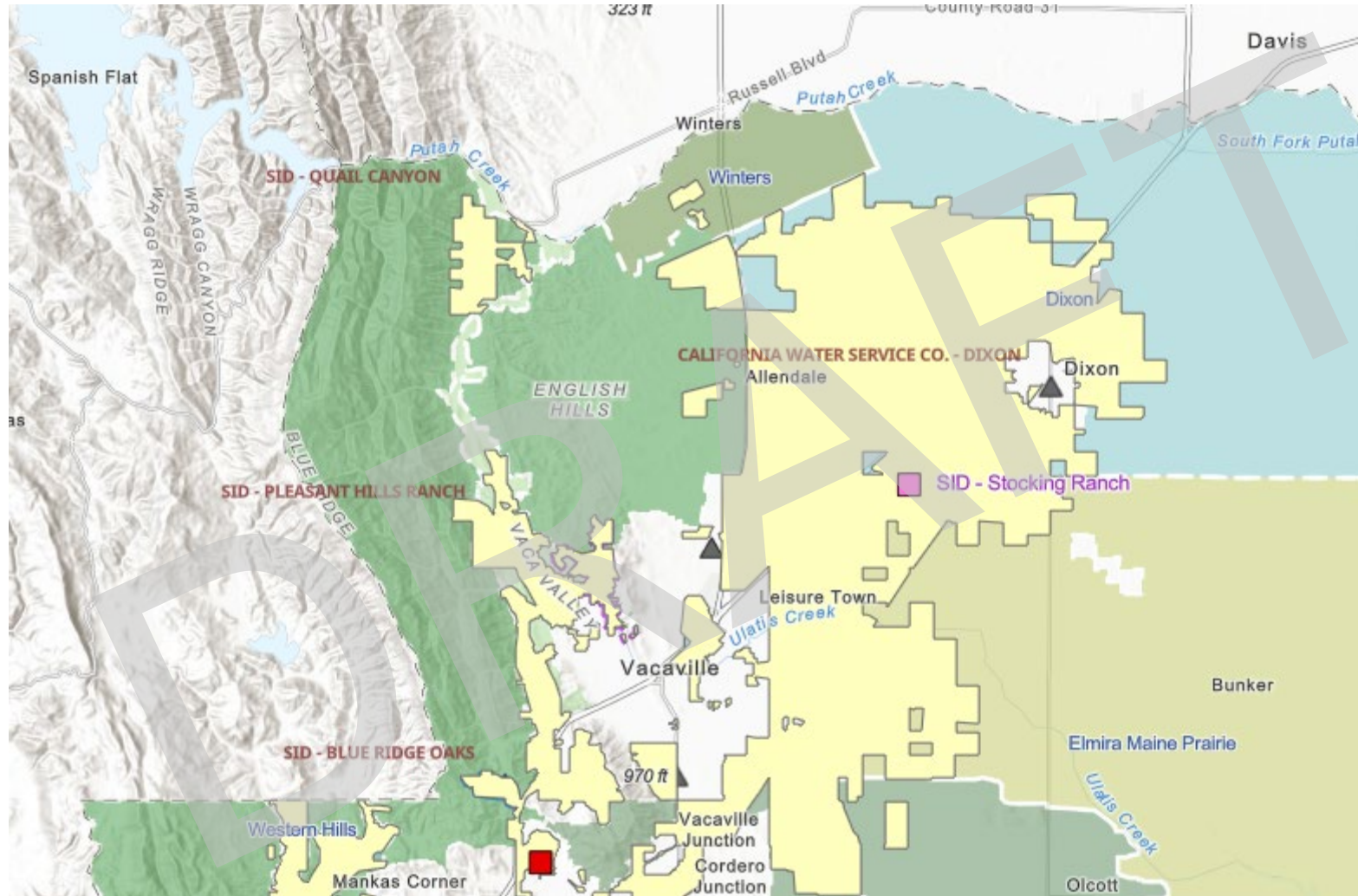
Goal	Action Categories/Strategies – Working Draft
1	<ul style="list-style-type: none">A. Improve collective understanding of the utility services and needs.B. Assess the water utility requirements.C. Consider General plan principles for water development.
2	<ul style="list-style-type: none">A. Leverage existing planning effortsB. Evaluate options for a structure to implement One Water Framework
3	<ul style="list-style-type: none">A. Evaluate consolidation of small systemsB. Support active groundwater recharge activities where appropriateC. Understand future demandD. Evaluate alternative sources such as recycled and stormwaterE. Improve treatment, conveyance infrastructure
4	<ul style="list-style-type: none">A. Recommend nature-based solutions for drainage and wastewaterB. Further model flood management and drainageC. Recommend land use consideration in planning flood and drainage projects
5	<ul style="list-style-type: none">A. Utilize existing water infrastructure for multiple purposes/benefits.B. Consider multi-benefit project scenarios as integrated solutions.C. Develop prioritization criteria to rank conceptual multi-benefit projects.D. ID other water-related benefits for project integrationE. Consider the need for other utilities when evaluating new projects.F. ID financial requirements and mechanisms to implement strategies, projects, and programs.

Overview of Pleasants/Vaca Valley Area

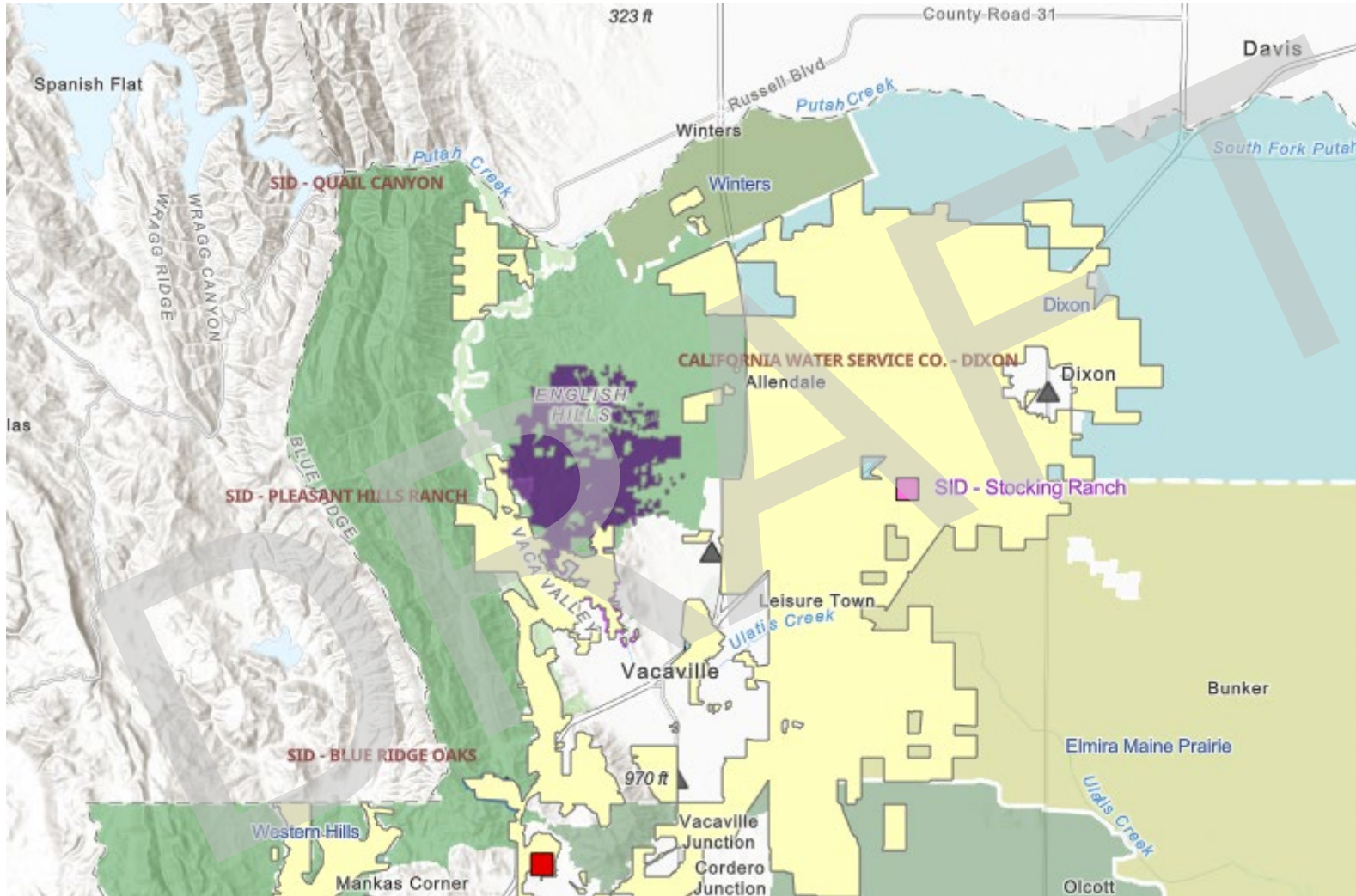
Overview – Water Supply and Conveyance



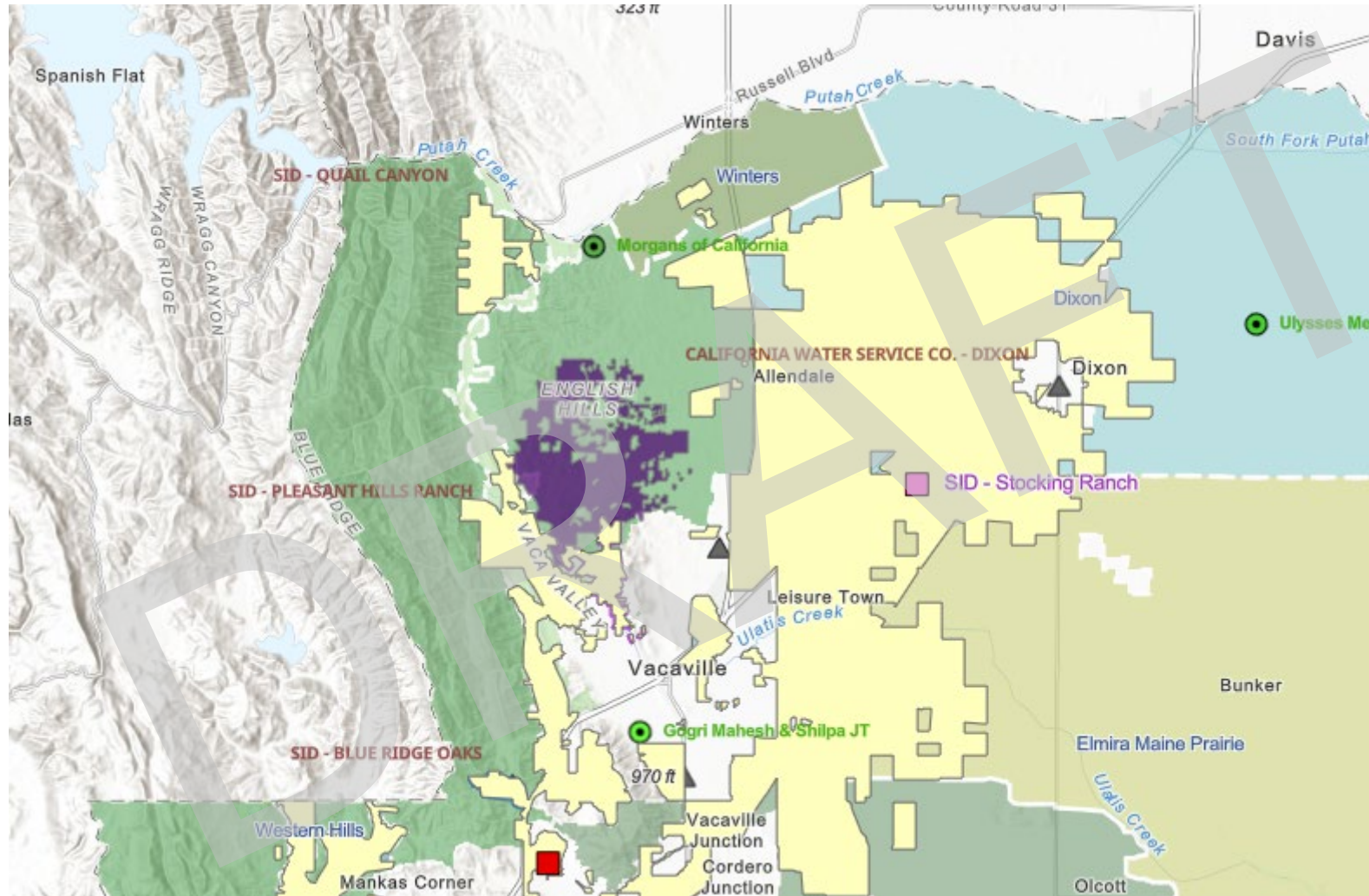
Overview – Water Supply and Conveyance



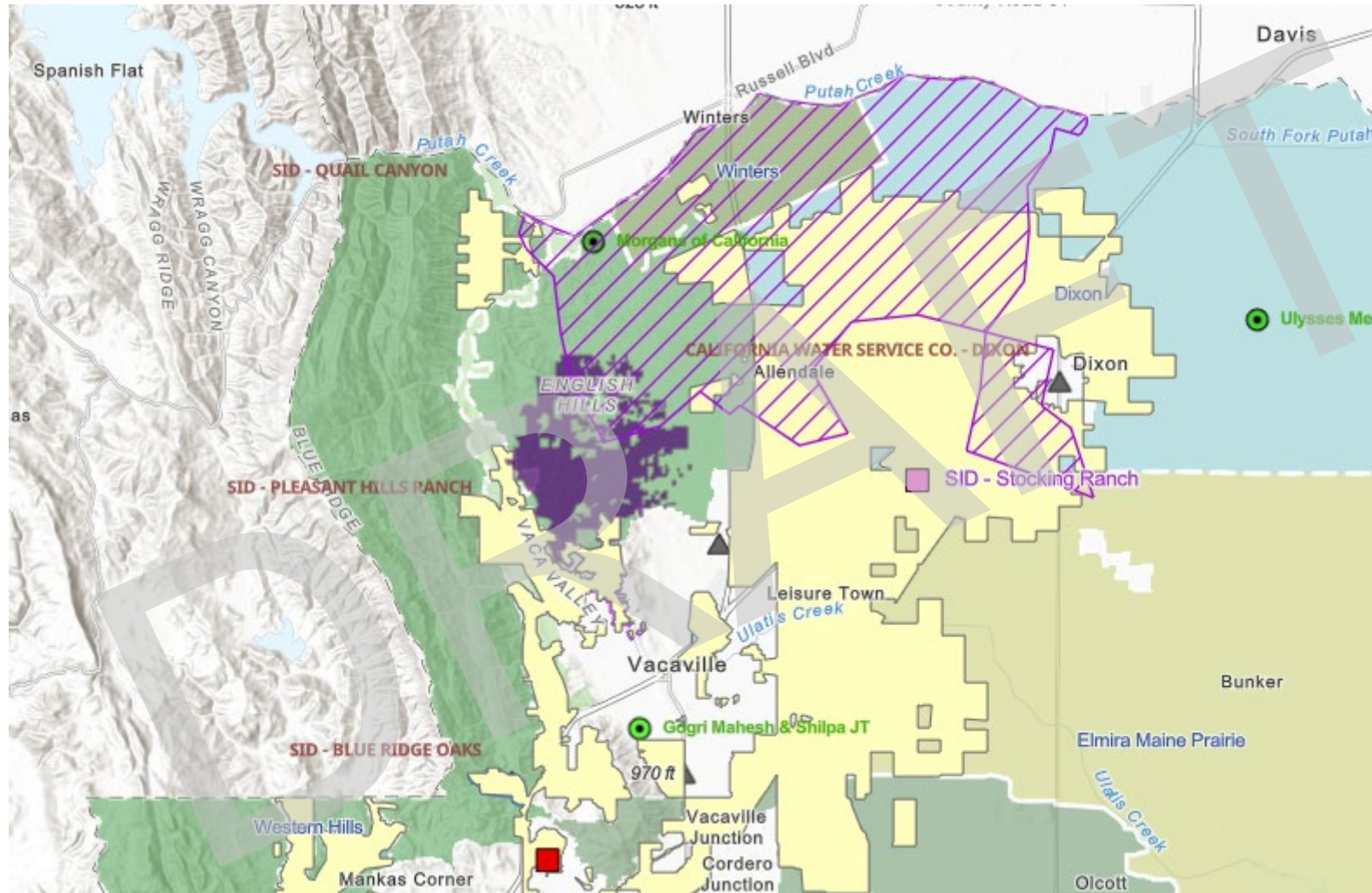
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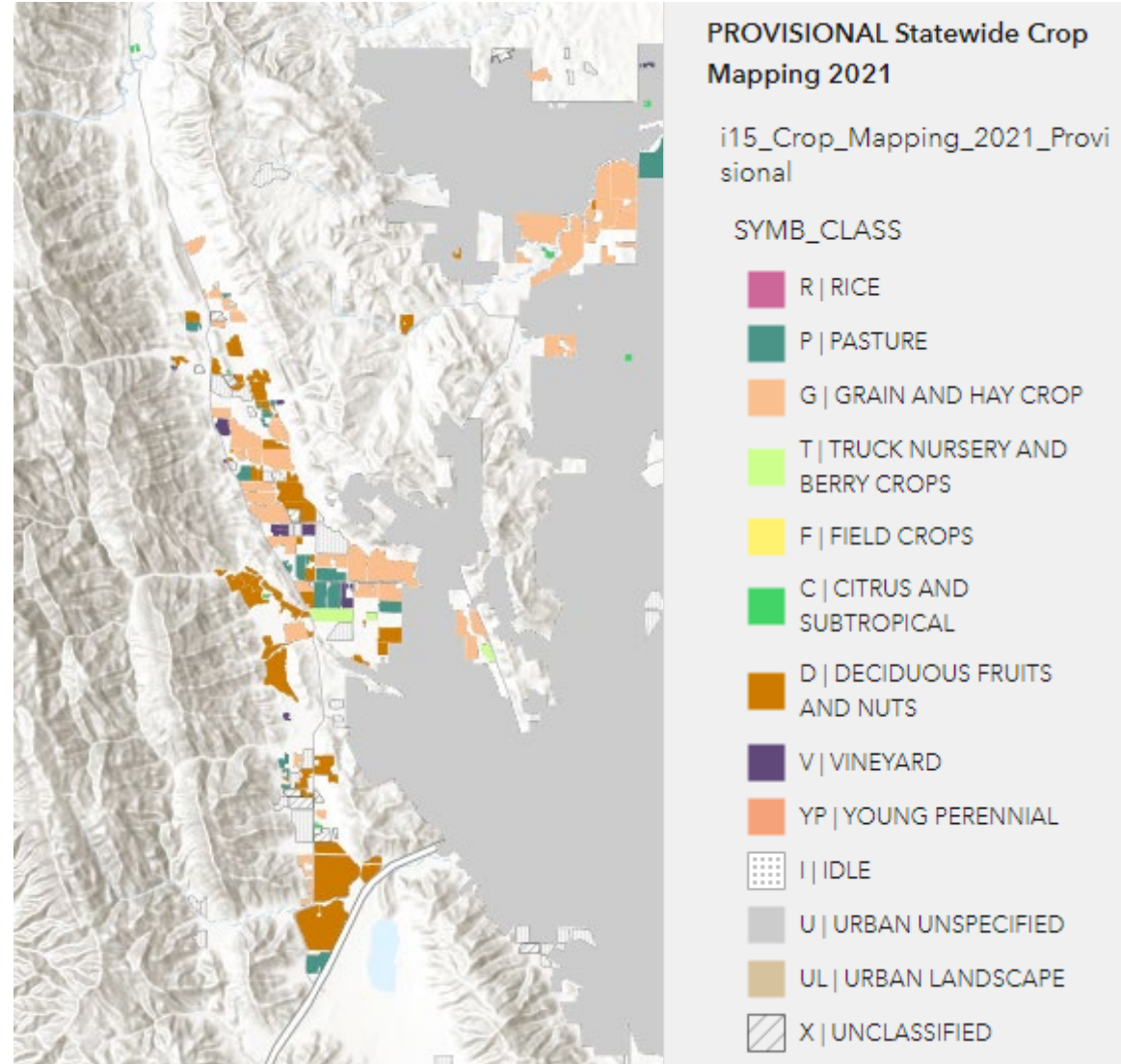
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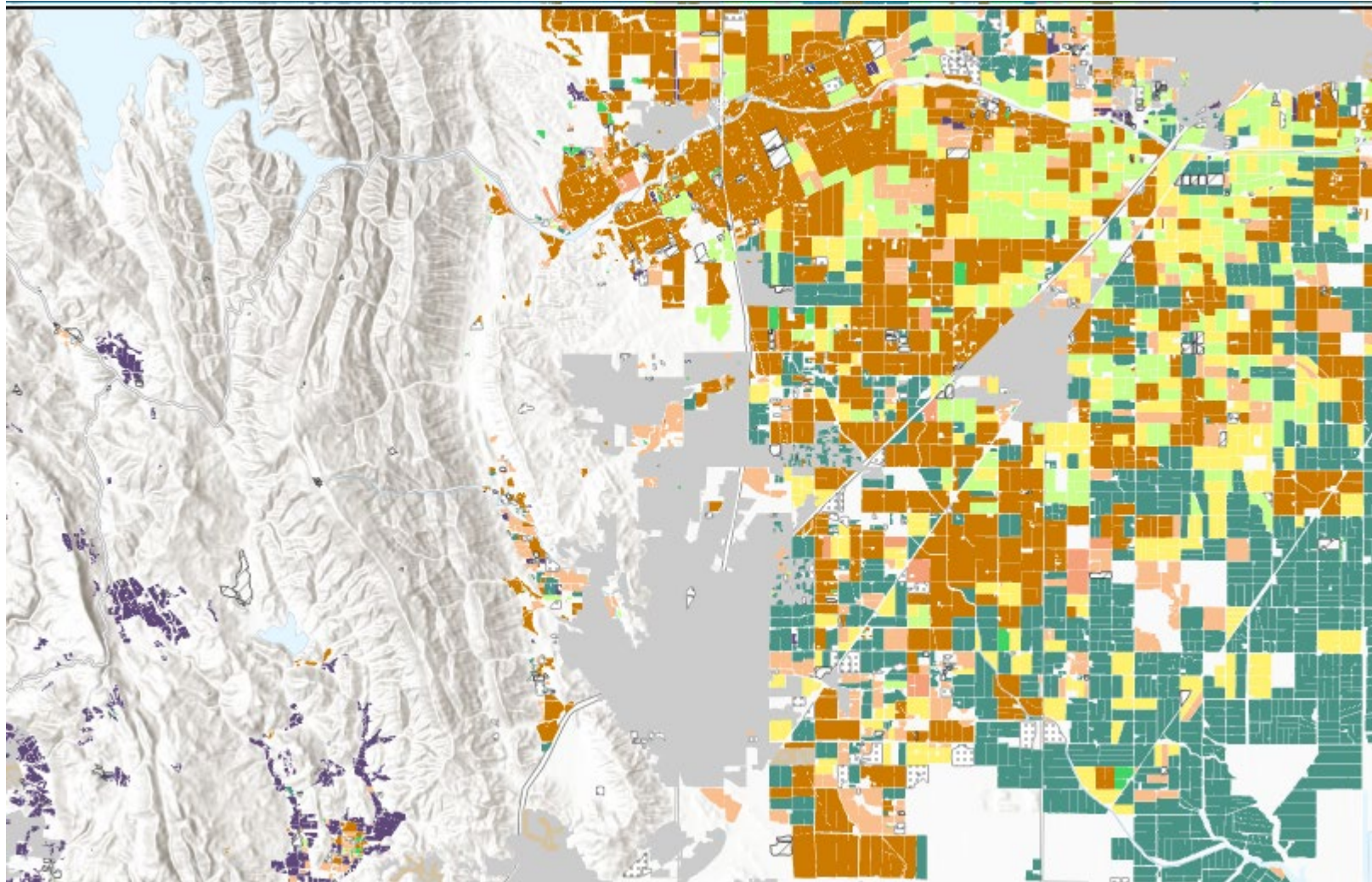
Overview – Water Supply and Conveyance



Overview – Water Supply and Conveyance



Overview – Water Supply and Conveyance



PROVISIONAL Statewide Crop Mapping 2021

i15_Crop_Mapping_2021_Provisional

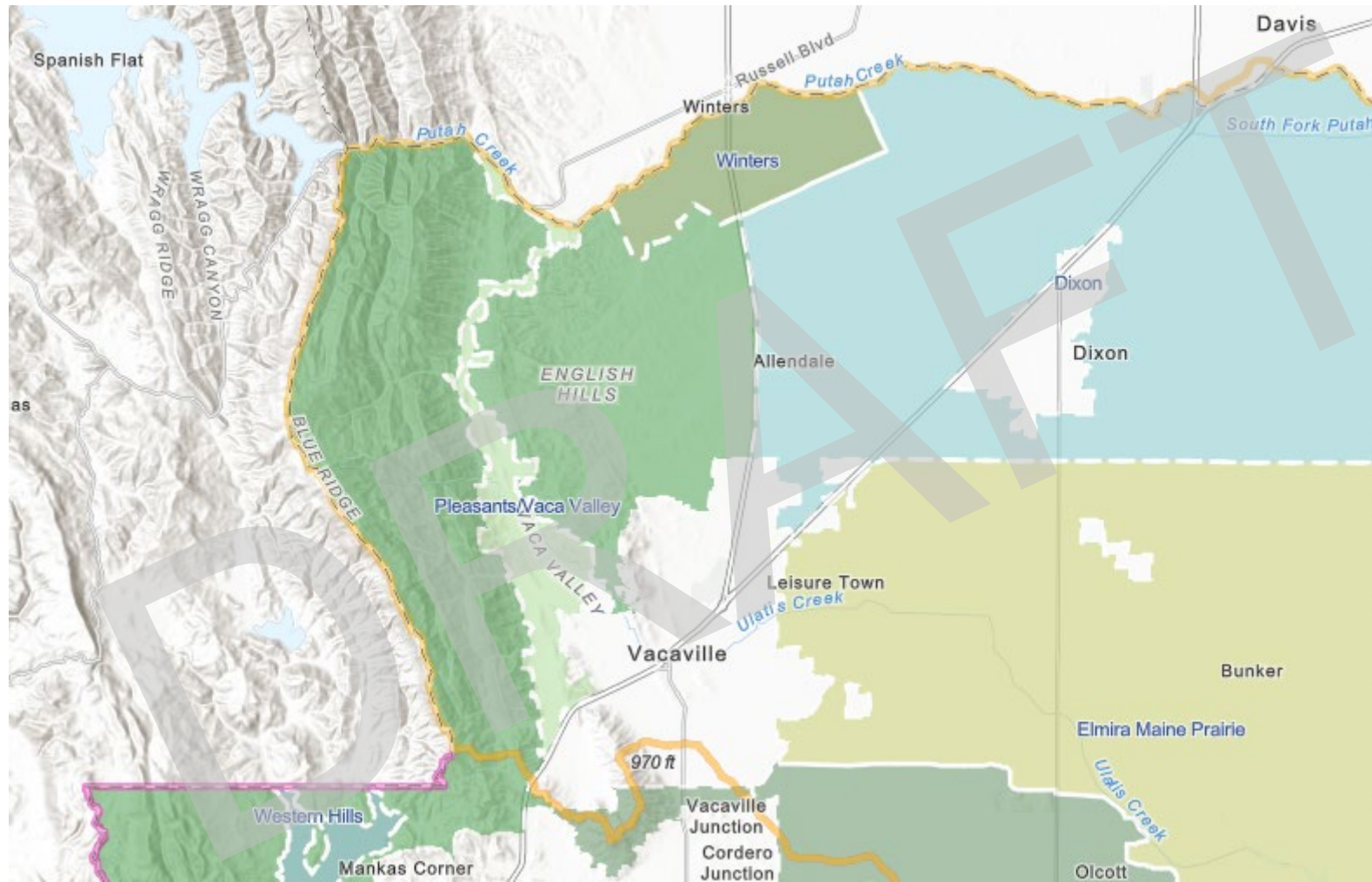
SYMB_CLASS

- R | RICE
- P | PASTURE
- G | GRAIN AND HAY CROP
- T | TRUCK NURSERY AND BERRY CROPS
- F | FIELD CROPS
- C | CITRUS AND SUBTROPICAL
- D | DECIDUOUS FRUITS AND NUTS
- V | VINEYARD
- YP | YOUNG PERENNIAL
- I | IDLE
- U | URBAN UNSPECIFIED
- UL | URBAN LANDSCAPE
- X | UNCLASSIFIED

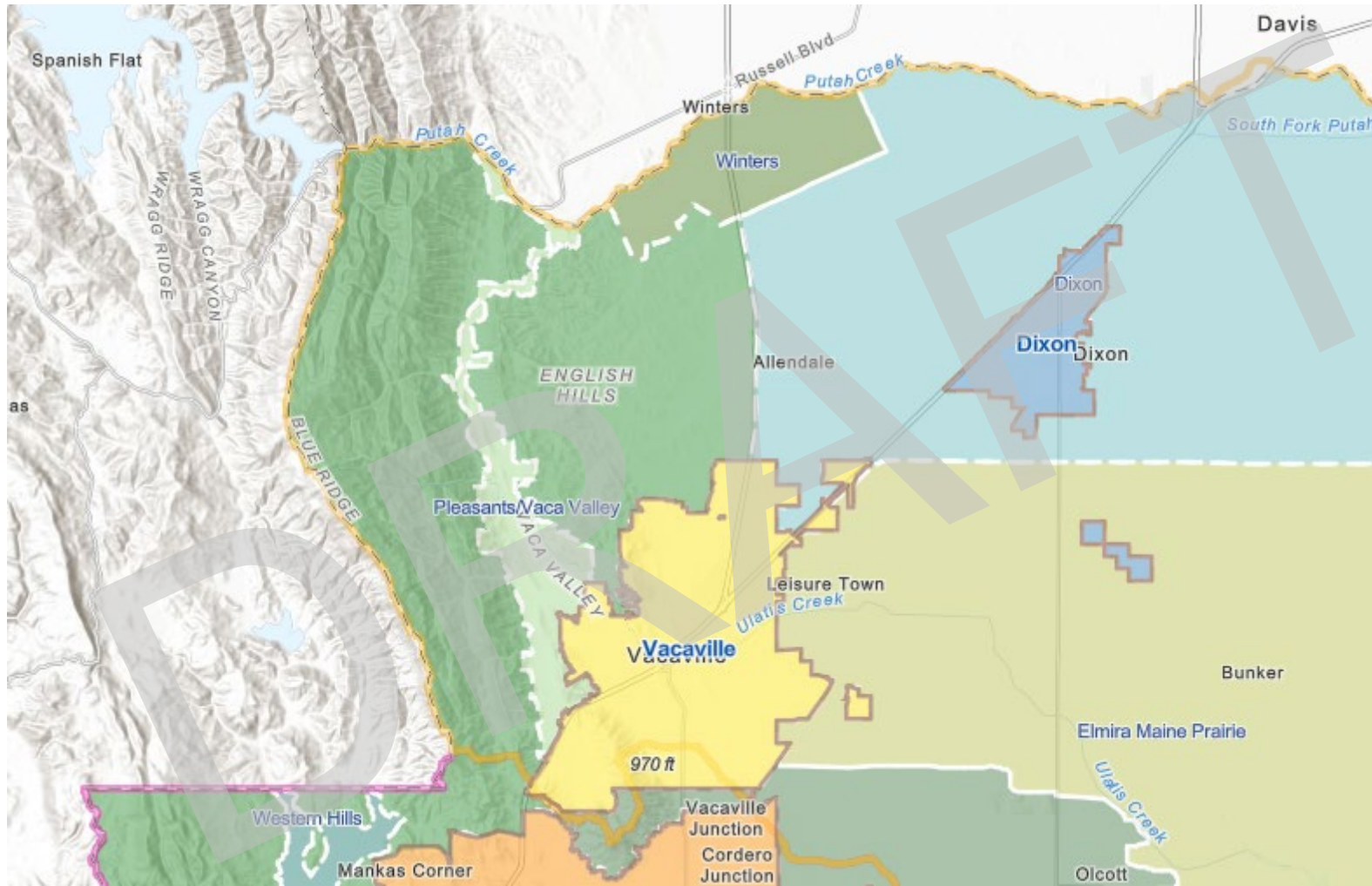
Overview – Water Supply and Conveyance

- Challenges/Needs
 - Supply reliability limited by groundwater quality and physical access to surface water infrastructure.
 - Financial challenges to maintaining/extending water supply/conveyance infrastructure over small customer base.
 - Individual residences – esp in NW Focus Area
 - Small Systems
 - Fire Flow?
 - SAFER-at-risk and potentially-at-risk systems
 - Ag users?
 - Ag industrial area?
 - Can needs be met with recycled water?
- Completed/Planned Actions for water supply and conveyance
 - Consolidations?
 - Co Drought Planning
 - Co Well Ordinance
 - SB610/221 for developments greater than 500 units

Overview – Wastewater



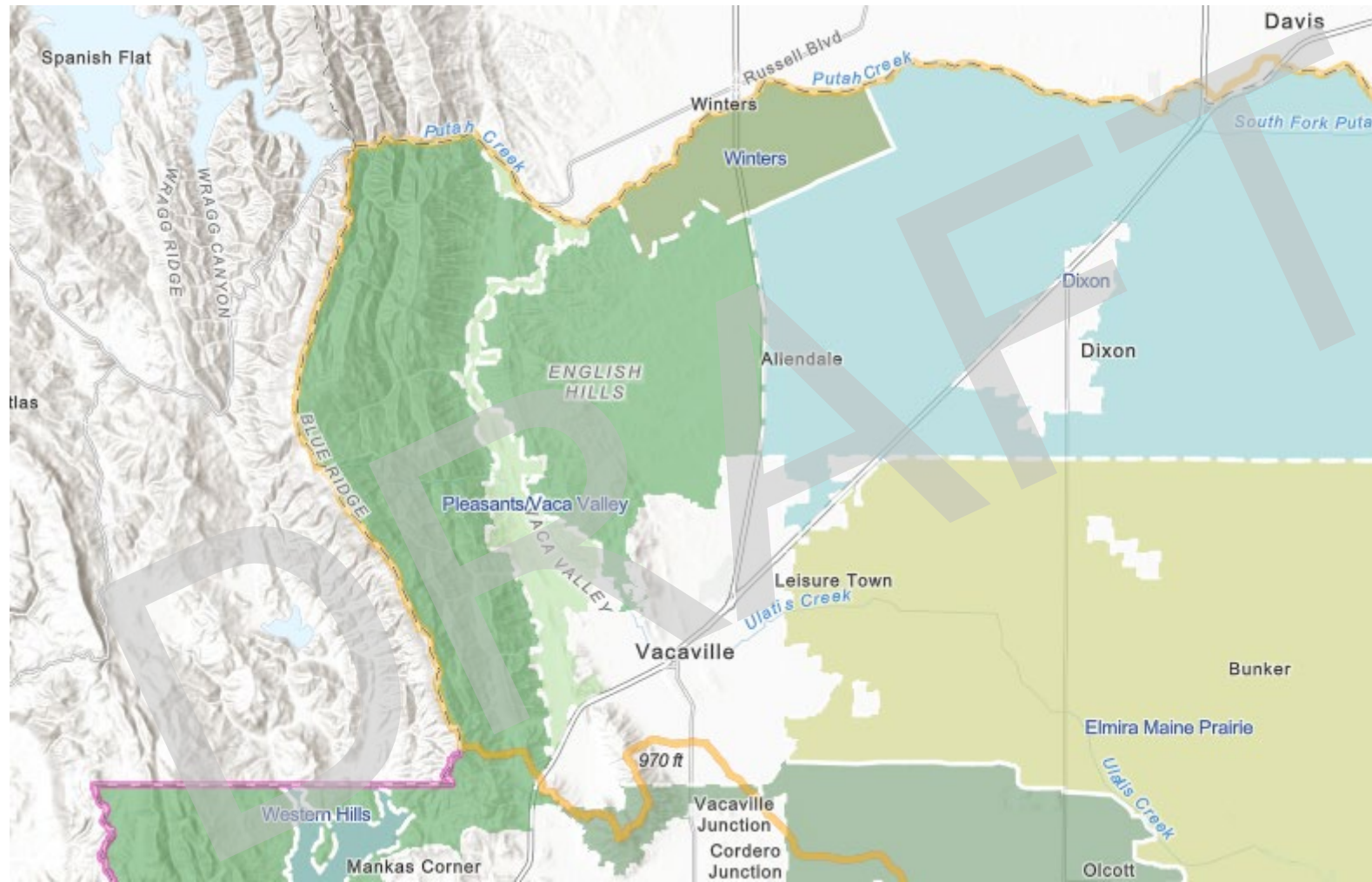
Overview – Wastewater



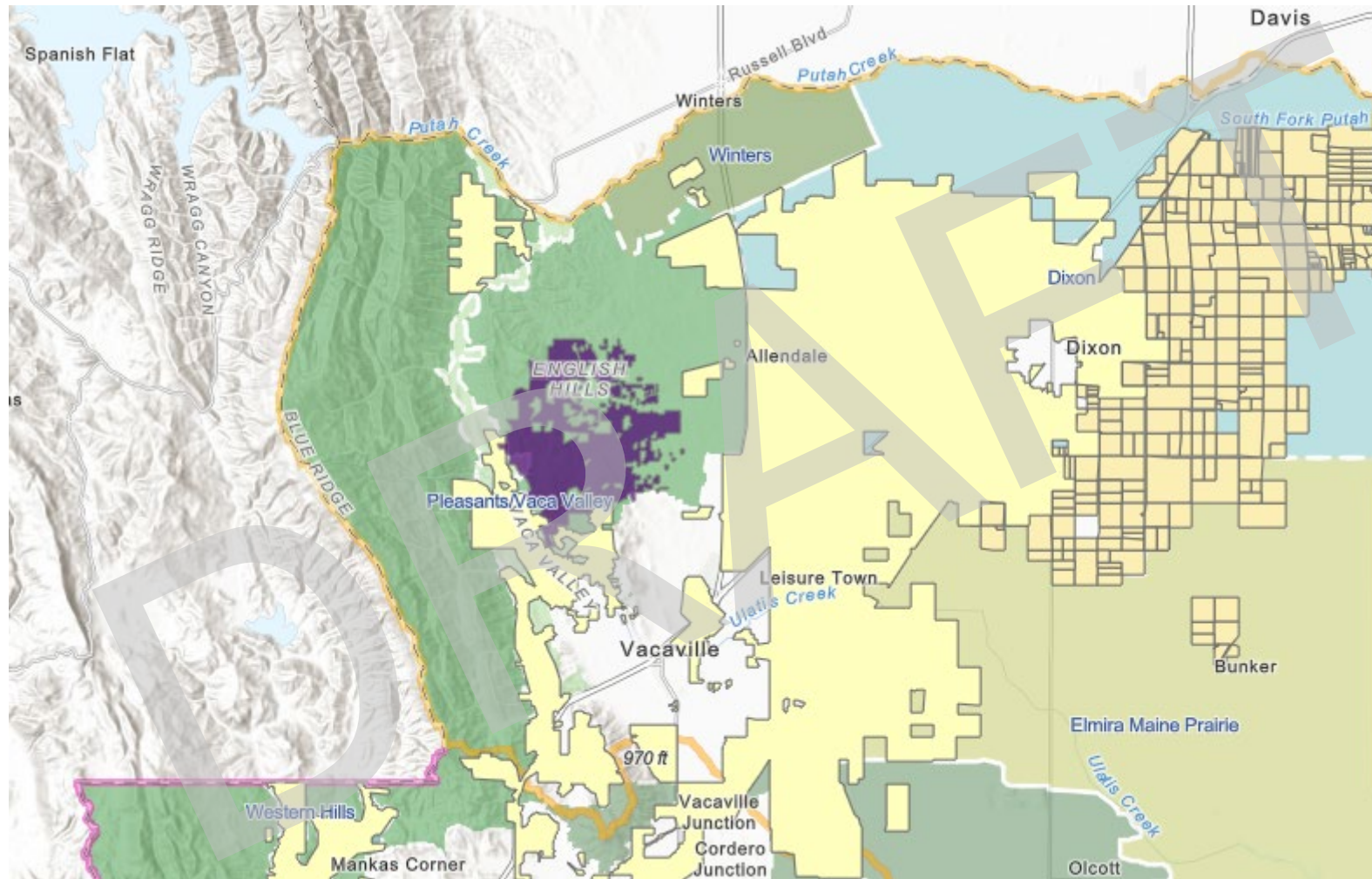
Overview – Wastewater

- Challenges/Needs
 - Lack of septic system maintenance by property owners
 - Little demand for recycled water
 - Pending SFRWQCB nitrogen regulations may impact whether FSSD expands high strength waste service
 - Financial challenges to maintaining/extending wastewater infrastructure
 - Ag industrial area
 - High strength waste
- Completed/Planned Actions for wastewater
 - State/Co Septic Ordinances
 - RWQCB WDR/Waiver programs

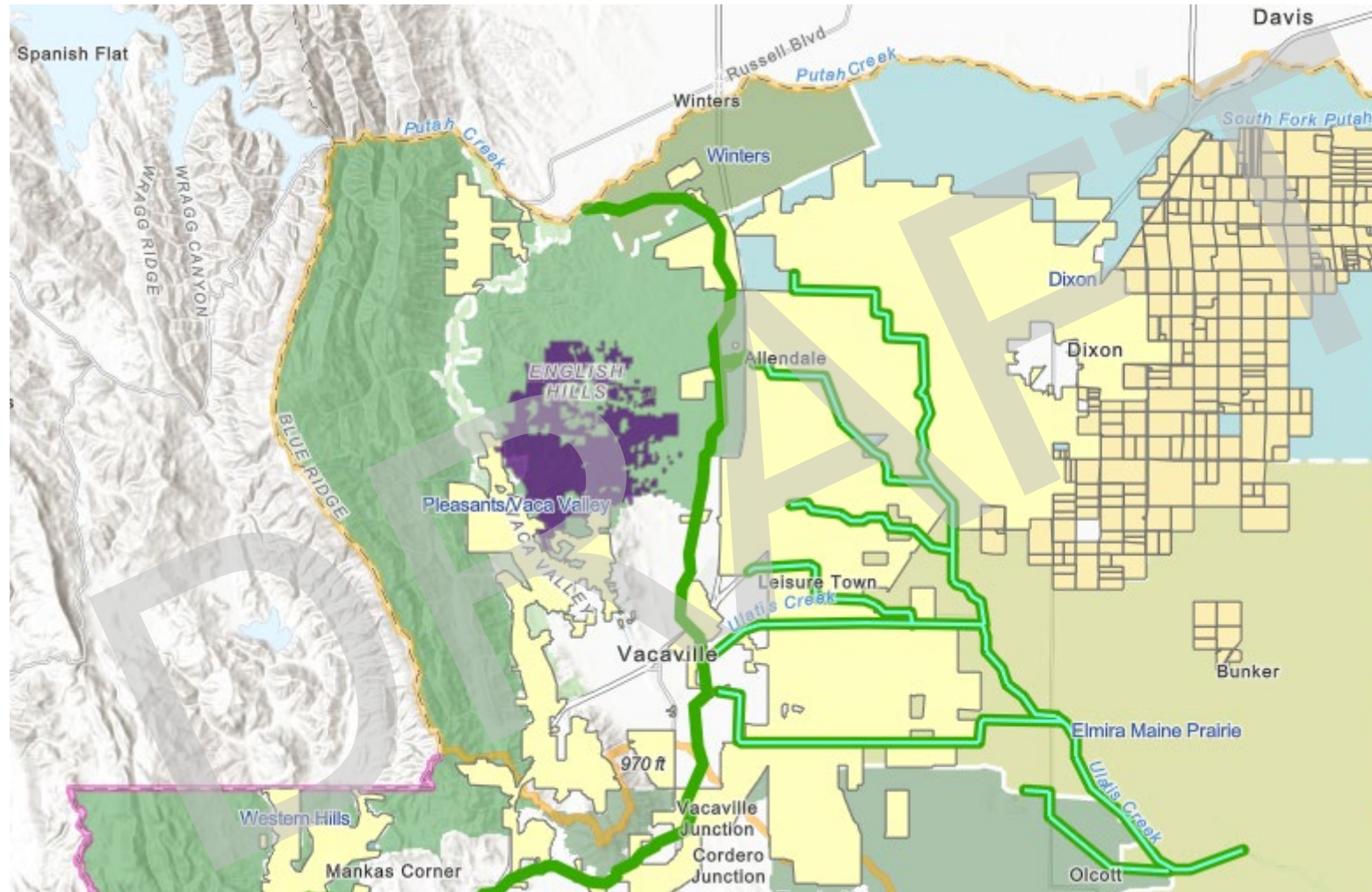
Overview – Flood Control and Drainage



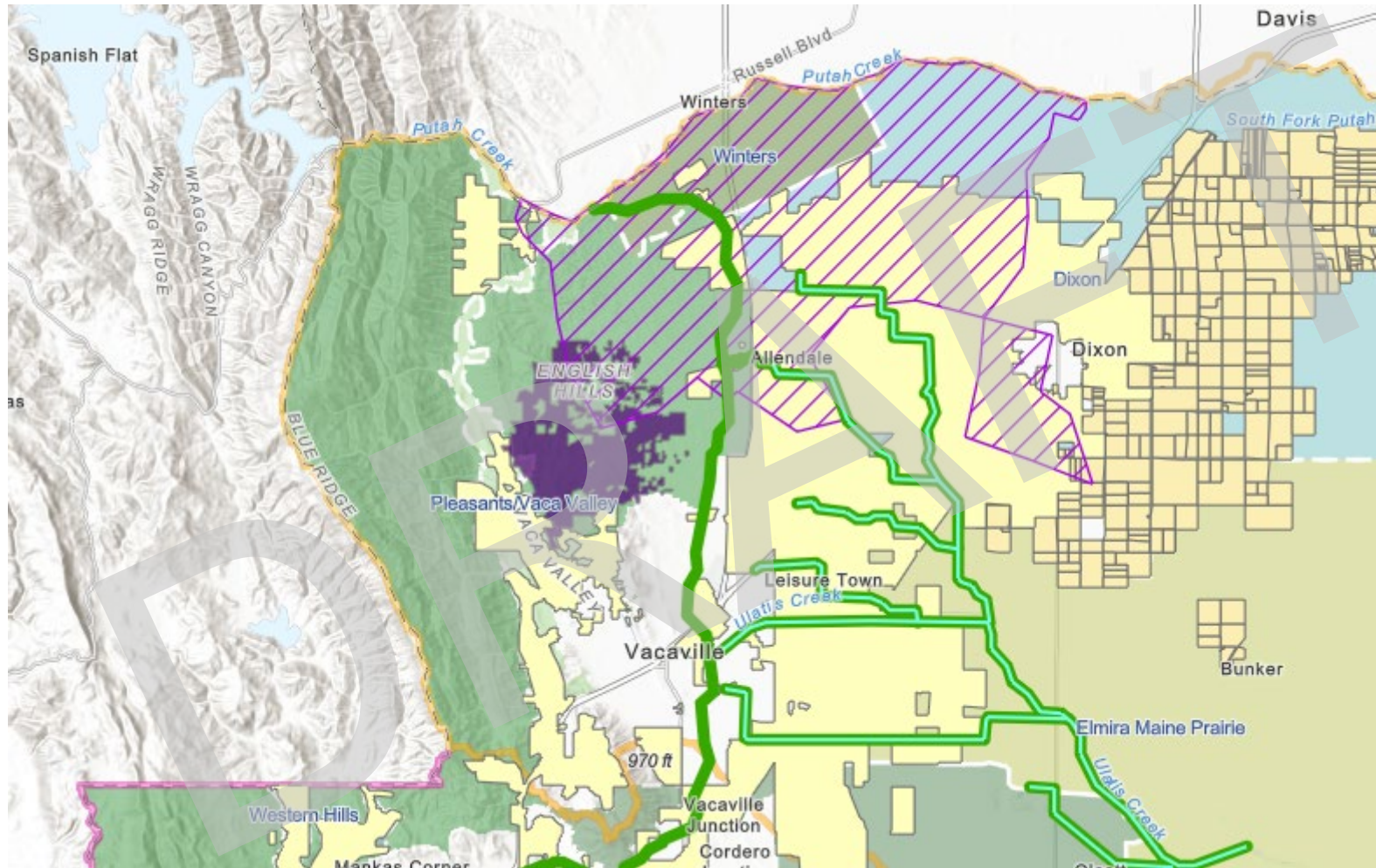
Overview – Flood Control and Drainage



Overview – Flood Control and Drainage



Overview – Flood Control and Drainage



Overview – Flood Control and Drainage

- Challenges/Needs
 - Limited locations to discharge drainage/flood flows during wet periods
 - Multiple entities with responsibilities to maintain/operate natural/engineered drainages
 - Loss of conveyance capacity due to aquatic nuisance vegetation
 - Flooding?
 - Sweany Creek / Allendale area
 - Runoff water quality
 - Return flow vs. storm drainage water for supply and reuse
- Completed/Planned Actions for flood control and drainage
 - General Plan
 - SCWA's Flood Management Policy
 - MS4

Potential Future Master Plan Actions

Discussion

Potential Future Master Plan Actions – Water Supply and Conveyance

Applicable Master Plan Actions - Water Supply and Conveyance - Draft

Consolidation/annexation of small water systems

Funding for on-farm recharge

Better quantify groundwater conditions

Other?

Potential Future Master Plan Actions – Wastewater

Applicable Master Plan Actions – Wastewater - Draft

Identify and quantify potential supplies and infrastructure to integrate water with wastewater, drainage/flood, and recycled water

Evaluate need for wastewater utilities

Identify policy measures needed to improve wastewater (incl onsite wastewater policies)

Take policy position on RWQCB WDR/Waiver Programs, change in nitrogen regulations

Other?

Potential Future Master Plan Actions – Flood Control and Drainage

Applicable Master Plan Actions – Flood Control and Drainage - Draft

Flood/Drainage Master Plan

Local drainage improvement actions (canal clearing, streamlined permitting, larger conveyance, detention basins)

Review and implement drainage policies

Other?

Developing Criteria for Prioritization of Multi-Benefit Projects

Potential Prioritization Criteria

- Action type (e.g., design and construction, data collection, planning, policy)
- Champion
- Geographical Scope
- Significance/Scale of Benefit
- Time Frame
- Feasibility

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- Draft Framework Chapter:
 - 3: Goals and Actions that Integrate All Aspects of Water Resources Management – December 2023
- Follow-Up Meetings: Agricultural Area-Specific Discussions
 - Green Valley
 - Eastside (Dixon + Elmira Maine Prairie)