



**WATER
AGENCY**

Onsite Wastewater Treatment Program Review

Zone 7 Board of Directors
June 17, 2026

2025 – 2029 Strategic Plan Alignment

GOAL D

Groundwater Management

Manage and protect the groundwater basin as the State designated Groundwater Sustainability Agency.

Initiative 11

Manage the GSA and implement the Groundwater Sustainability Plan

Agenda

- Objectives
- Background
- Summary of Zone 7's OWTS Regulations
- Assessment of Current Wastewater Requirements
- Recommended Updates



Objectives

- To update on the Onsite Wastewater Treatment System (OWTS)-also known as the septic use permitting program
- To inform of inconsistencies between agencies
- To highlight current land use policies and regulations
- To recommend potential board actions for amending the Zone 7 1982 Wastewater Treatment Plan and the 2015 Nutrient Management Plan

Acronyms

ACDEH – Alameda County Department of Environmental Health

ADU – Accessory Dwelling Unit

AOCs – High Nitrates Areas of Concern

LAMP – Local Area Management Program for managing septic systems

LAVWMA - Livermore Amador Valley Water Management Agency

SB – Senate Bill

SGMA – Sustainable Groundwater Management Act

NMP – Nutrient Management Plan

OWTS – Onsite Wastewater Treatment Systems

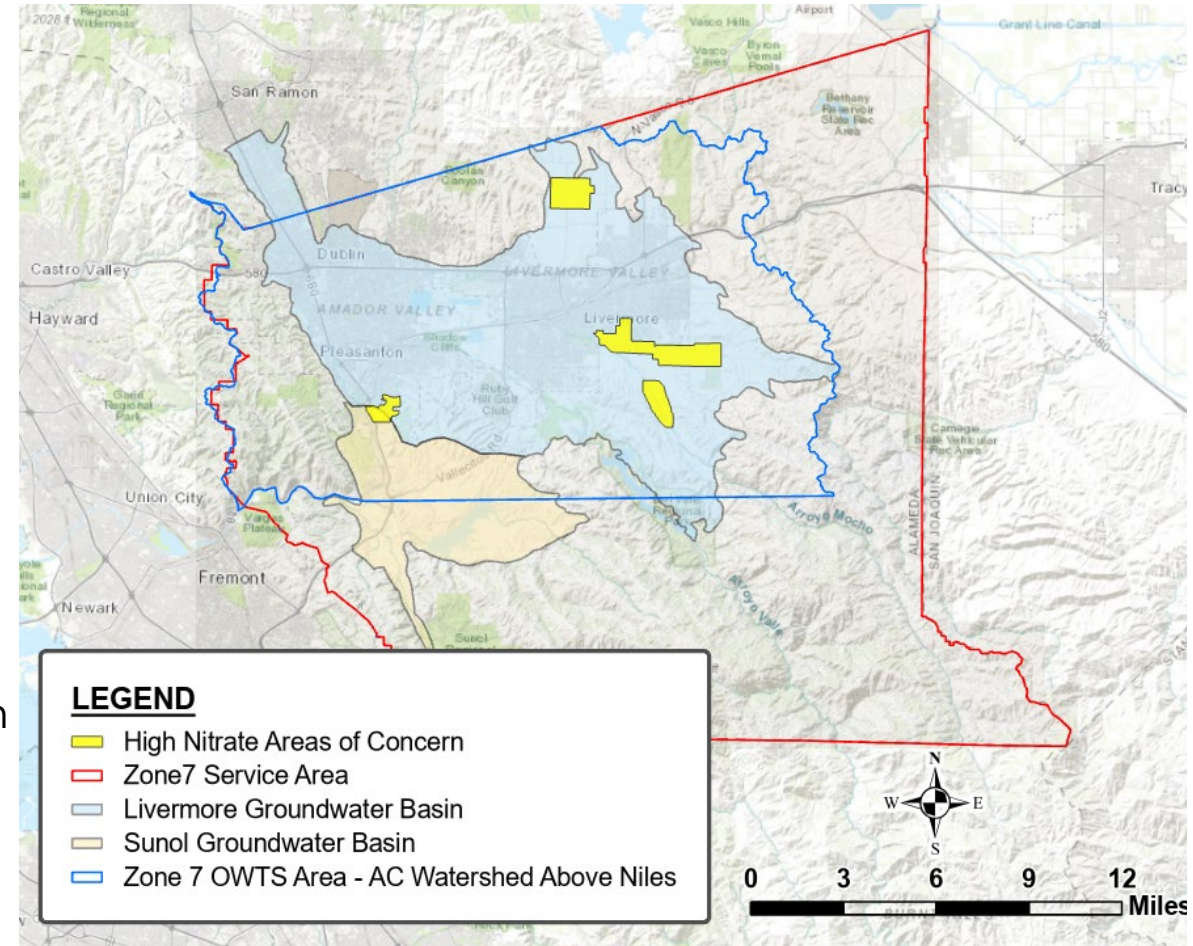
RRE – Rural Residential Equivalence of Nitrogen loading (to a 3-bedroom home)

WMP – Wastewater Management Plan

Background

What does Zone 7's septic permitting program do?

- Manages the discharge of nitrogen in unsewered unincorporated areas of the Upper Alameda Creek Watershed
- Prohibits commercial use of OWTs unless the Zone 7 Board approves an exception
- Regulates the amount and type of nitrogen loading
- Works in coordination with the Alameda County Environmental Health Department (ACDEH) septic design permitting and the Alameda County Planning Department



Background – Septic and Land Use Policies

1. **1975 SFRWQCB Basin Plan** – Nitrate limit 45mg/l (updated in 2023)
2. **1982 Resolution 1037** - Wastewater Management Plan, Minimum 5-acre lot size
3. **1985 Resolution 1165** – Commercial and Industrial Land Use Permitting
4. **2015 Resolution 15-71 (Nutrient Management Plan)** – Stricter requirements in “Areas of Concern”, Recognition of new “Advanced Treatment” septic technologies, Loading type Best Management Practices
5. **2018 ACDEH LAMP** – Alameda County Department of Environmental Health incorporates Zone 7’s loading limits into the County’s Local Agency Management Program (LAMP) for Onsite Wastewater Treatment Systems
6. **2022 California SB-9** - Ministerial approval of up to two properties per lot and lot split
7. **2025 California SB 12-11** – Allows up to 8 separate ADUs on a single lot

Assessment of Current OWTS Requirements

1. The Minimum Lot Size recommended in the Wastewater Management Plan (WMP):
 - Did not account for today's advanced treatment and nitrogen reduction.
 - Uses 34 pounds of nitrogen loading, based on a 5-acre minimum lot size.
 - Allows for 34 pounds of loading on smaller lots: lots of record, variance subdivision.
2. New housing laws promote increased housing density:
 - 2021 California Senate Bill 9 - Ministerial approval of lot split and ADU
 - 2024 California Senate Bill 1211 – ADU allowance increase from 2 to 8 detachable units per lot

Assessment of Current OWTS Requirements (cont.)

3. Unclear minimum lot size between agencies:

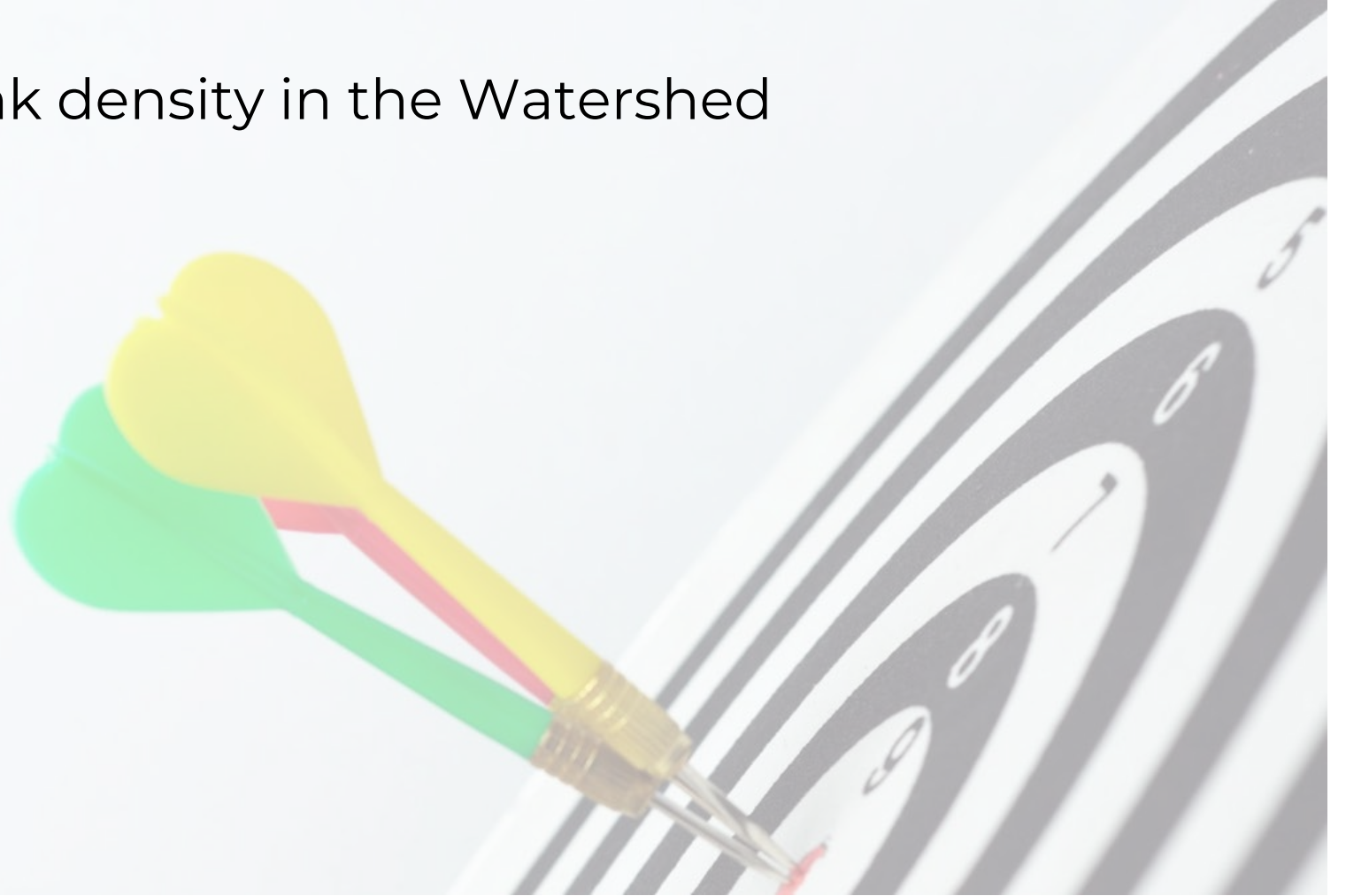
- *ACDEH's minimum 40,000 to 60,000 square feet unless more restrictive requirements must be met.*
- Zone 7's 5-acre lot size within the watershed above Niles Canyon Rd.

4. The variance requirement, "*improvement of groundwater quality,*" described in the 1982 WMP is ambiguous

5. Board approval for Wastewater Treatment Plants is not included.

Septic Tank Density Assessment

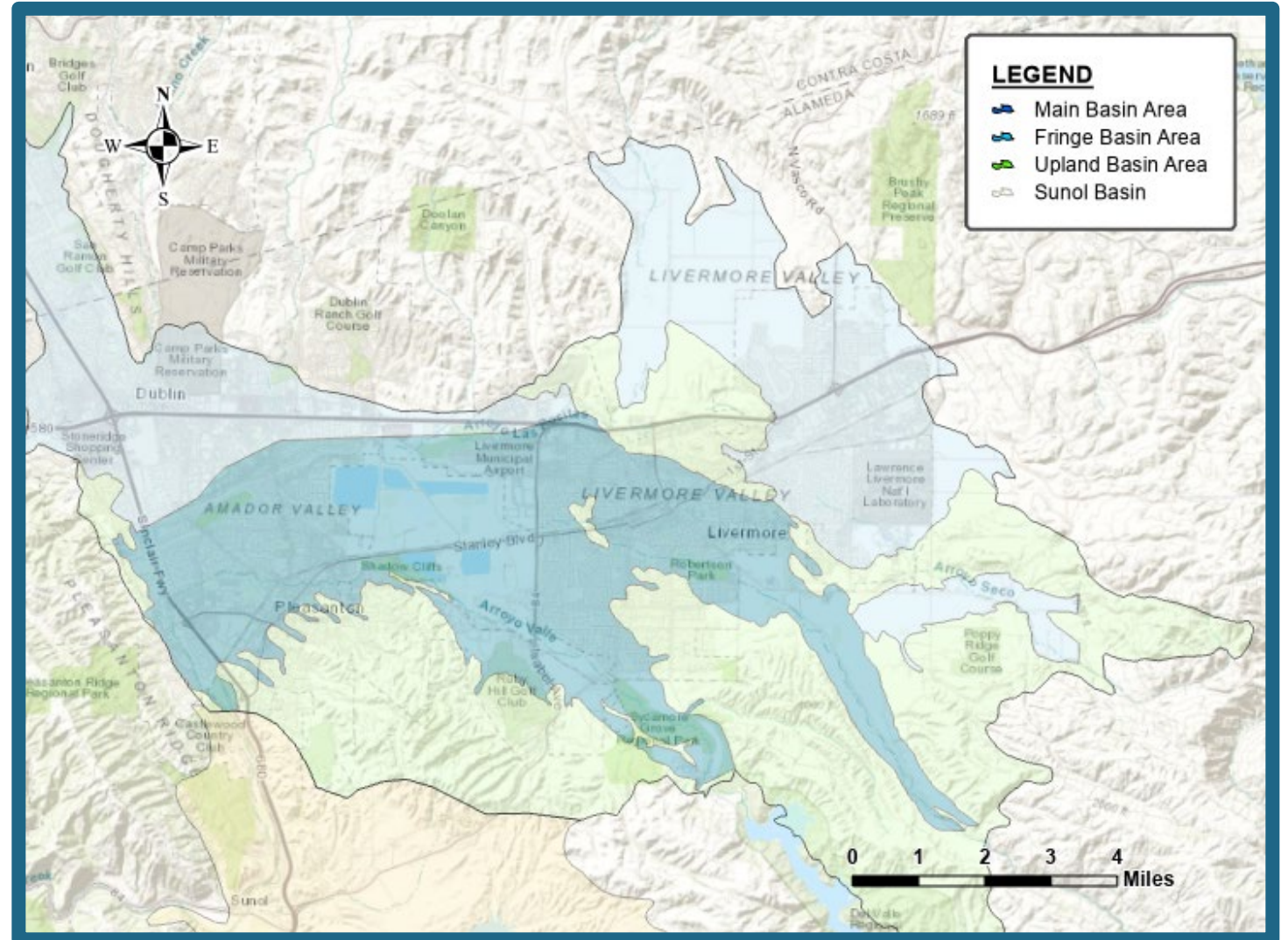
- Reviewed septic tank density in the Watershed



Septic Tank Density Assessment

OWTS Factors

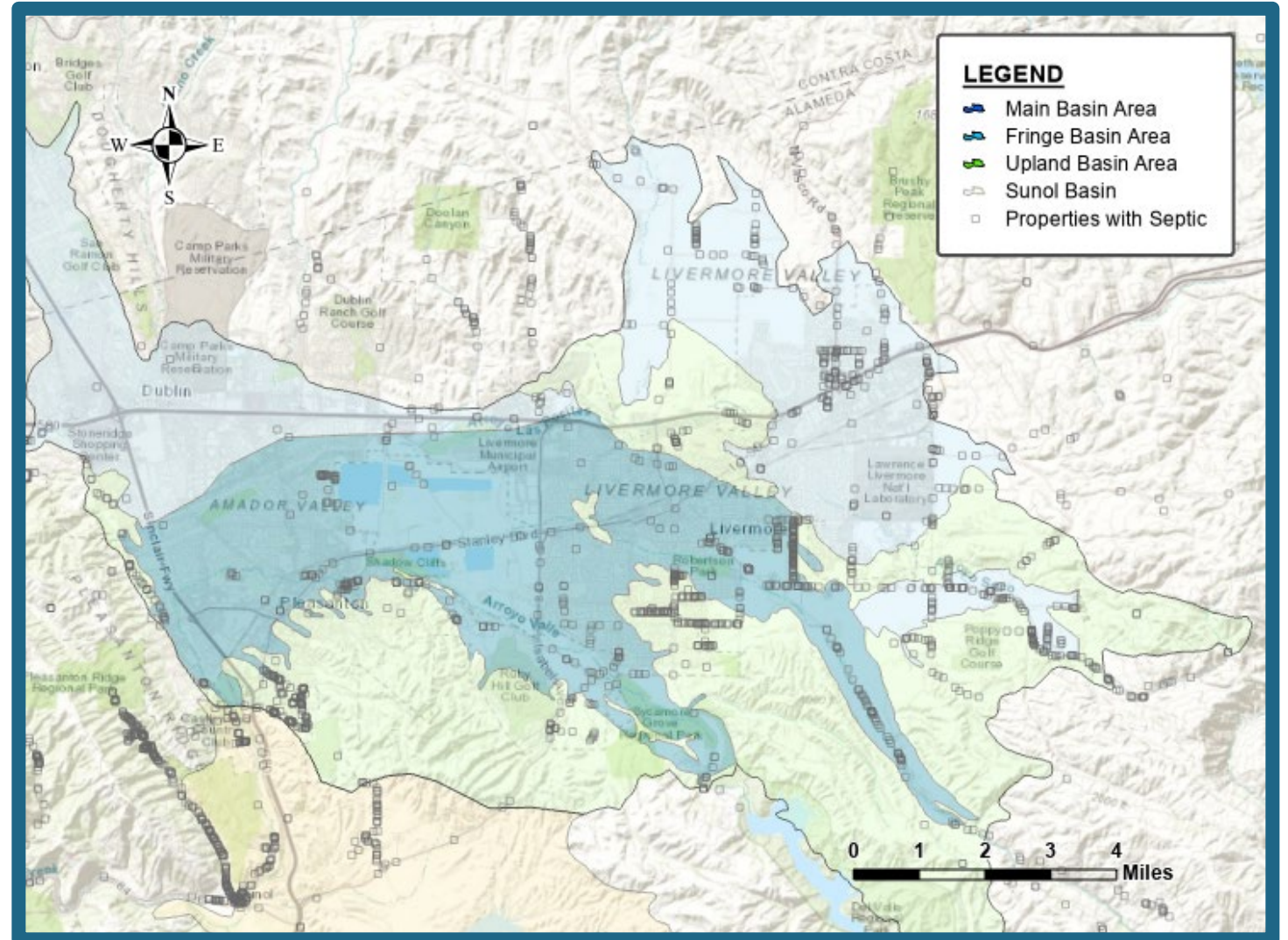
- Basins



Septic Tank Density Assessment

OWTS Factors

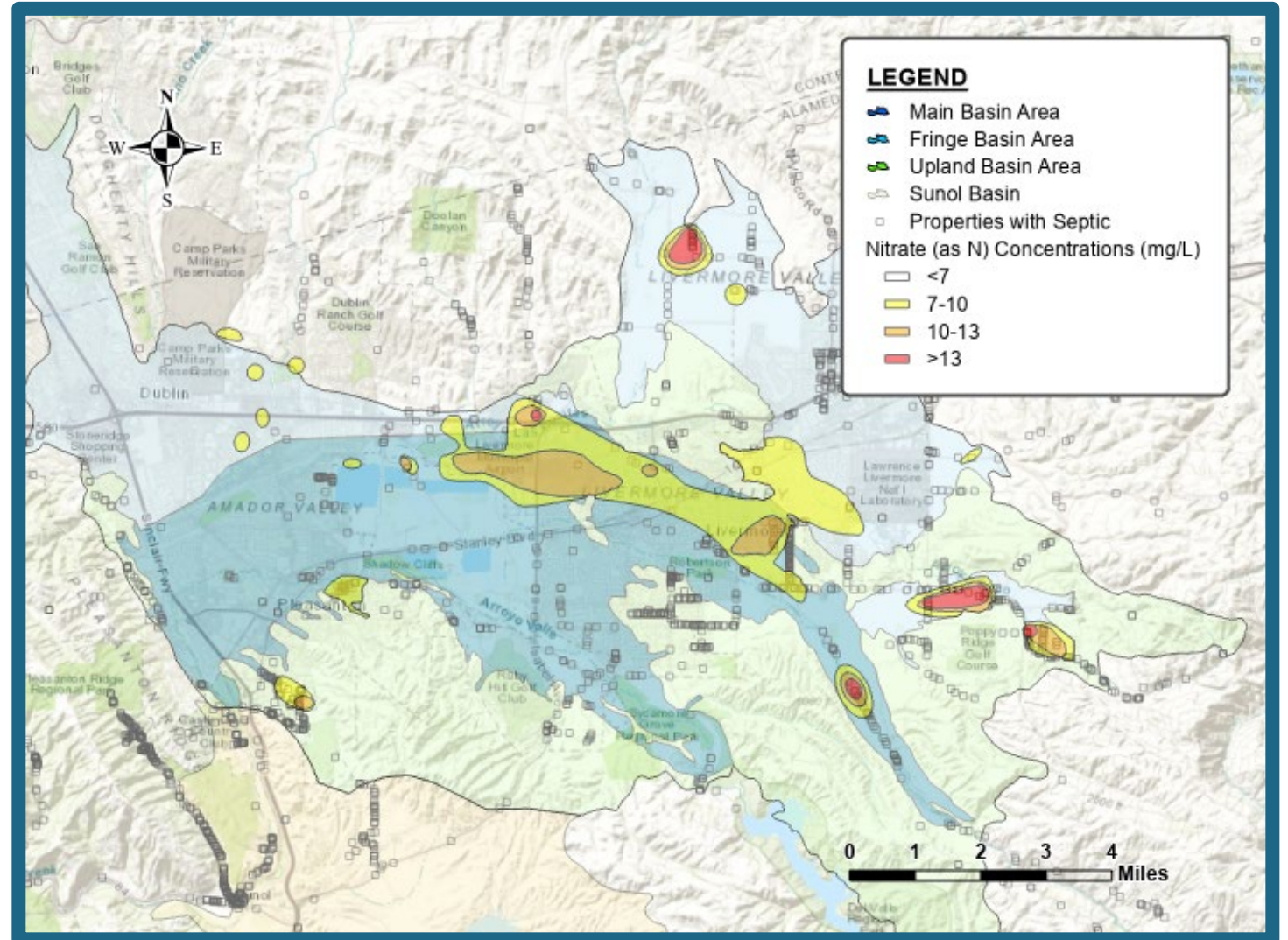
- Basins
- Septic Sites



Septic Tank Density Results

OWTS Factors

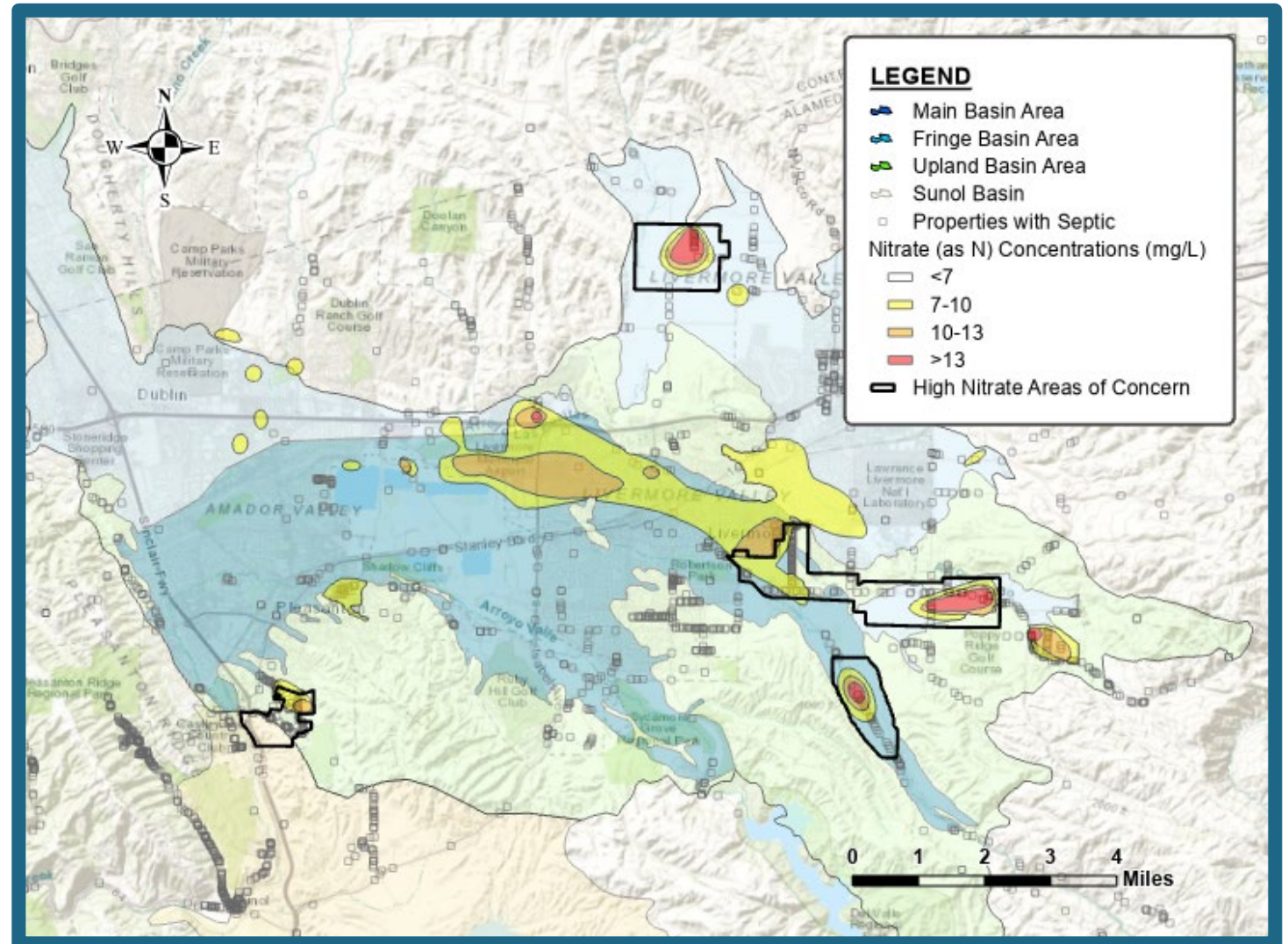
- Basins
- Septic Sites
- Nitrate Plume (Upper)



Septic Tank Density Assessment

OWTS Factors

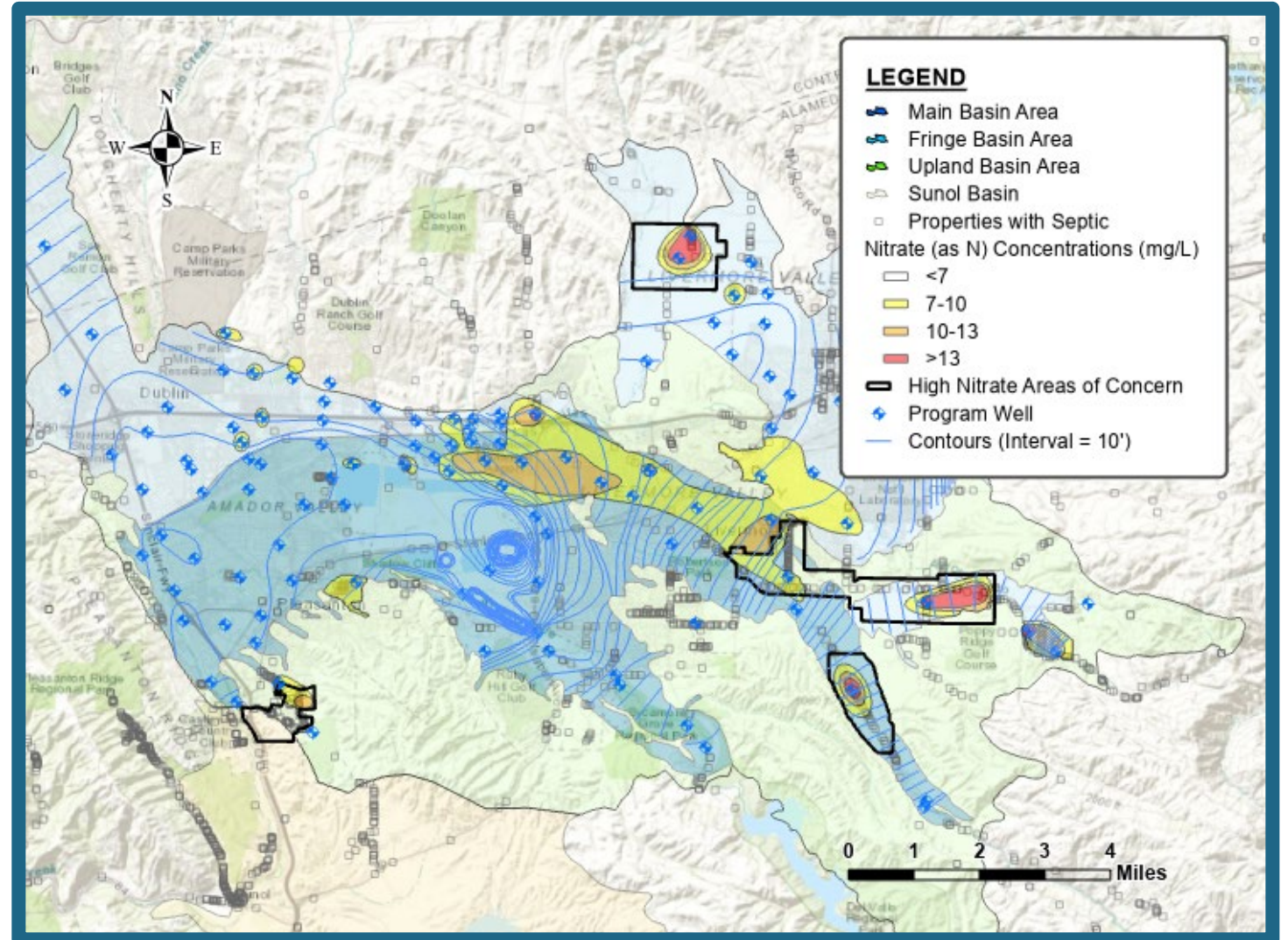
- Basins
- Septic Sites
- Nitrate Plume (Upper)
- Nitrates Areas of Concern



Septic Tank Density Assessment

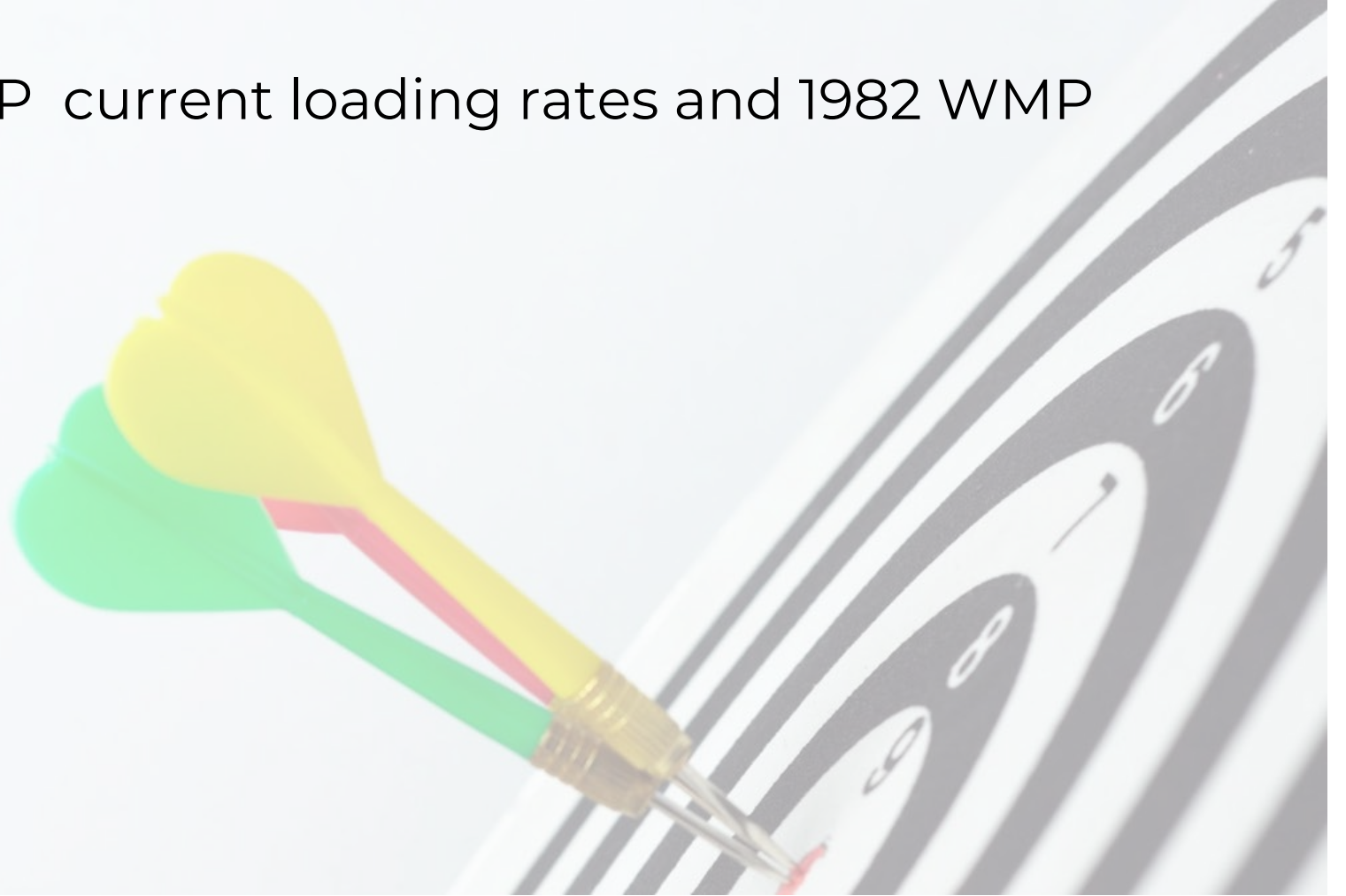
OWTS Factors

- Basins
- Septic Sites
- Nitrate Plume (Upper)
- Nitrates Areas of Concern
- Groundwater Gradients



Lot Size and Loading Recommendations

1. Evaluated 2015 NMP current loading rates and 1982 WMP minimum lot sizes



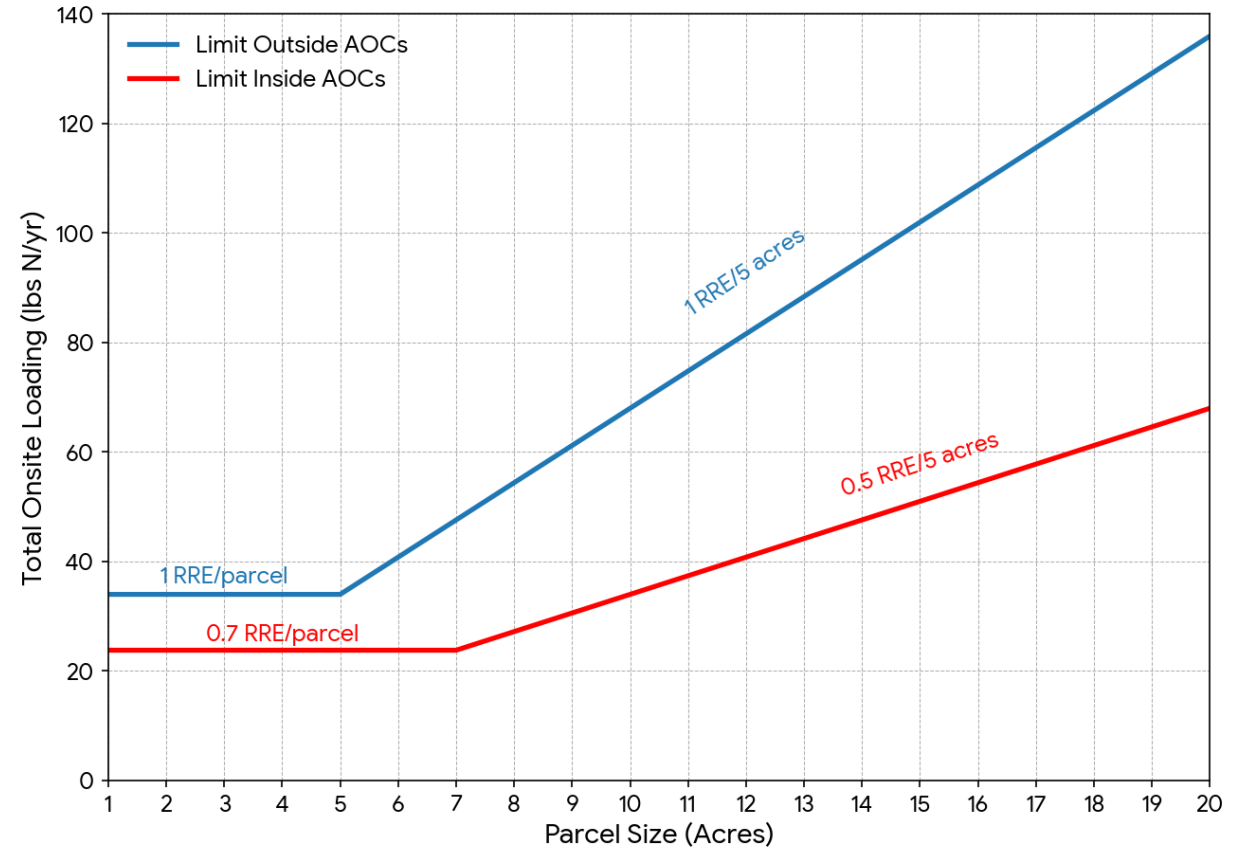
Lot Size and Loading Recommendations

Policy Update Zone 7 2015

Nutrient Management Plan (reflected in the ACDEH LAMP)

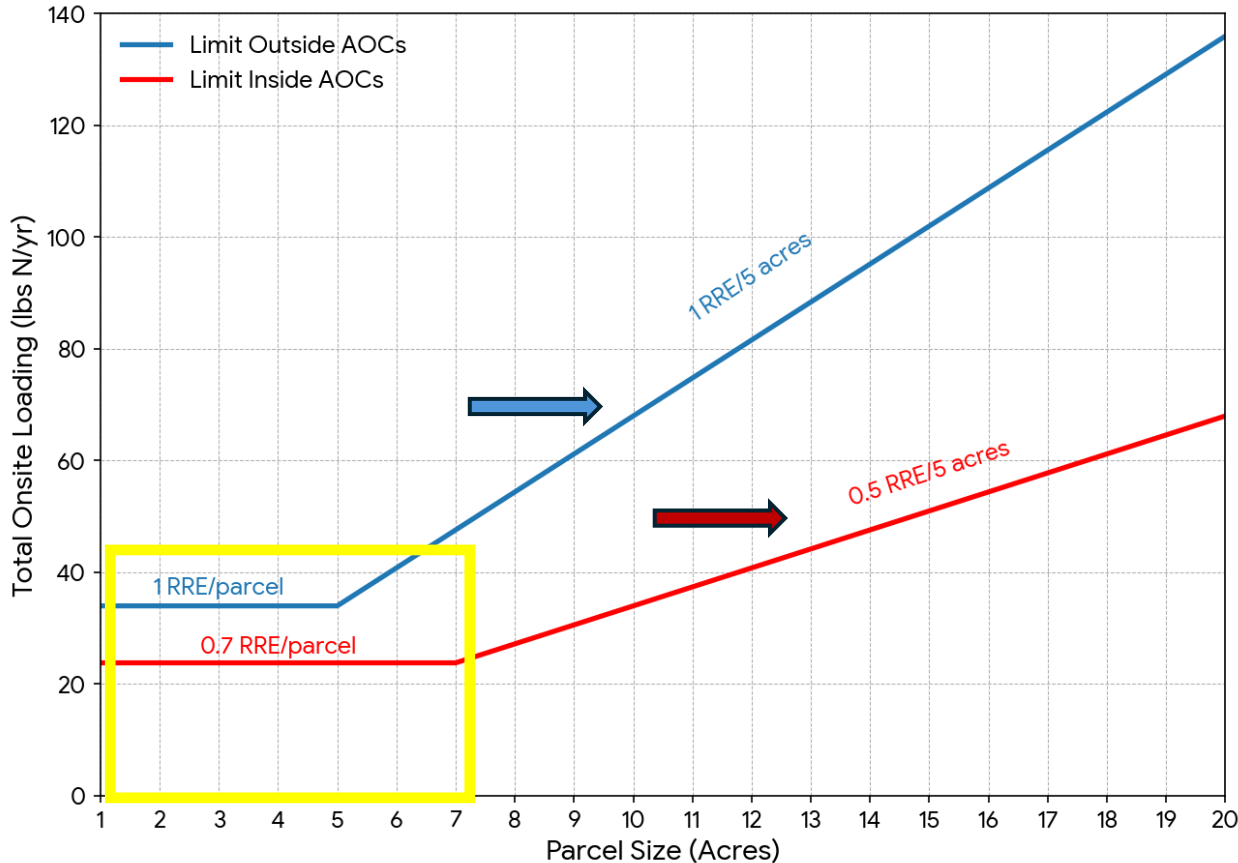
- Replace: 5-acre minimum lot size
- Add: Further restrict loading below 5 acres by proportionalizing requirements
- Maintain: Groundwater quality goals

Existing - Graphs of OWTS Limits



Lot Size and Loading Recommendations

Existing - Graphs of OWTS Limits



Existing - Loading Rate Table

Maximum Allowable Annual Nitrogen Loading Per Parcel for Parcels Located in Zone 7 Jurisdiction

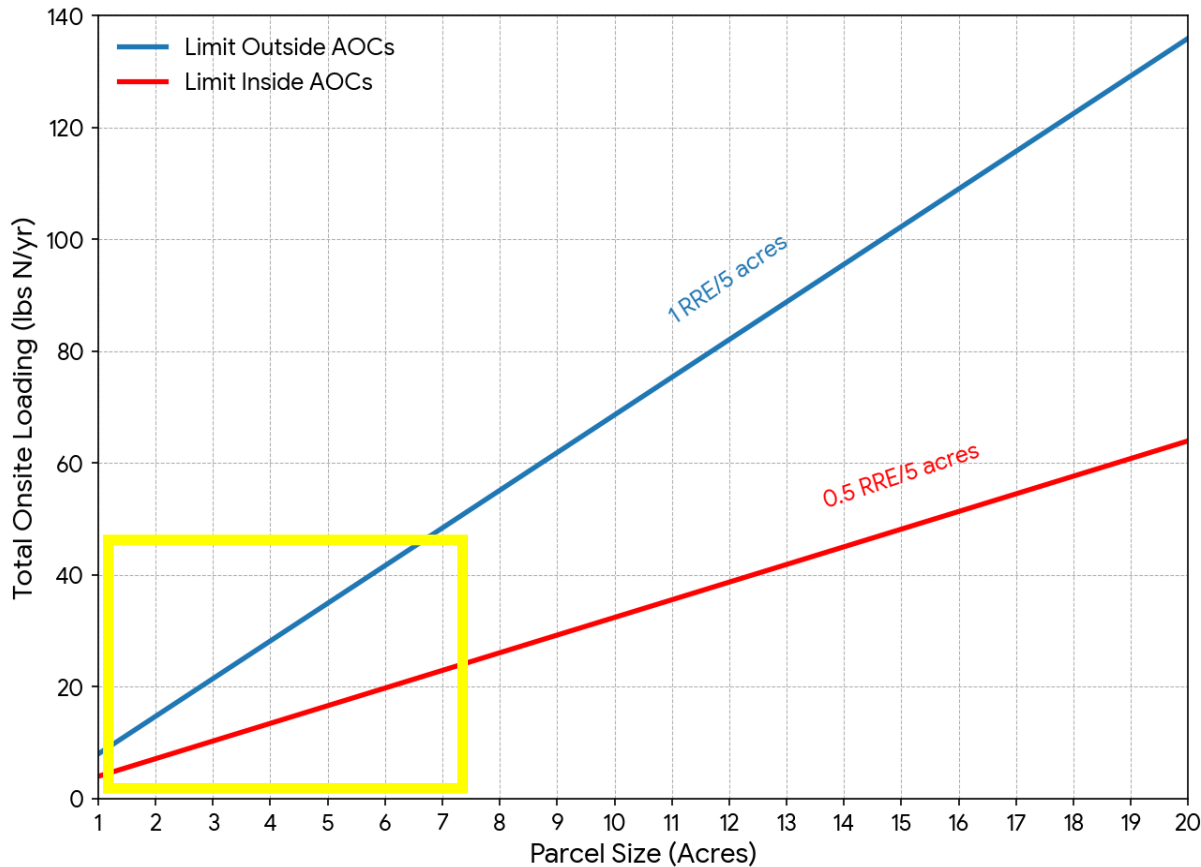
Parcel Location	Parcel Size	Nitrogen Loading (lbs)
Outside AOC	Parcels ≤ 5 Acres	34
	Parcels > 5 Acres	(# Acres) * 6.8
Inside AOC	Parcels ≤ 7 Acres	23.8
	Parcels > 7 Acres	(# Acres) * 3.4 (# Acres) * 6.8*

Notes:

*Alternative loading rate allowed if a hydrogeological study is performed that assesses current groundwater nitrate conditions beneath the site and demonstrates that the proposed project will not cause nitrate concentrations to rise.

Lot Size and Loading Recommendations

Proposed - Graphs of OWTS Limits



Proposed - Loading Rate Table

Maximum Allowable Annual Nitrogen Loading Per Parcel for Parcels Located in Zone 7 Jurisdiction

Parcel Location	Nitrogen Loading (lbs)
Outside AOC	(# Acres) * 6.8
Inside AOC	(# Acres) * 3.4

Notes:

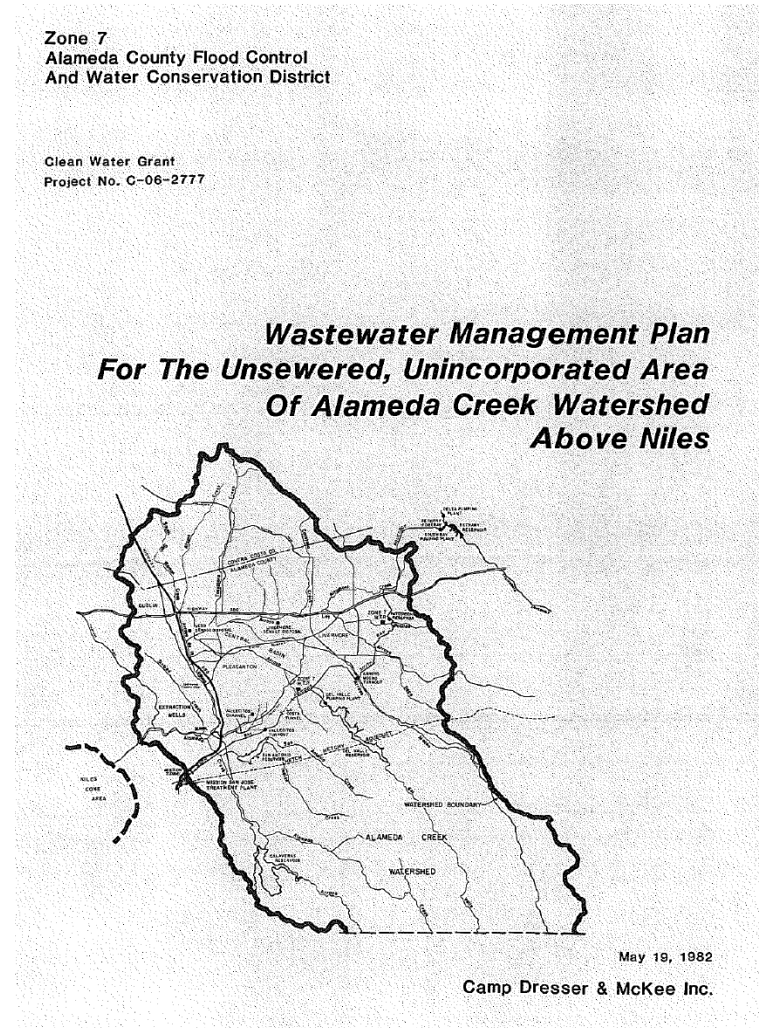
Alternative loading rate allowed if a hydrogeological study is performed that assesses current groundwater nitrate conditions beneath the site and demonstrates that the proposed project will not cause nitrate concentrations to rise.

Loading Example (Outside AOC)

Lot Size (acres)	Existing Allowable Loading (lbs)	Proposed Allowable Loading (lbs)
2.5	34	17
5	34	34
10	68	68

Other Recommendations – Clarify Policy Language

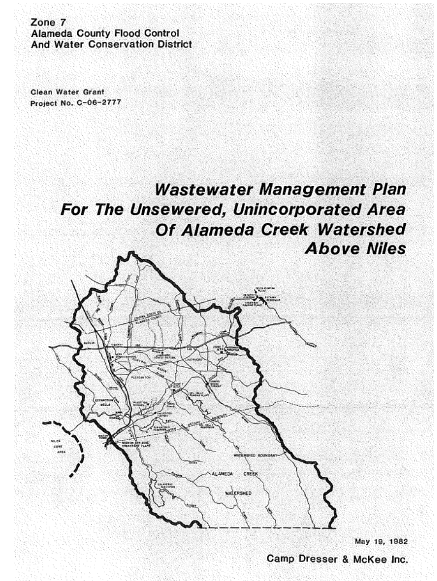
- Modify the provisions of the Zone 7 1982 Wastewater Management lot size variance and Wastewater Treatment Plant operations language



Other Recommendations – Clarify Policy Language

Replace: “*demonstrate improvement in groundwater quality*” with “*will not cause the nitrogen concentrations to increase.*”

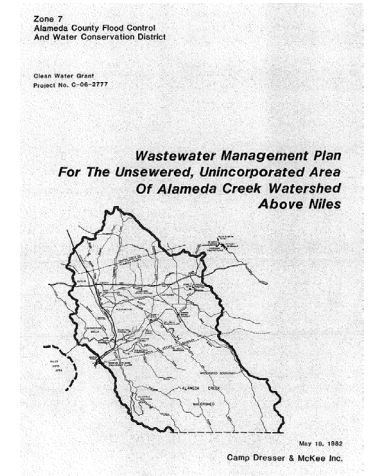
studies should be required to demonstrate the special conditions and the improvement in water quality.



Other Recommendations – Wastewater Treatment Plants

Modify Wastewater Treatment Plants language to be consistent with individual septic system policies for loading and land use

- Change operation language *“Wastewater treatment plants in Alameda County above Niles not operated by LAVWMA agencies should be operated and maintained by Zone 7”*.
- Add - Zone 7 Board approval for new Wastewater Treatment Plants



OPERATION AND MAINTENANCE

Wastewater treatment plants in Alameda County above Niles not operated by LAVWMA agencies should be operated and maintained by Zone 7. Zone 7 could contract with a

Summary of Updates

1. Maintain current groundwater protection standards through nitrogen loading limits.
2. Continue monitoring nitrates in the groundwater to meet groundwater objectives and SGMA compliance
3. Remove minimum lot size, and proportionalize loading for smaller lots
4. Remove lots of record provisions
5. Update 1982 WMP to reference latest RWQCB OWTS policy
6. Clarify 1982 WMP variance
7. Update 1982 WMP to include approval for Wastewater Treatment Plants not operated by LAVMA agencies



Recommended Action

Staff recommends adopting the attached resolution to update:

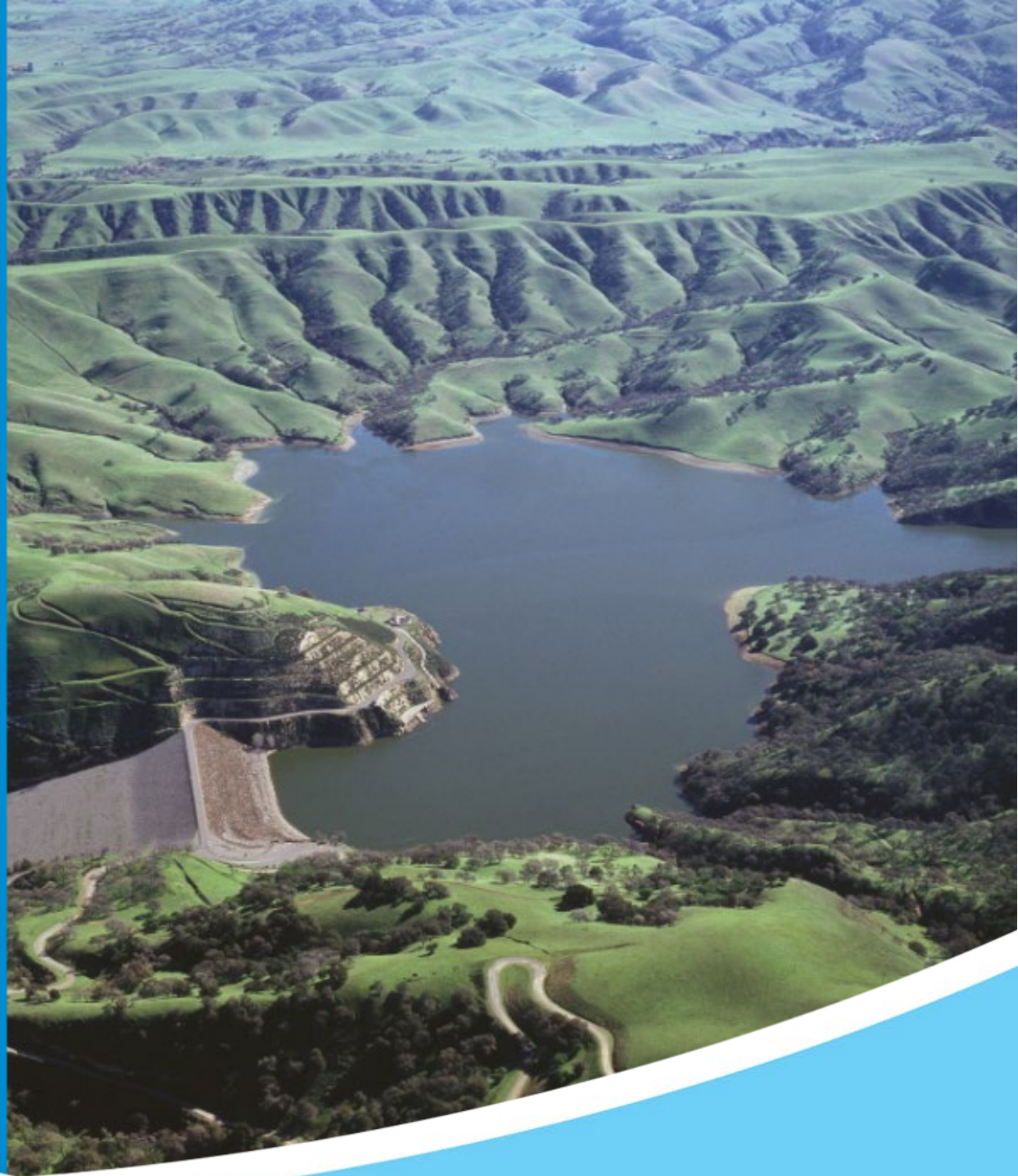
1. The Wastewater Management Plan for the unsewered, unincorporated area of Alameda Creek Watershed above Niles
2. The Nutrient Management Plan for the Livermore Valley Groundwater Basin to align with the current regulatory environment and land use policies and to continue protecting basin groundwater quality.



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Questions?

Extra Slides



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Interagency Workflow

Zone 7 – Regulate Commercial and industrial use of septic system exemptions, loading limits, and design variance.

ACDEH – Regulate Residential and Commercial nitrogen loading limits, septic design, inspection, and monitoring.

RWQCB – Regulates wine processing waste discharge.

