



6. Resource Management

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6.1 RESOURCE MANAGEMENT CONCEPT

The responsible management of an area's natural resources is critical to establishing a community that is environmentally sound. The Riolo Vineyard Specific Plan creates a framework for incorporating these sensitive elements into the design of the community. This ensures the long term preservation and management of significant natural systems. Riolo Vineyard protects the vast majority of existing natural resources



by preserving them within large portions of contiguous open space. Design of the Plan Area addresses open space, wetlands, wildlife, vegetation, cultural resources, soils, and water. Additionally, the Specific Plan attends to energy conservation, air quality, and lighting. Each of these resources will be managed on an individual basis and protected in perpetuity.

6.2 RESOURCE MANAGEMENT GOALS AND POLICIES

Resource Management Goal

Conserve, protect, and manage significant natural resources within the Plan Area.

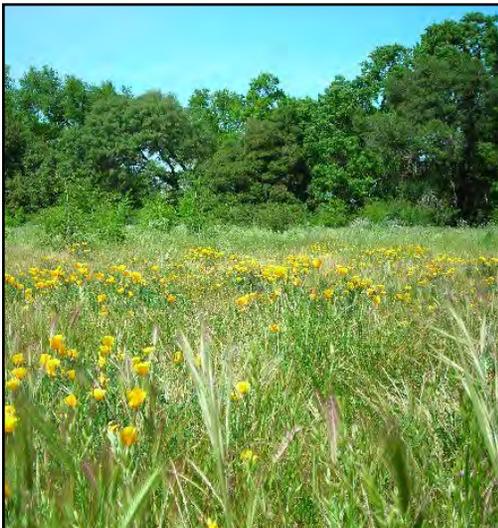
Resource Management Policies

1. Protect important natural resources and sensitive habitats from encroachment by incompatible uses.
2. Encourage the development of plant and wildlife management and preservation areas.
3. Protect and preserve wetlands to the extent feasible.
4. Preserve and manage Dry Creek and its associated riparian corridor to the extent feasible.
5. Provide open space trails and pathways which encourage a sense of community pride and ownership of open space areas.
6. Protect and preserve significant trees to the extent feasible.
7. Mitigate tree impacts pursuant to Placer County's Tree Ordinance.
8. Implement erosion control and water quality measures identified in Placer County's Stormwater Management Plan and Grading Ordinance.
9. Establish a coordinated approach to the management of drainage areas and floodplains.
10. Implement stormwater quality measures identified in Placer County's Mitigation Monitoring and Reporting Program (MMRP).
11. Implement Best Management Practices (BMPs) to protect water quality.
12. Enforce stormwater management restrictions pertaining to residential units through a Homeowner's Association (CC&R's).
13. Implement low-impact development (LID) design strategies which decrease impervious areas and naturally treat stormwater runoff.
14. Promote water conservation through the use of water saving devices, such as low-flow plumbing fixtures, in homes and commercial buildings.
15. Minimize water usage in green spaces through a landscape design that utilizes native and drought tolerant plant species.
16. Implement drip and low-flow irrigation systems in landscaped areas to the extent feasible.
17. Encourage the conservation and efficient use of energy.
18. Encourage non-motorized transportation by providing a

system of interconnected pedestrian walkways, bike lanes, and equestrian trails.

19. Utilize energy efficient appliances, windows, compressed natural gas fireplaces, and other available technologies to reduce air polluting emissions.
20. Develop all residential and commercial units in compliance with State of California Title 24 energy conservation measures.
21. Utilize restrictive lighting measures which reduce light pollution while maintaining public safety and security.
22. Locate housing in close proximity to recreational and commercial uses to reduce vehicular emissions.
23. Provide and encourage various options for public transit.
24. Limit open burning to agriculture and agriculture-10 parcels within designated areas.
25. Minimize noise impacts on sensitive uses.
26. Provide appropriate vector control for controlling mosquito populations.

6.3 OPEN SPACE PRESERVATION



In accordance with the Placer County General Plan and Dry Creek West Placer Community Plan, the Riolo Vineyard Specific Plan preserves and enhances open space lands to maintain the natural resources and rural characteristics of the area. The Specific Plan's definition of open space is consistent with that of the Dry Creek West Placer Community Plan.

Open space within the Project Area is preserved with the intention of protecting areas for their scenic, recreational, agricultural, soil, and/or habitat values. Preservation of this element overlaps with the protection of other natural resources, such as wetlands, trees, and wildlife. This includes preservation of Dry Creek and its adjacent riparian corridor. Approximately ~~127~~ 128 acres will be preserved as open space within the Riolo Vineyard Specific Plan area.

Additional information regarding open space and its integration into the Plan Area can be found in Section 5.

6.4 WETLAND RESOURCES

The US Army Corps of Engineers has issued a 404 permit for the HBT portion of the Plan Area.

Wetland resources within the Riolo Vineyard Specific Plan area include various types of water features. Wetlands are an important natural resource because of their potential to support a variety of sensitive wildlife and plant species.

Three categories of wetland types are identified within the Plan Area: seasonal wetlands, excavated channels and drainages, and riparian wetlands. Other waters include stock ponds, excavated channels, and irrigation ditches.

The Plan Area Wetlands are shown on Figure 6.1.

A total of ~~9.31~~ 13.08 acres of wetlands under the jurisdiction of the United States Army Corps of Engineers has been verified and delineated within the Specific Plan area. Additional (unverified) potential jurisdictional wetland features have been identified offsite. Portions of these could be impacted by the construction of off-site infrastructure.

Refer to the Riolo Vineyard Specific Plan EIR for more detailed information about on-site and off-site wetlands and project related impacts.

Wetland Types

Seasonal Wetlands

Seasonally inundated basins are scattered throughout the Plan Area. These areas may be categorized as seasonal wetlands depending on their floristic composition and hydrology. Seasonal wetlands can be found within swales, drainages, or depressions and typically support wetland plants, including grasses, native plants, and nonnative forbs. None of the seasonal wetlands are basin features or considered to be vernal pools. The Specific Plan area contains approximately 7.29 acres of seasonal wetlands.

Excavated Channels and Drainages

A number of excavated drainages and channels are present within the Plan Area, primarily on the western and central portions. These drainages and channels are generally man-made, and were originally created in conjunction with the historic agricultural use of the site. Intermittent excavated channels and irrigation and drainage ditches total approximately 2.02 acres within the Plan Area.



Riparian Wetlands

Riparian wetlands are found along the northern boundary of the Plan Area within the Dry Creek corridor. Impacts to these features are avoided as this important corridor is protected from development under the Specific Plan.

Wetland Impacts and Mitigation

The arrangement of land uses within the Specific Plan reflects a thorough evaluation of practicable land use alternatives and proposes extensive avoidance of wetlands. However, due to the scattered distribution of seasonal wetlands within the Plan Area, full avoidance of wetlands cannot reasonably be achieved with the type of development envisioned by the Community Plan. Each of these impacts will be fully mitigated according to federal regulations.

Existing Wetland Features and Impacts are shown on Table 6.1.

6.5 WILDLIFE RESOURCES

The Riolo Vineyard Specific Plan maintains fish and wildlife habitats in accordance with the Placer County General Plan, and serves to protect, restore, and enhance habitats that support fish and wildlife species.

The California Natural Diversity Data Base (CNDDDB) reports no known sightings of rare or threatened wildlife species on the site. However, the Biological Resources Report for the site indicates that several Special Status Species (including Swainson's Hawk) are known to frequent adjacent areas and that site conditions suggest suitability for these species. Swainson's Hawk nest sites have been documented in the vicinity and the Plan Area is within their known foraging distance of 10 miles. Because of this, mitigation measures will be implemented.

Field surveys have identified field mice, lizards, rattlesnakes, hummingbirds, finches, quail, mockingbirds, owls, hawks, mule deer and coyotes within the Plan Area. These animals can be found here because the area provides water, as well as opportunities for nesting and foraging. Fish and wildlife habitat conservation, restoration and enhancement will occur within open space and agricultural lands.

6.6 TREES

A total of 330 trees have been inventoried within the Plan Area, representing fifteen different species. Most of these trees are California native oak species, which have been identified as historically valuable resources. The remaining trees consist of native and non-native tree species such as walnut, ash, almond, mulberry, willow and London



plane. Over half of the trees are located within fifteen feet of adjacent arterial roadways or along the boundary of the Plan Area. The remaining trees are located in the central portion of the Plan Area near existing homestead sites.

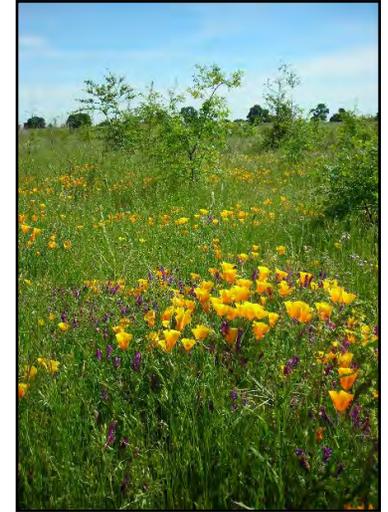
Where feasible, the Riolo Vineyard community design has strived to avoid or minimize impacts to trees. Special effort has been made to incorporate these

magnificent specimens into residential villages as neighborhood focal points. Any impacts to significant trees shall be mitigated according to Placer County's Tree Protection Ordinance. Mitigation plantings may occur within appropriate open space areas.

Locations for potential tree mitigation are shown on Figure 6.2.

Approximately 29 acres of the Plan Area, located adjacent to Dry Creek, are owned and maintained by Placer County as an oak tree mitigation site. This area serves as tree mitigation for adjacent development areas. As trees in this area mature, they will further increase habitat values along the Dry Creek riparian corridor.

The Plan Area is within a tree preservation zone, as defined in the Placer County Tree Protection Ordinance, and a tree permit shall be obtained prior to any tree removal.



6.7 HISTORIC AND CULTURAL RESOURCES

The project site was settled in the mid 1800's, and since that time, has primarily been used for farming operations. Several single family residential structures, dating back to the 1930's, exist within the Plan Area. There are also a number of accessory structures that were historically utilized to support farming operations.



No structures or subsurface cultural resources within the Plan Area qualify for inclusion on the National Register of Historic Places or the California Register of Historic Places. The potential resource value of existing structures and other sites within the Plan Area is described in the Riolo Vineyard Specific Plan EIR. Existing structures within those areas proposed for development would be removed. In the event that grading or other construction activity results in the discovery of unknown subsurface cultural resources, appropriate mitigation measures would be employed, as described in the Mitigation Monitoring and Reporting Program approved by the County in conjunction with the Specific Plan.

The Union Cemetery occupies approximately 2 acres in the southwest corner of the Specific Plan area. Development under the Specific Plan would not impact existing burials or monuments within the cemetery. In addition, approximately 3 acres of land will be donated to the cemetery for future expansion. The Union Cemetery does not satisfy criteria for inclusion on the National Register of Historic Places or the California Register of Historic Places.



6.8 SOILS

Soil types within the Plan Area are generally recognized as Pleistocene sediments of the Turlock Lake Formation and include sand/silt mixtures with deeply weathered and dissected arkosic gravels containing minor quantities of resistant metamorphic rock fragments and quartz pebbles. These sediments represent eroded alluvial fans derived primarily from the plutonic and metamorphic rocks of the Sierra Nevada to the east.

These sediments are underlain by alluvial deposits of the Mehrten Formation.

A full-scale geotechnical investigation of the Plan Area will be completed prior to commencement of any grading operations. Erosion control and soil management measures will be implemented in compliance with the Placer County Grading Ordinance, Placer County Land Development Manual, and the Erosion and Sediment Control Guidelines for Developing Areas of the Sierra, published by the High Sierra Resources Conservation District.

6.9 WATER QUALITY AND CONSERVATION

The following section summarizes more detailed drainage information contained in The Riolo Vineyard Preliminary Drainage Master Plan prepared by Civil Solutions. The Riolo Vineyard Specific Plan implements a Master Storm Drainage System which accounts for increases in impervious surface and potential impacts to water quality. This system is designed to meet Placer County Storm Water Management Manual requirements and comply with the County's National Pollutant Discharge Development Elimination System (NPDES) II permit. A post-development Stormwater Management Plan (SWMP) will be prepared using the design criteria and guidelines in the State Water Resources Control Board's Stormwater Best Management Practice Handbook. This Handbook is considered the most comprehensive guide available for managing stormwater pollutants in the State of California. In addition, the project shall incorporate low-impact development (LID) techniques in order to reduce the amount of impervious area and naturally treat stormwater through a series of vegetated bioswales.

Permanent Stormwater Quality Improvements

The Riolo Vineyard project intends to install improvements which will comply with the Placer County MS4 permit Phase II NPDES

requirements by constructing a treatment train of Best Management Practices (BMPs). The design standards for these requirements are identified in “Attachment 4 to the State’s General Permit No. CAS000004, Order No. 2003-0005-DWQ No. 2013-0001-DWQ – Waste Discharge requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems”. Onsite drainage would be designed to provide a water quality treatment train of runoff from paved and other developed areas prior to release into the swales and streams. This treatment train will consist of measures for source control, runoff reduction and treatment control. Example Best Management Practices (BMP’s) which would be used with this project would include:

- Source Control to reduce the quantity of runoff.
- Directing some of the flow to sheet discharge onto grassy areas or open space.
- The installations of “Fossil Filter” or equivalent petroleum absorbing insert assemblies in the project drop inlets.
- Trash Screen Vaults.
- Structural BMP’s such as vortex devices.
- The placement of water quality interceptor devices.
- Use of rock-lined ditches below pipe outlets.
- Use of grassy treatment swales.
- Minimize impervious surface areas
- Stormwater functional landscapes

The final selection of Best Management Practices (BMPs) shall consider requirements specific to the Dry Creek watershed as outlined in the Dry Creek Coordinated Resource Management Plan. Other best management practices will involve prompt re-vegetation of disturbed areas, and proper erosion protection per the NPDES permit during construction.

The Riolo Vineyard Specific Plan strives to ensure that groundwater quality is unaffected by the proposed project. Abandoned and improperly sealed wells often serve as conduits for pollution of groundwater. The project will properly abandon several existing wells within the Plan Area in strict accordance with Placer County

requirements in order to prevent potential contamination of groundwater.

The Riolo Vineyard Specific Plan adopts a number of water conservation measures which reduce water usage within the Plan Area and conserve this valuable natural resource. Various water saving devices shall be incorporated into the design of landscaped areas, as well as residential and commercial uses. As a result, water usage within the Plan Area will be significantly reduced.

6.10 NOISE

The Riolo Vineyard community minimizes noise impacts to sensitive uses through a system of landscaped setbacks, berms, walls, and building orientations. These attenuation strategies shall reduce noise levels to acceptable standards as required by Placer County’s Noise Ordinance and General Plan Policies. As a result, noise levels within the community will be comfortable for residents and visitors alike.

6.11 ENERGY CONSERVATION

Energy conservation is a top priority for the Riolo Vineyard community. The Plan Area has been designed so that land uses and transportation systems encourage energy conservation through the use of alternative modes of transportation. In addition, various energy conservation methods and technologies shall be employed in the design and construction of residential and commercial buildings.

6.12 LIGHT MANAGEMENT

The Riolo Vineyard community strives to blend with its rural surroundings by incorporating specific measures intended to protect the

nighttime sky from light pollution and excessive glare. These measures will control light trespass, minimize obtrusive light, and conserve energy. At the same time, these lighting systems will be designed to provide ample illumination for public safety and security.

6.13 AIR QUALITY



Air quality in the Sacramento region is recognized as a significant environmental concern. A major source of degraded air quality comes from vehicular emissions. The location and design of new communities can play a role in the effectiveness of efforts to minimize air pollution. The Riolo Vineyard community has been designed so that most land uses are within easy walking distance of one another, and an elaborate system of pathways links these uses. This land use configuration encourages residents to walk or bike or ride a horse to the various destinations within the Plan Area. As a result, the community will produce fewer vehicular trips and minimize adverse impacts to regional air quality.

PREVIOUSLY APPROVED TABLE 6.1 Wetland Impacts

Type	Existing On-Site Acreage	Permanent On-Site Impacts	Temporary On-Site Impacts	Off-Site Impacts
Seasonal Wetland	7.29	0.691	0.219	0.213
Excavated Channel	1.38	0.054	0.090	0.244
Irrigation/ Drainage Ditch	0.64	0.422	0.005	0.000
Riparian Wetlands	NA	0.000	0.000	0.000
Emergent Marsh	0.00	0.000	0.000	0.191
TOTAL ACRES	9.31	1.167	0.314	0.648

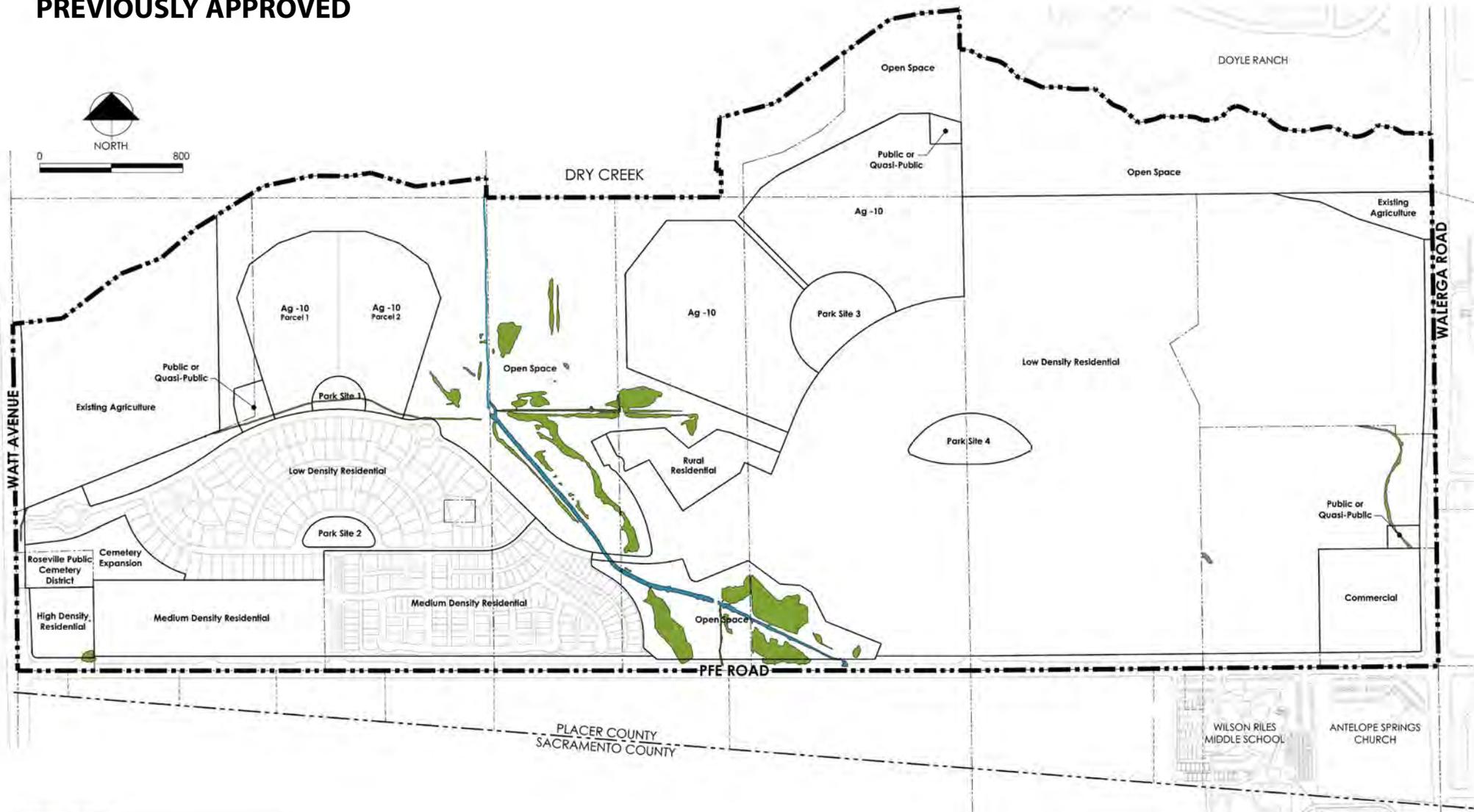
AMENDED TABLE 6.1 Wetland Impacts

Type	Existing Acreage	Permanent Impacts	Temporary Impacts
Seasonal Wetland	7.808	0.785	0.283
Excavated Channel	4.273*	0.291	0.090
Irrigation/ Drainage Ditch	0.645	0.420	0.006
Riparian Wetlands	NA	0.000	0.000
Emergent Marsh	0.200	0.191	0.000
TOTAL ACRES	13.075	1.687	0.379

Based on revised delineation and USACOE Permit, which does not break out on-site and off-site.

*A portion (2.633 Ac.) of Dry Creek has been included in this calculation.

FIGURE 6.1 WETLANDS PREVIOUSLY APPROVED

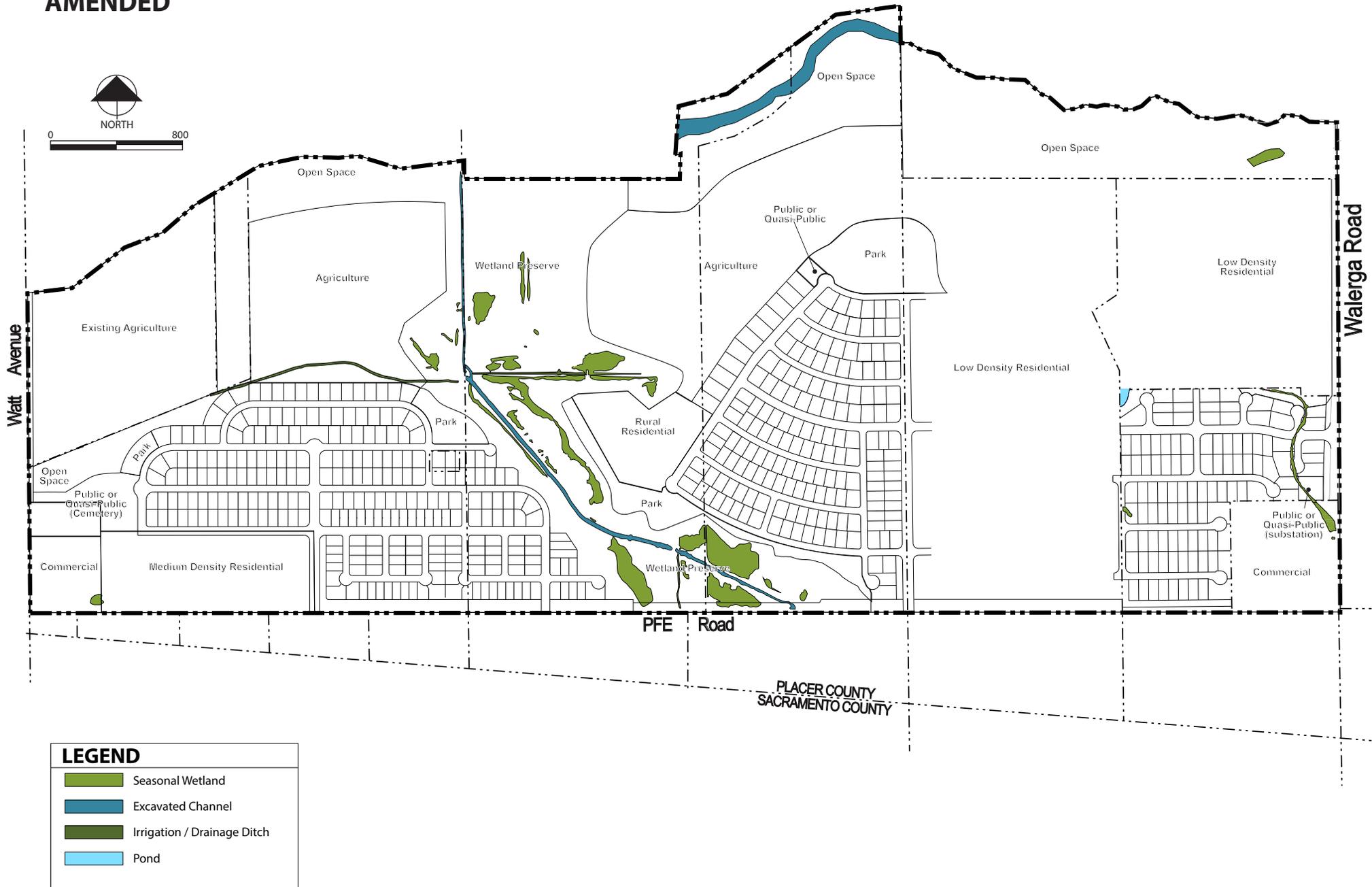


LEGEND

- Seasonal Wetland
- Excavated Channel
- Irrigation/ Drainage Ditch

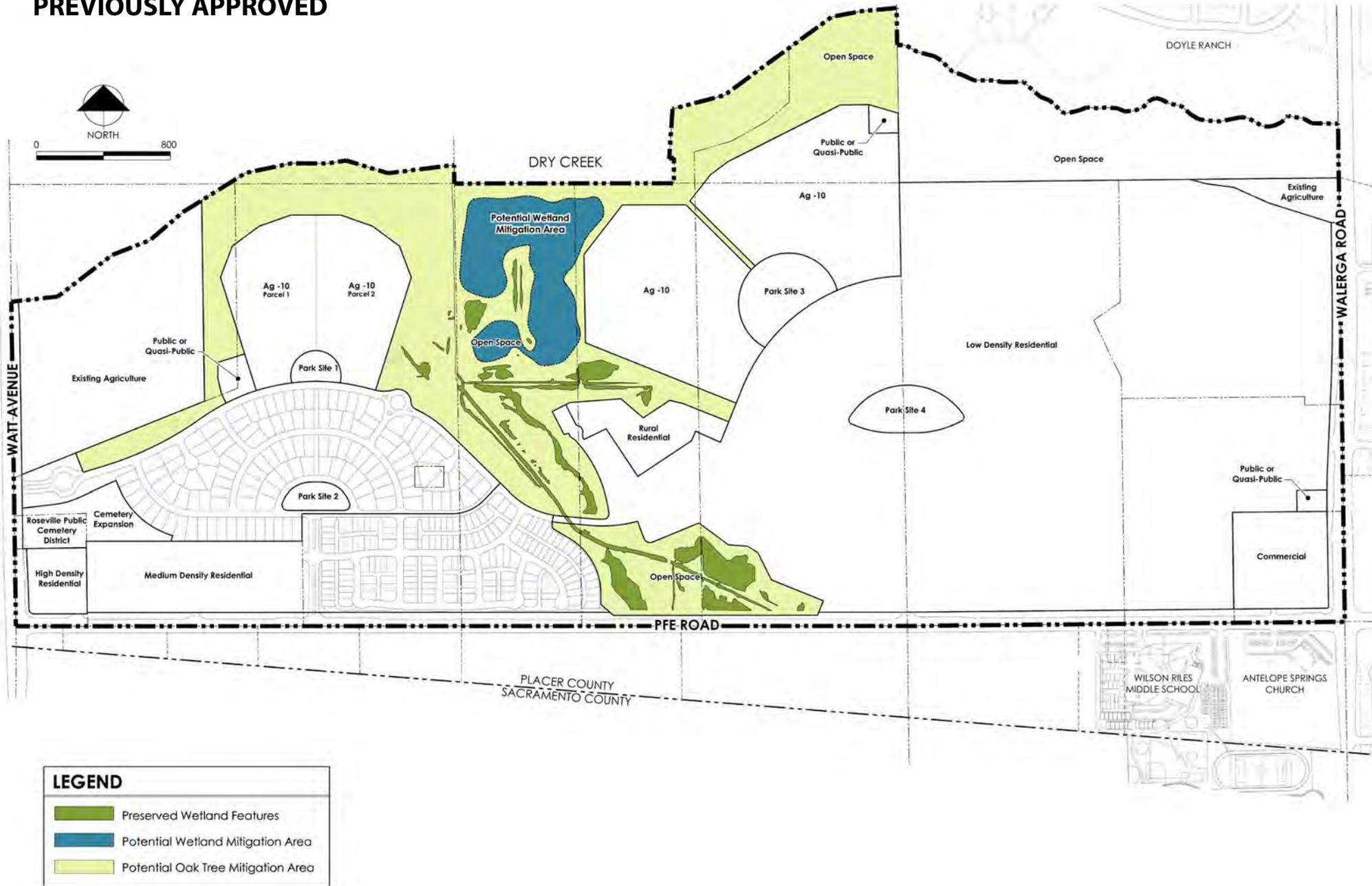
Note: Not all properties within the Specific Plan Area have been surveyed for wetlands. Delineated area shown above does not include Dry Creek.

**FIGURE 6.1 WETLANDS
AMENDED**

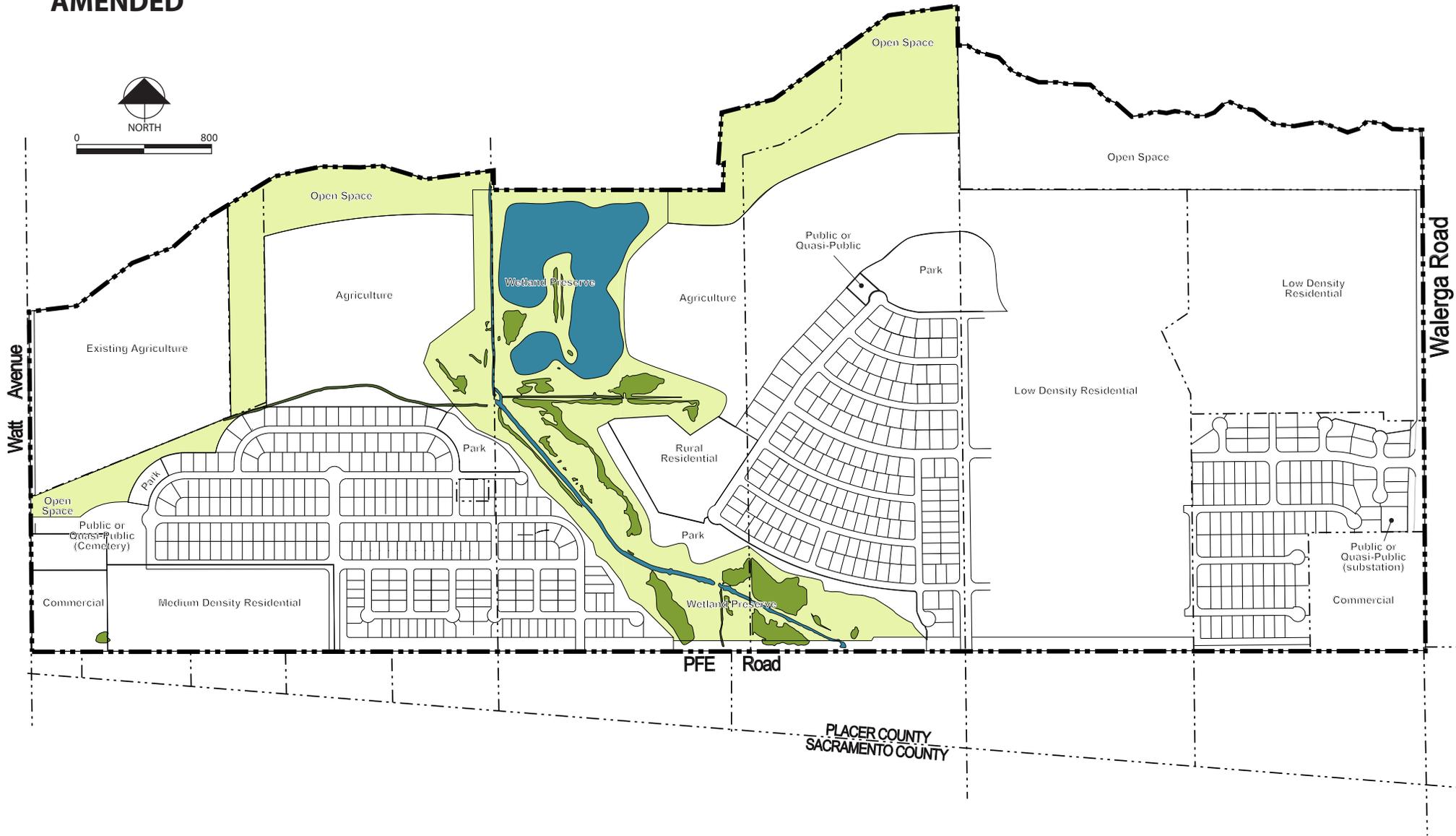


Note: Not all properties within the Specific Plan Area have been surveyed for wetlands. Delineated area shown above does not include Dry Creek.

FIGURE 6.2 MITIGATION PREVIOUSLY APPROVED



**FIGURE 6.2 MITIGATION
AMENDED**



LEGEND	
	Preserved Wetland Features
	Potential Wetland Mitigation Area
	Potential Oak Tree Mitigation Area

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