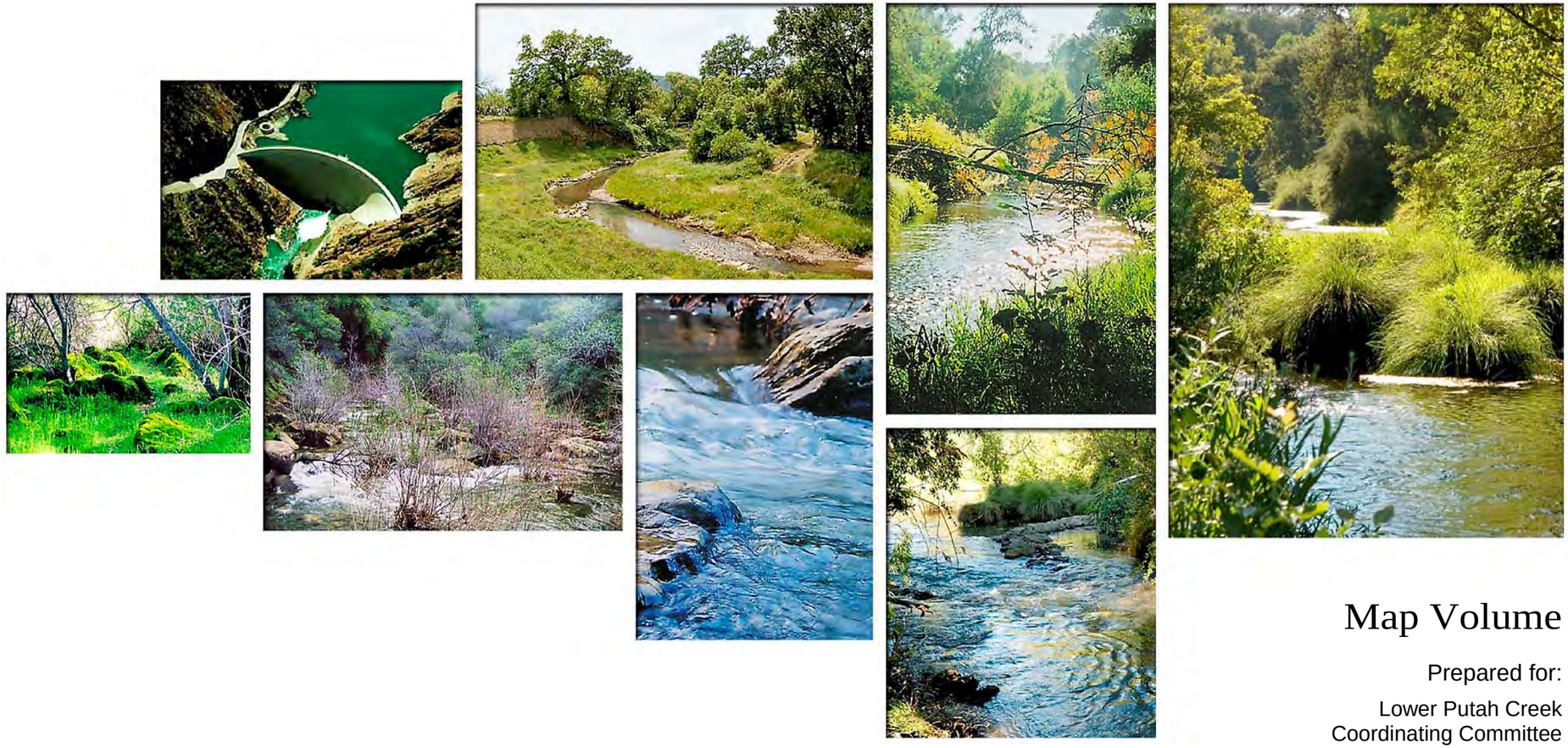
Lower Putah Creek Watershed Management Action Plan
Phase I – Resource Assessment



Map Volume

Prepared for:

Lower Putah Creek
Coordinating Committee

Contact:

Rich Marovich
Putah Creek Streamkeeper

December 2005

EDAW

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PART 1 – PUTAH CREEK RIPARIAN VEGETATION COVERAGE

The draft riparian vegetation map set for lower Putah Creek was developed by the Chico Geographic Information Center (GIC), California State University-Chico (GIC 2000). It was part of a California Bay-Delta Authority-funded Sacramento River Riparian Mapping Project developed to inventory and map riparian lands along the Sacramento River and its major tributaries. Riparian vegetation types were delineated from aerial interpretation of infrared photographs and are shown by reach.
Reaches 1-6 cover lower Putah Creek from the Los Rios check dam at the Yolo Bypass continuing upstream to Monticello Dam. The vegetation types had not been field verified throughout the mapped area and are not entirely reflective of the actual vegetation types. However, the information provides an overview of vegetation communities that serves as a starting point for further analysis and resource management planning.

DESCRIPTION OF RIPARIAN CATEGORIES

BS Blackberry Scrub. ≤ 80% coverage by blackberry vegetation.

CF Great Valley Cottonwood Riparian Forest. ≤ 80% Cottonwood by canopy cover - One year old or greater. CF represents the earliest successional sere. These forests are dominated by cottonwood (*Populus fremontii*) and one or more tree willows (*Salix gooddnigii*, *S. laevigata*, and *S. lasiandra* are most common) California Grape (*Vitis californica*) is the only conspicuous vine.

EUC Eucalyptus (*Eucalyptus* spp.). Found in fairly monospecific stands (one species only) on heavily modified banks. Eucalyptus tends to shade out competitors. NOTE: 1998 coverages only.

GR Giant Reed (*Arundo donax*). Grass < 8 meters. A very invasive plant that reduces and replaces native species. NOTE: 1998 coverages only.

HL Herbland Cover. Composed of annual and perennial grasses and forbs. Must be enclosed by riparian vegetation or the stream channel.

M Valley Freshwater Marsh. Valley freshwater marshes are dominated by perennial emergent monocots. Coverage may be very high, approaching 100%. Cattails (*Typha* spp.) or tule (*Scripus* spp.) usually are the dominants, often forming monotonous swards that are sparingly punctuated with additional taxa such as sedges (*Carex* spp.), cane (*Phragmites australlis*), or blue vervain (*Verbena hastata*).

MF Great Valley Mixed Riparian Forest. In this unit neither willows nor cottonwoods dominate - also contains a mixture of more upland, later successional species that may

include valley oak (*Quercus lobata*) at less than 60% canopy coverage, black walnut (*Juglans* spp.), ash (*Fraxinus latifolia*), tree of heaven (*Ailanthus altissima*), and sycamore (*Platanus racemosa*).

NL No label. In some of our older maps we used NL to depict non-riparian areas surrounded by riparian types. It was a way to show that the label was not missed. It has been dropped in recent coverages, however.

RS Great Valley Riparian Scrub. Young primary succession.

TAM Tamarisk. "Saltcedar" (*Tamarix chinensis*). Invasive shrub found in open areas along the river. Originally introduced as an ornamental and for erosion control, Tamarisk has become an undesirable weed. Plants spread by seed and cuttings and grow rapidly. NOTE: 1998 coverages only.

VO Valley Oak (*Quercus lobata*) ≤ 60% canopy cover - must be contiguous or have longest axis greater than the distance from riparian vegetation.

Habitat Types:

D Disturbed. This unit identifies areas that are undergoing major disturbances and are now either completely devoid of riparian vegetation or contain only small remnants of it.

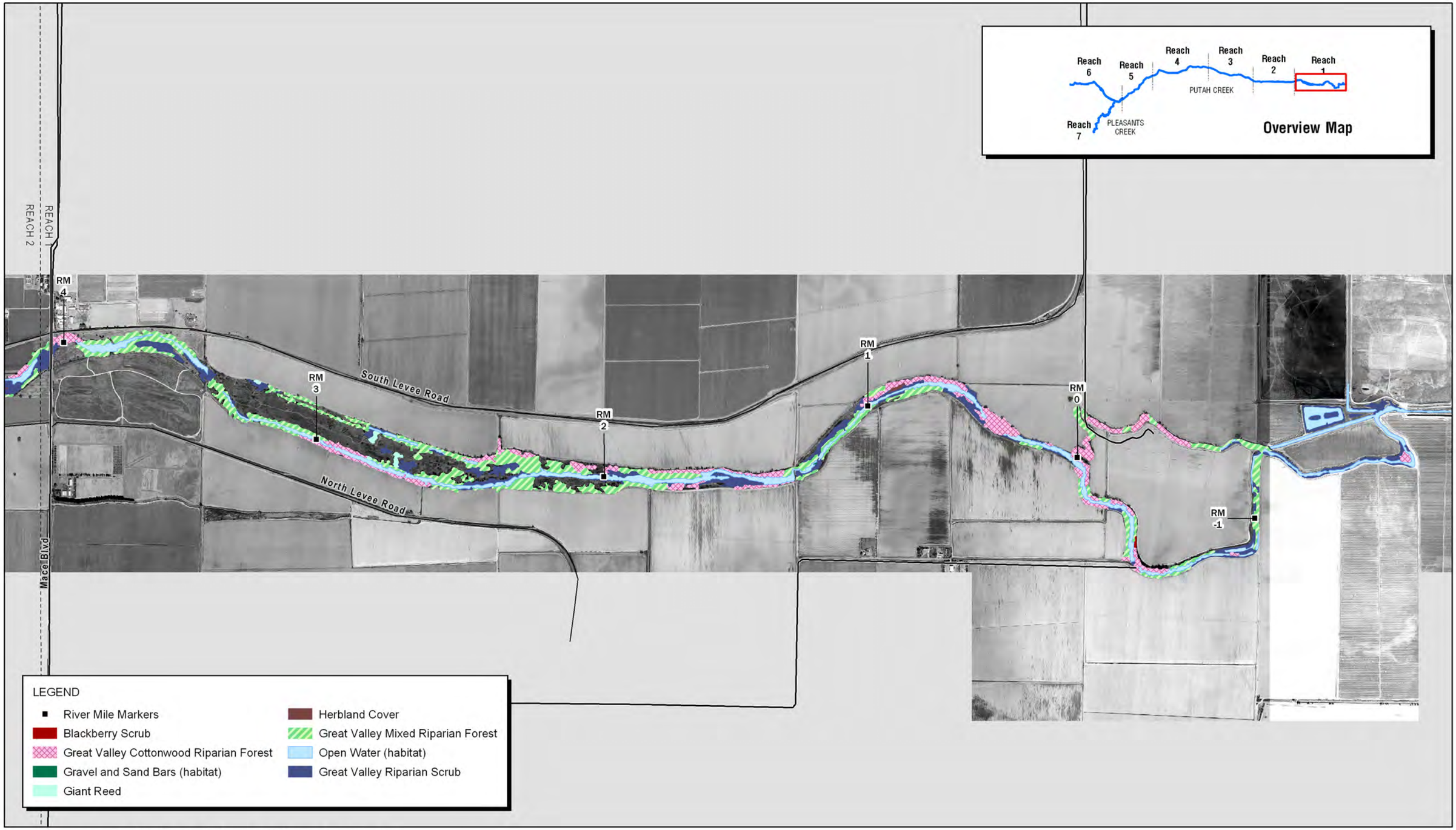
DR Disturbed Riparian. This unit identifies a past disturbance, primarily dredge tailings with cottonwoods (*Populus fremontii*) the dominant species and other riparian vegetation types having established since the disturbance.

G Gravel and Sand Bars. These appear as open, unvegetated areas in air photos, but ground truthing reveals several annual and short-lived perennial species of sun-loving herbs, grasses, and suffrutescent subshrubs. The vegetation coverage is less than 50%.

OW Open Water. This mapping unit constitutes water, either standing or moving, and does necessarily imply vegetation.

Reference:

GIC 2000. Sacramento River Riparian Vegetation Coverage Draft. Metadata. Putah Creek – Putah Creek from Monticello Dam to Yolo Bypass, 1998, nominal scale RF = 1:12,000. Datum: NAD 27; Projection: Universal Transverse Mercator (UTM); Source: Color infrared aerial photography. Sacramento River Mapping Project. Geographic Information Center (GIC), California State University-Chico. Chico, California. February.



Sources: Image America, March 2001; California State University, Chico, 2000

Riparian Vegetation - Reach 1

MAP EXHIBIT 1

Lower Putah Creek Watershed Management Action Plan

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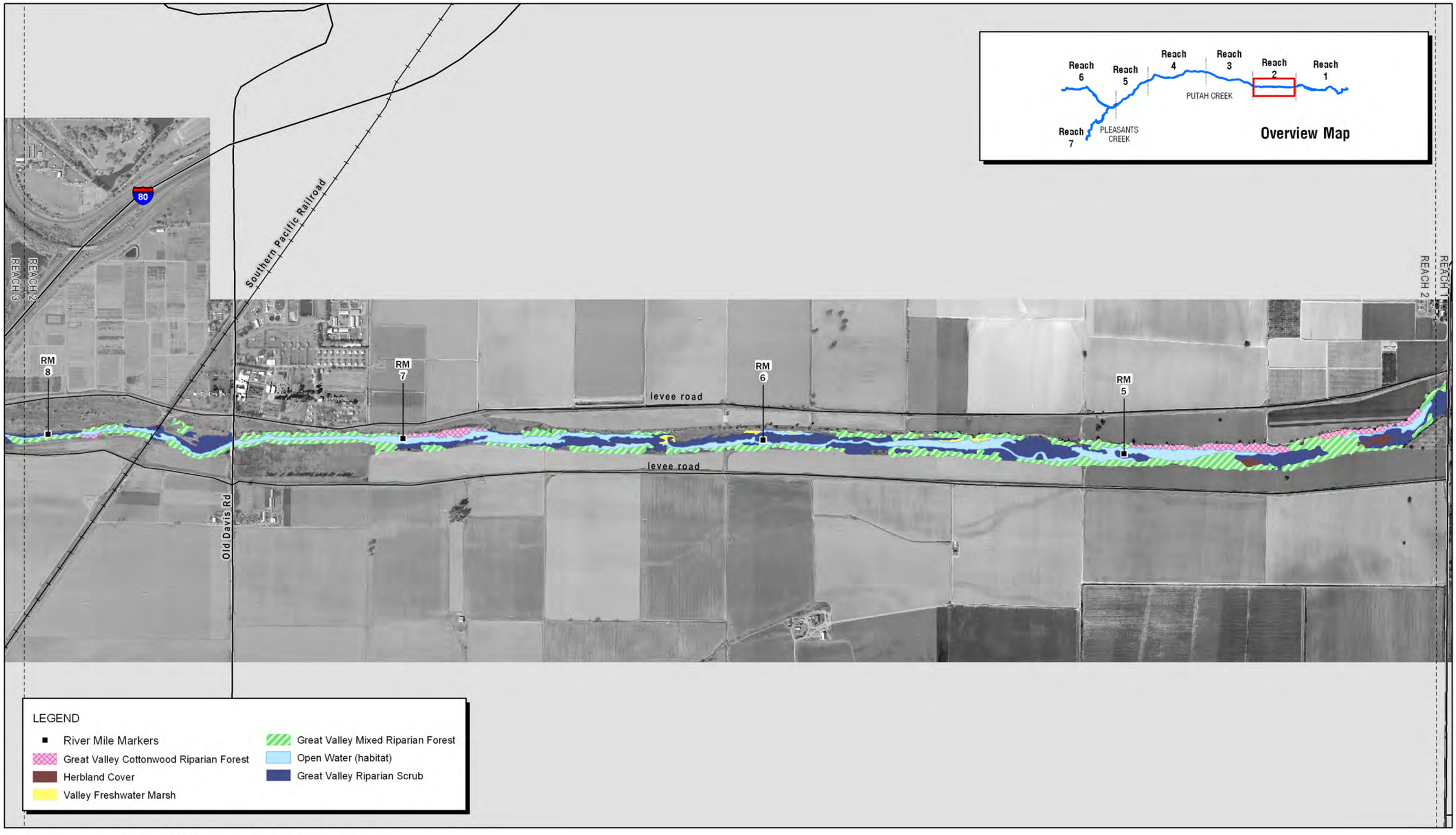

Sources: Image America, March 2001; California State University, Chico, 2000

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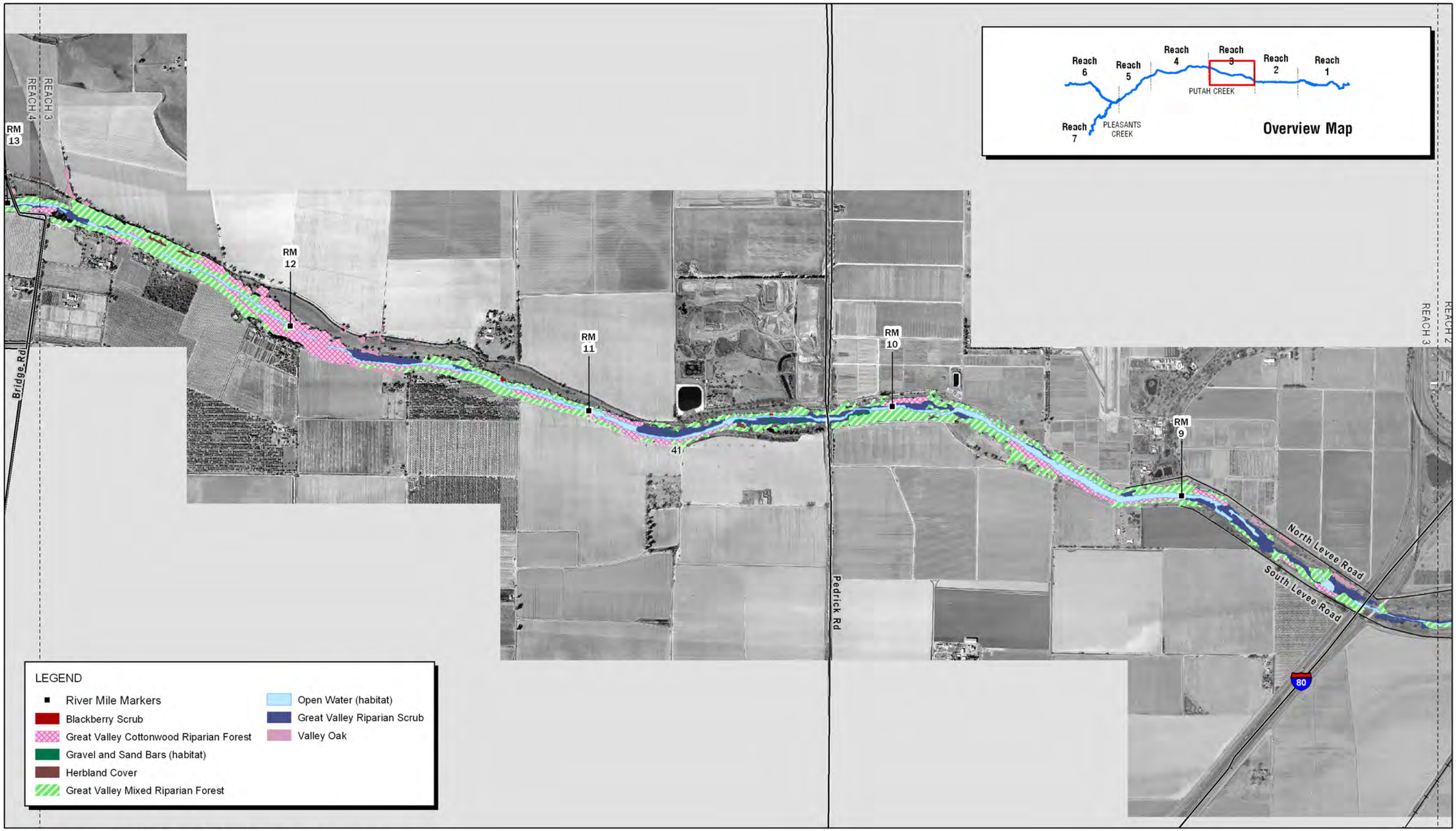

Sources: Image America, March 2001; California State University, Chico, 2000

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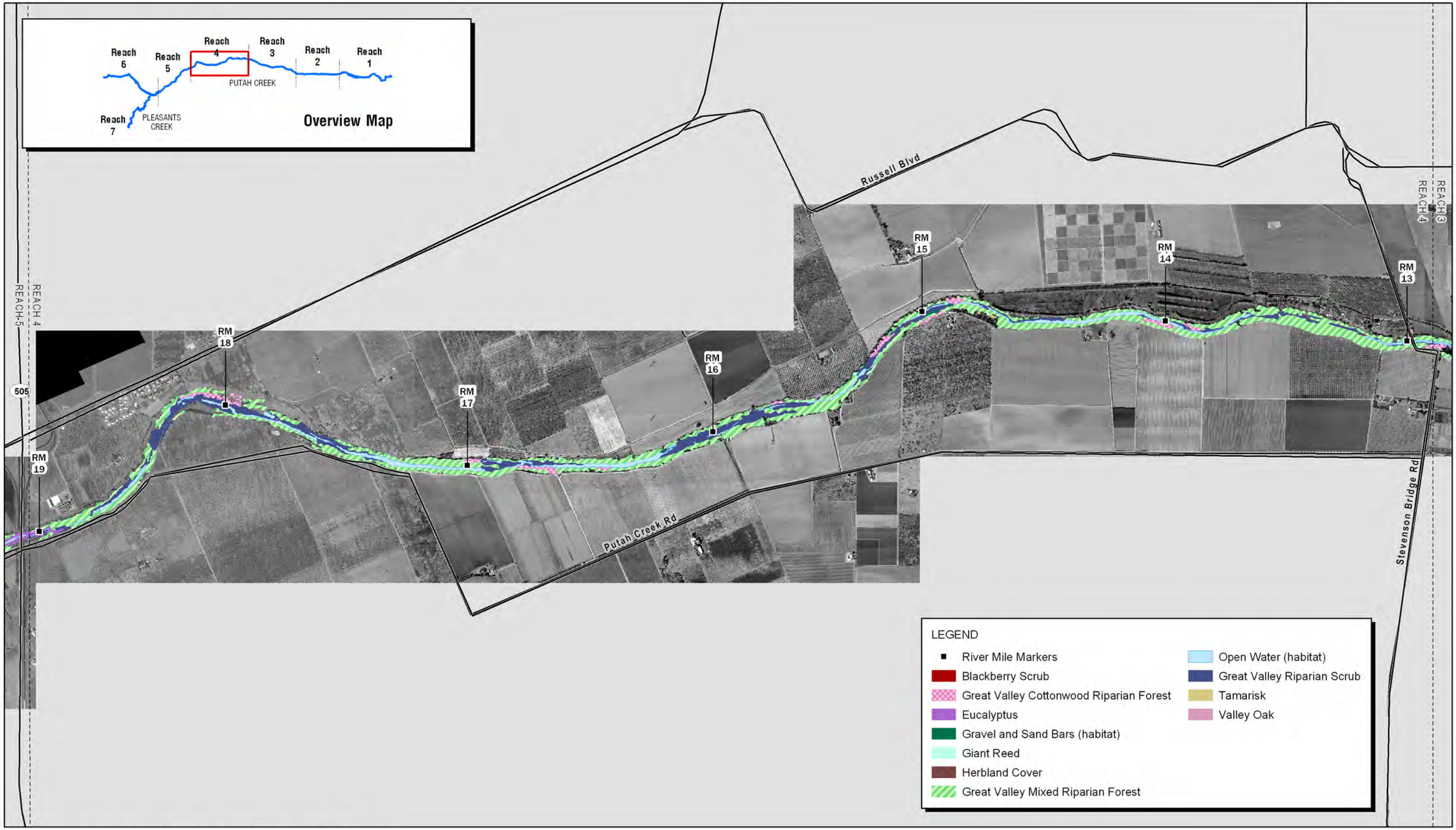

Sources: Image America, March 2001; California State University, Chico, 2000

Riparian Vegetation - Reach 4

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Lower Putah Creek Watershed Management Action Plan

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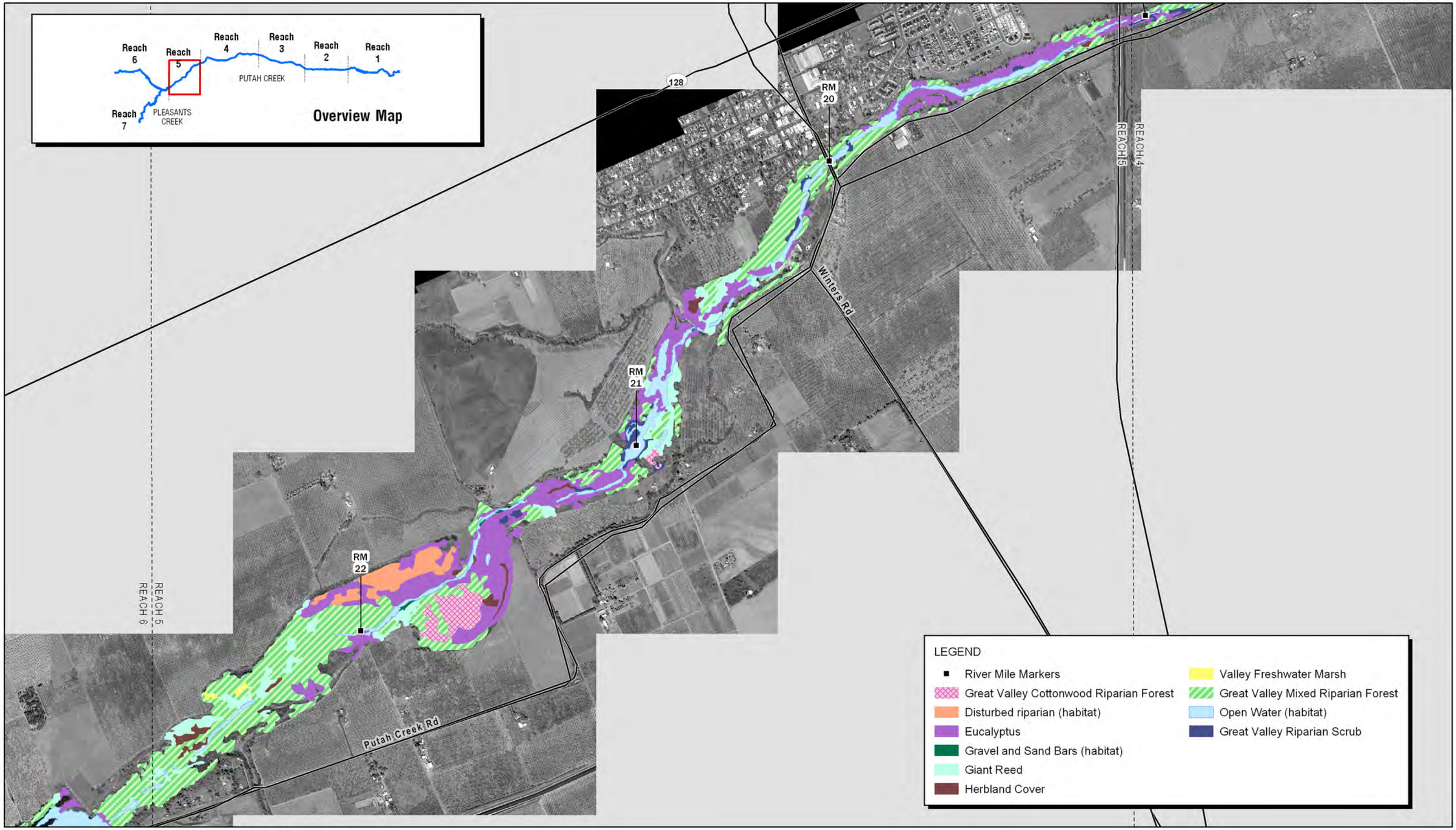

Sources: Image America, March 2001; California State University, Chico, 2000

Riparian Vegetation - Reach 5

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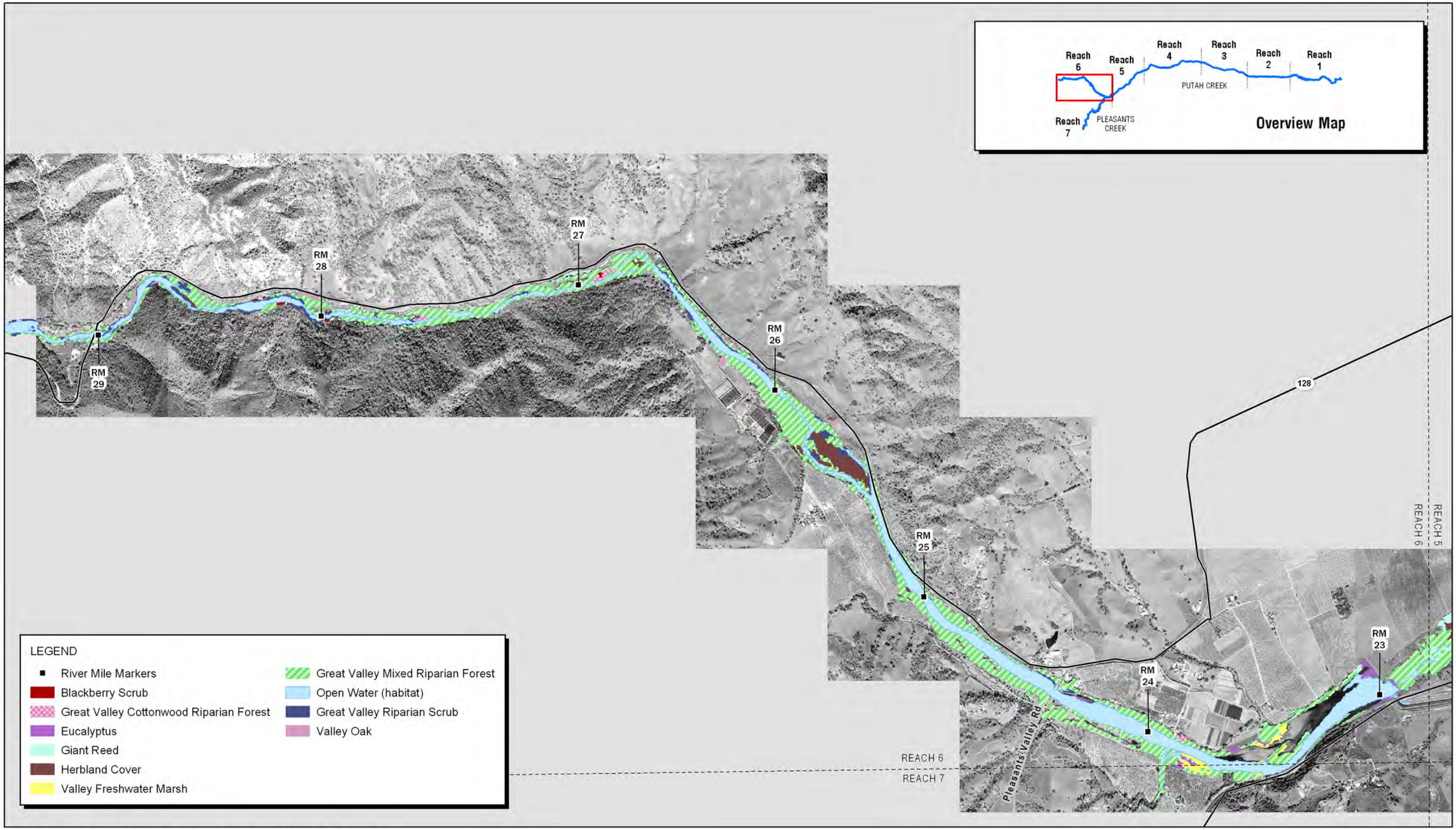

Sources: Image America, March 2001; California State University, Chico, 2000

Riparian Vegetation - Reach 6

MAP EXHIBIT 6

Lower Putah Creek Watershed Management Action Plan

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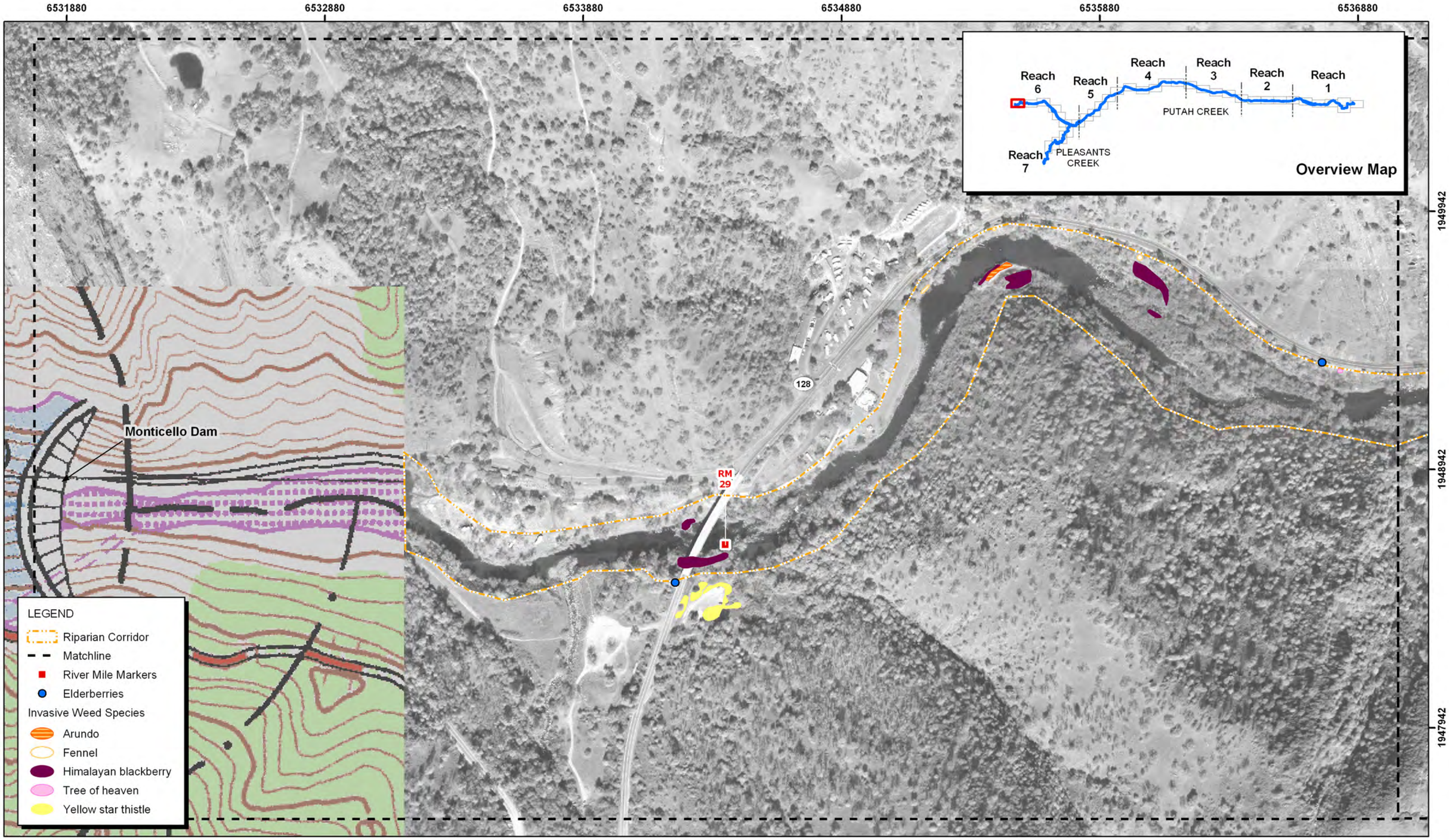
PART 2 – RESOURCE ASSESSMENT MAPS

The resource assessment map set includes 36 maps that provide information on sensitive resources, invasive weeds, trash sites, and erosion sites in the lower Putah Creek riparian corridor study area extending from Monticello Dam to the Yolo Bypass and the lower portion of Pleasants Creek. The information provided was acquired during field surveys conducted in the summer of 2002 and mapped onto color aerial photographs taken in April 2001 and orthophotographs taken in June 2001. The data was subsequently incorporated into geographic information systems (GIS) layers. Chapters 6 and 7 of the Lower Putah Creek Watershed Management Action Plan, Phase I – Resources Assessments contain information on the resource data provided in this map set.



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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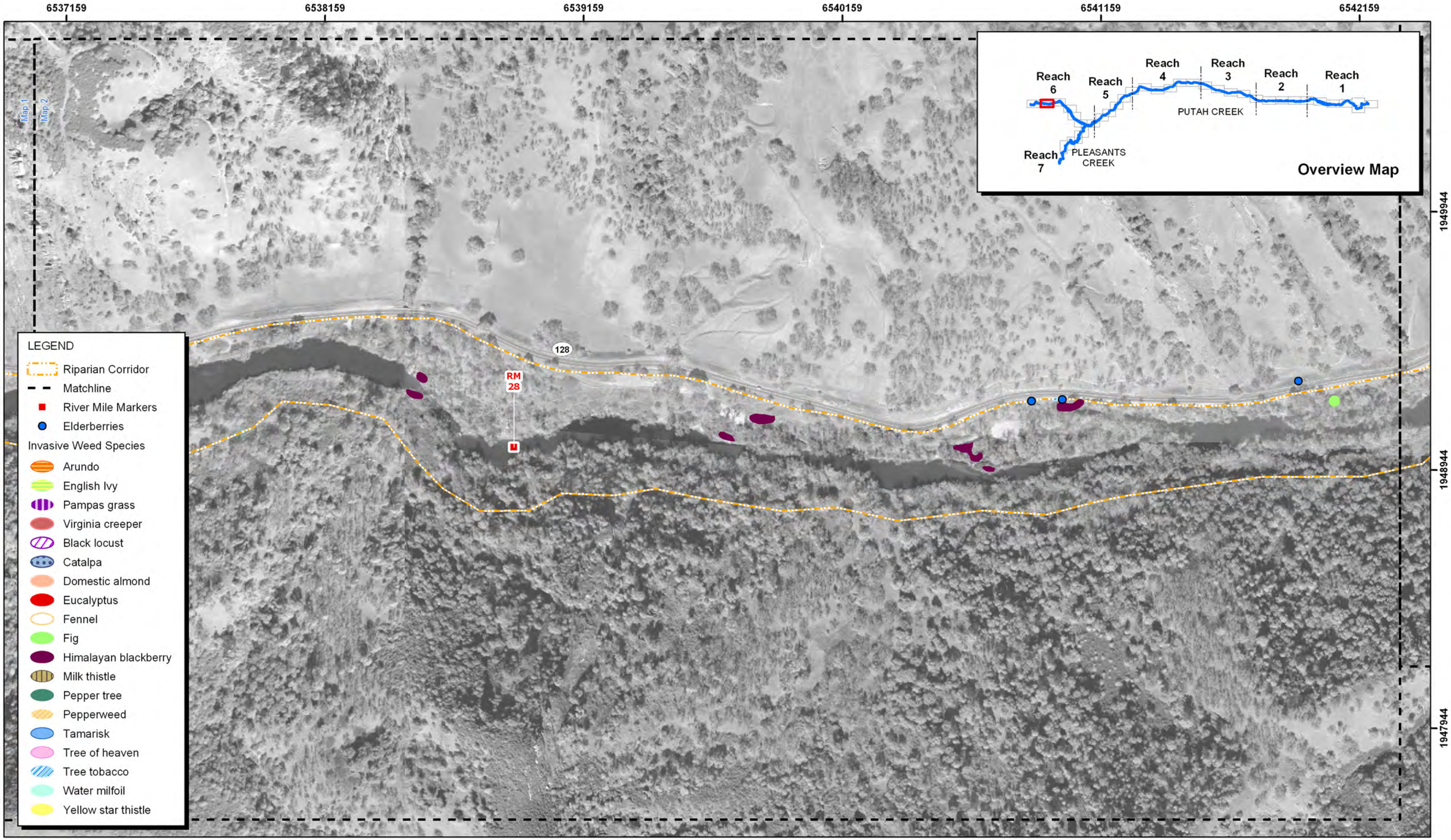

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Resource Assessment

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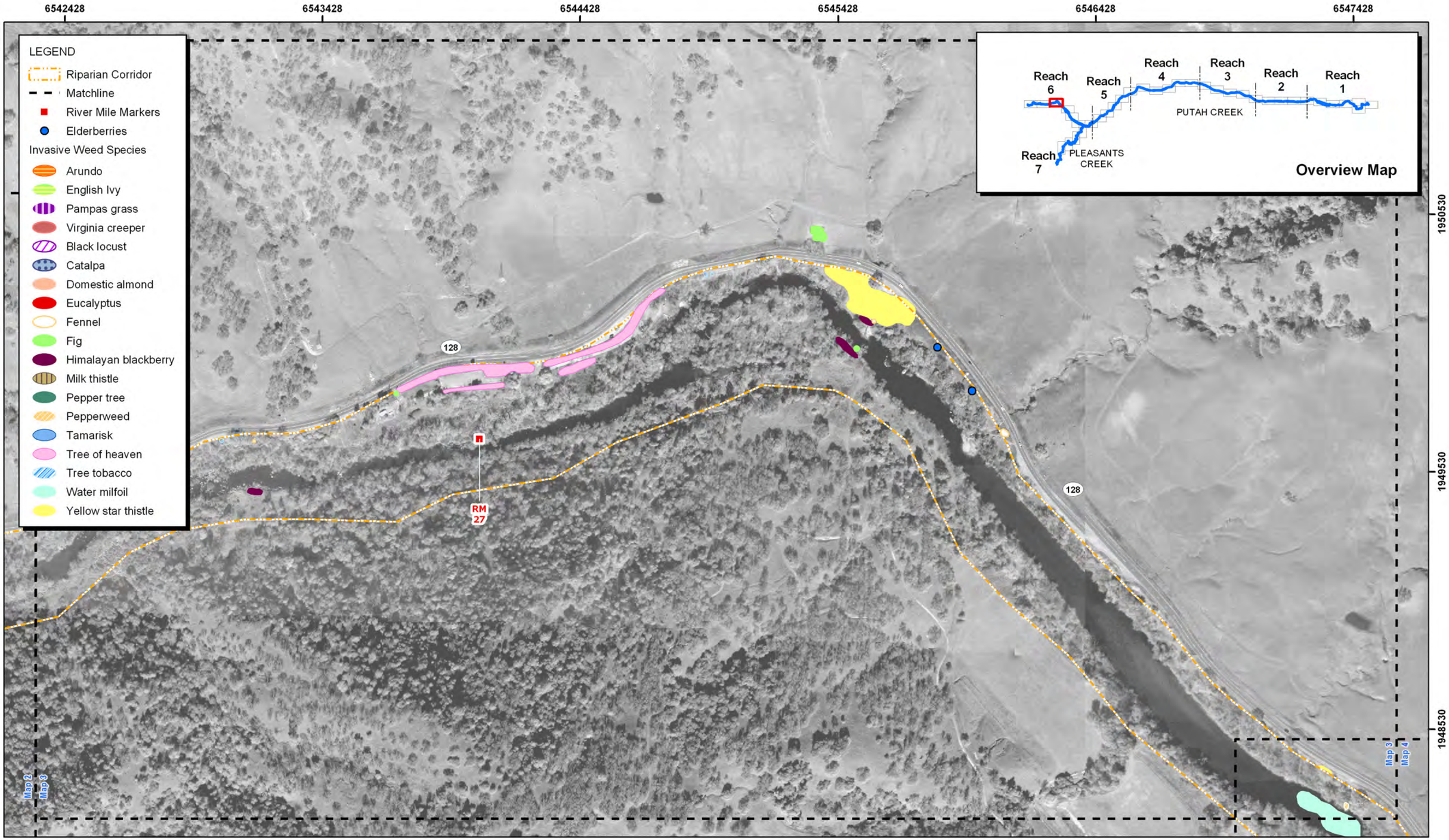

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Resource Assessment

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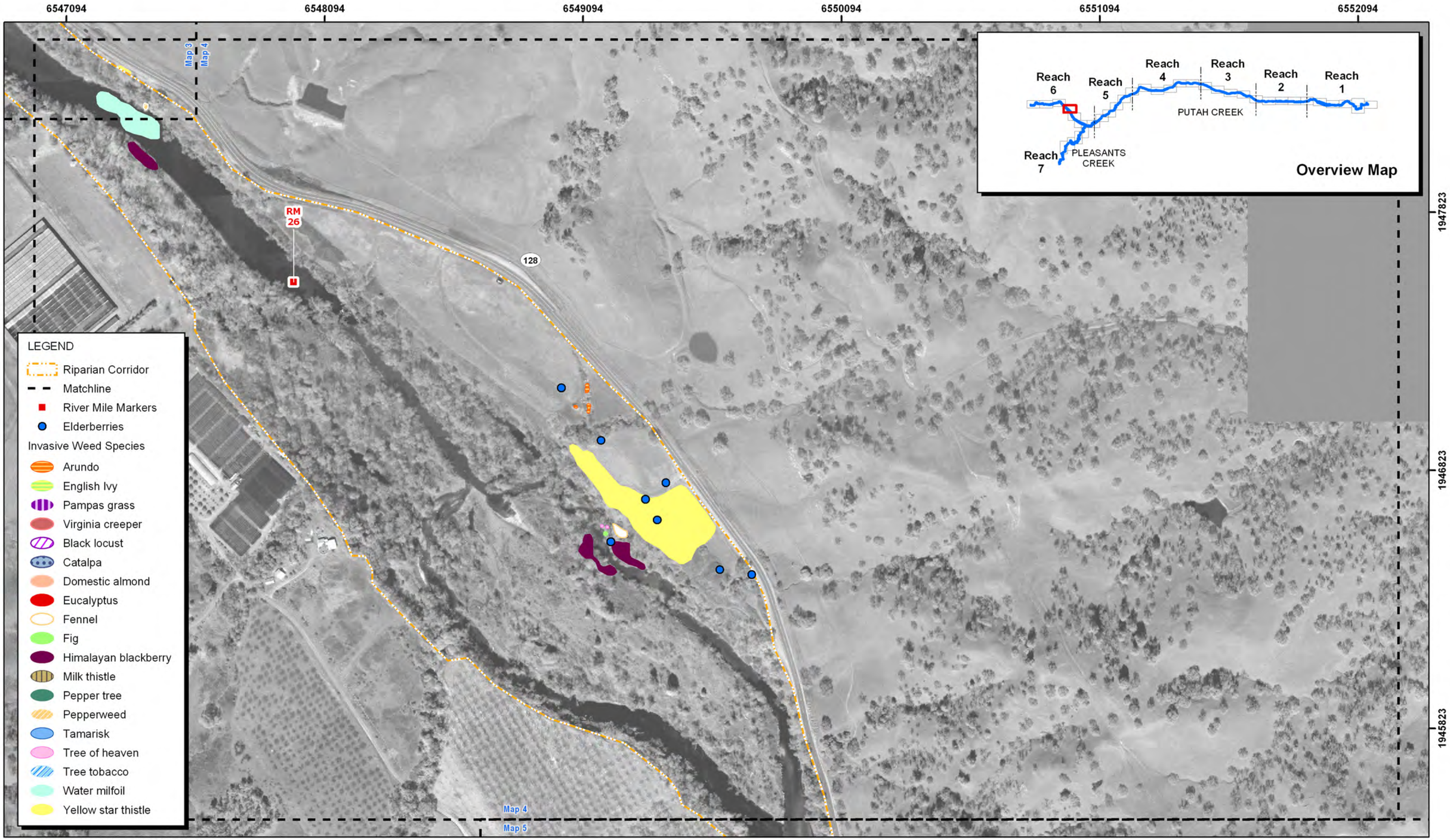

Sources: Image America, March 2001; EDAW 2002
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Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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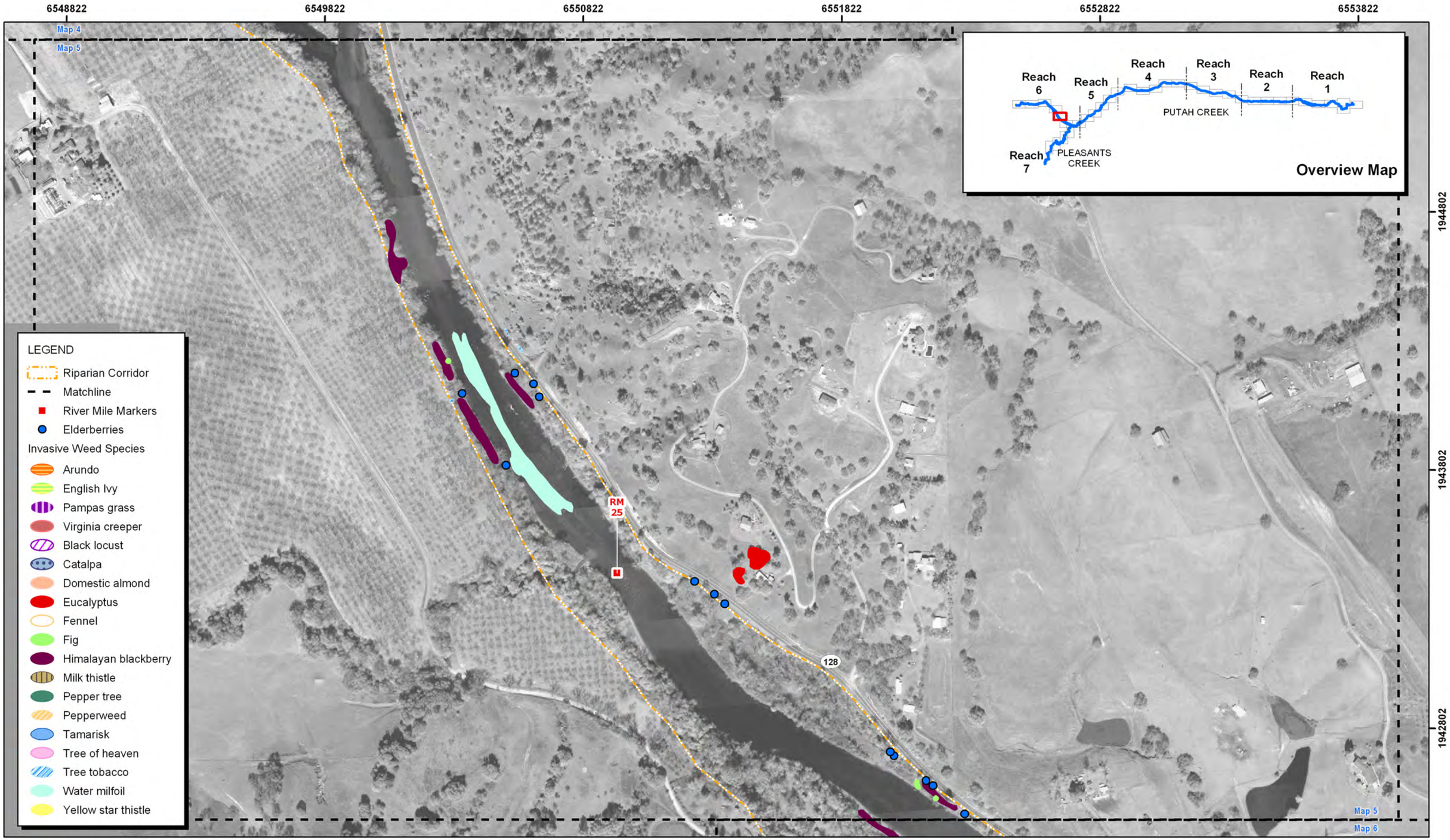

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Resource Assessment

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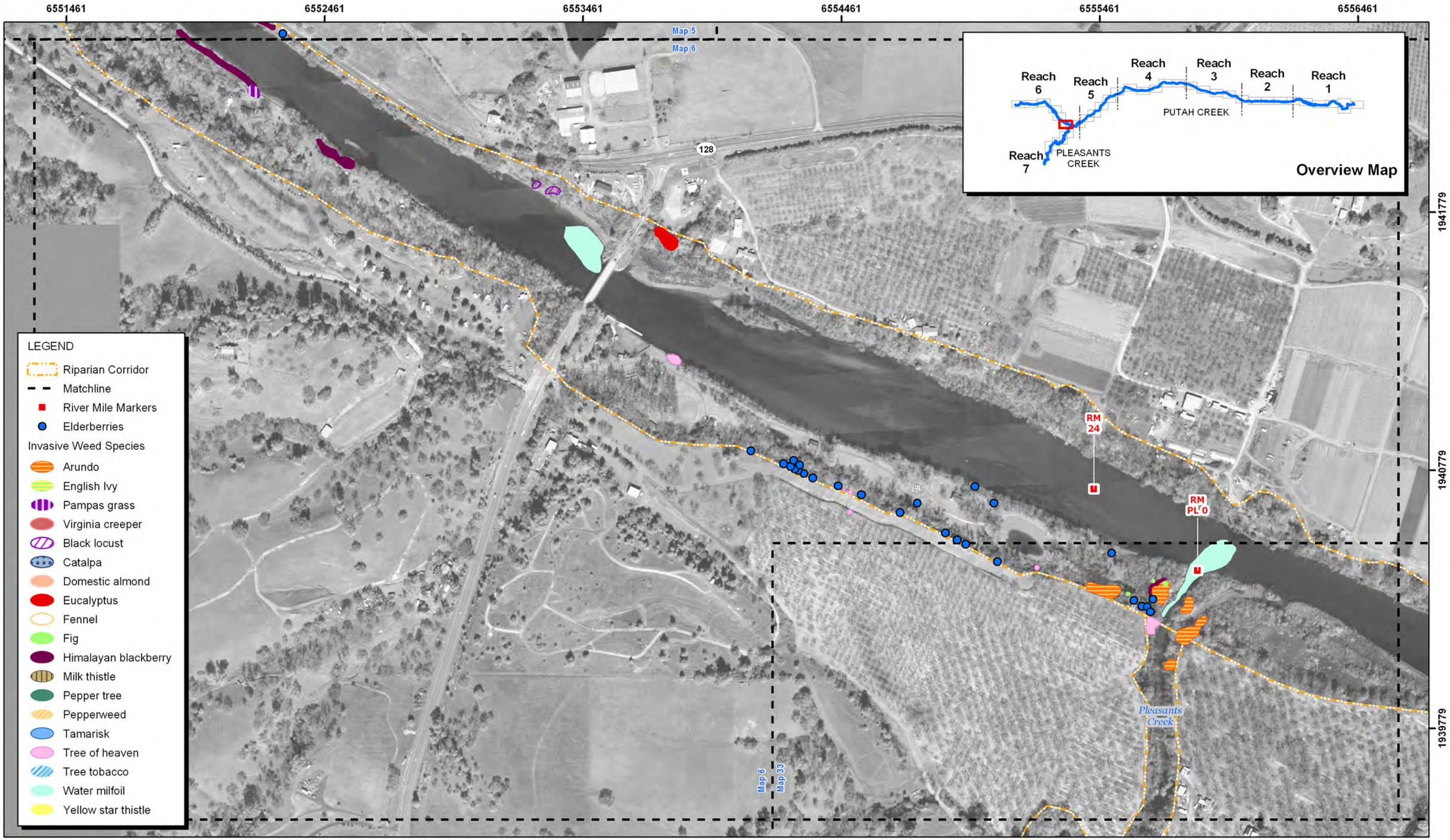

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Resource Assessment

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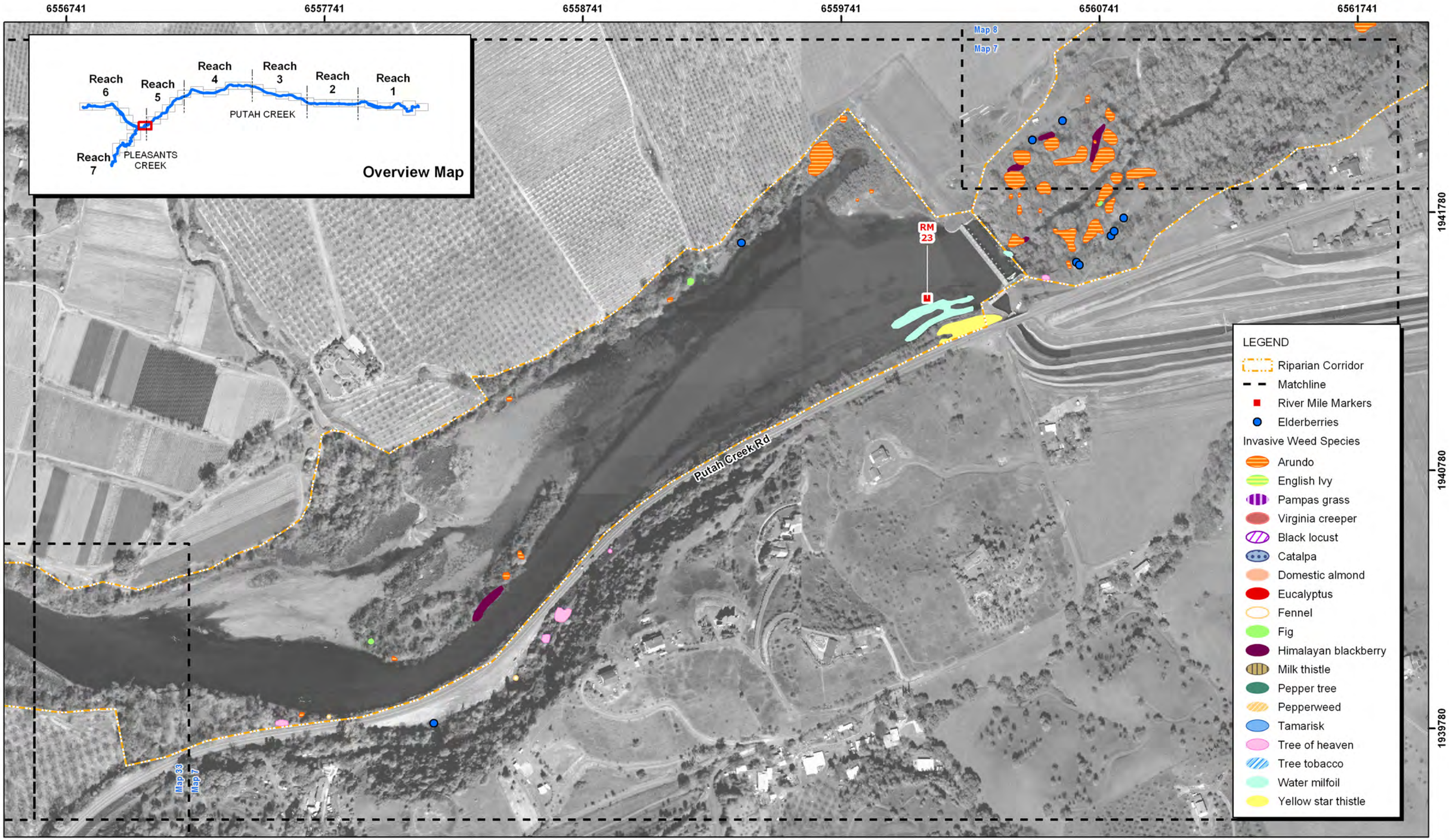

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Resource Assessment

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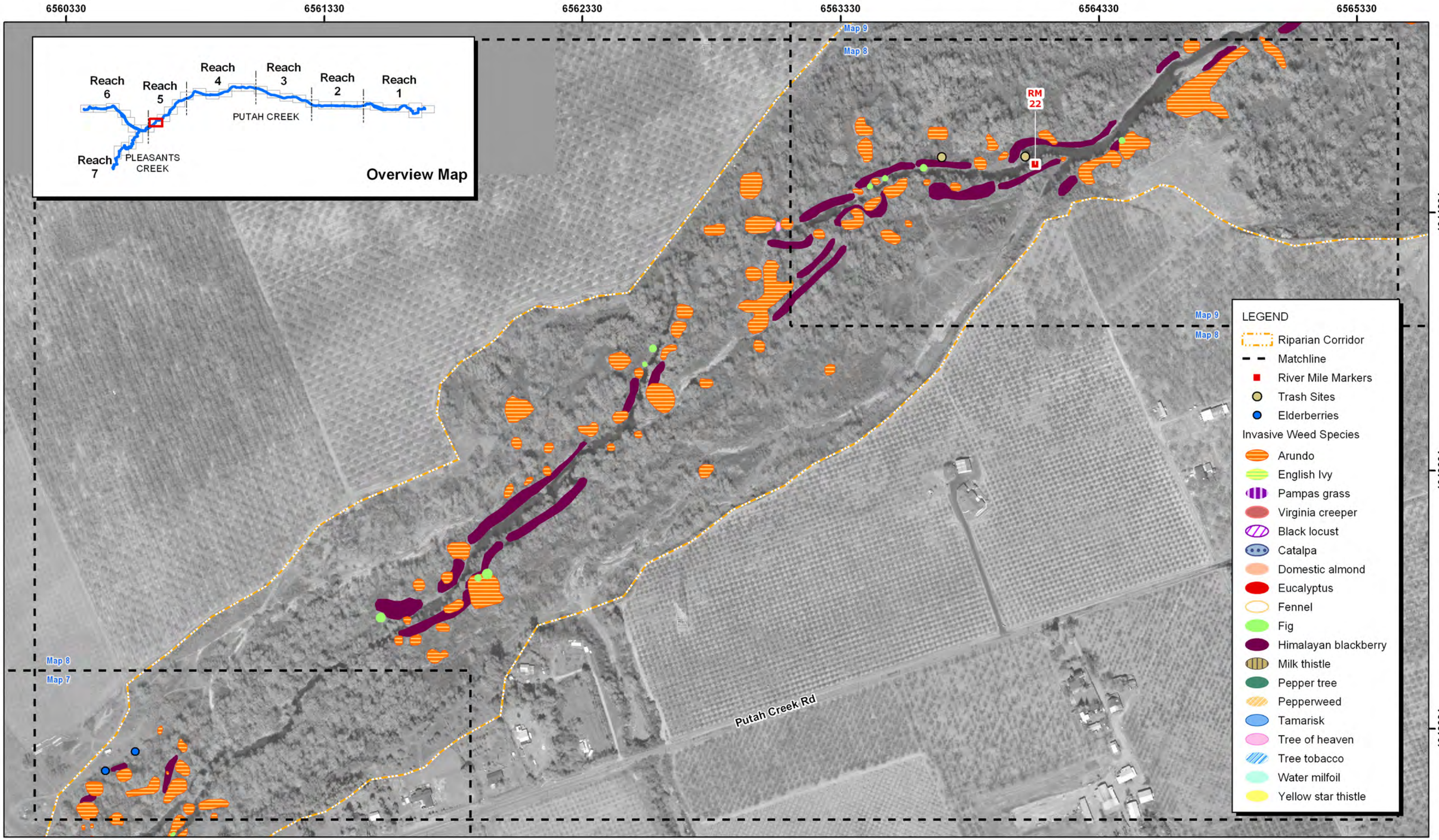

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Resource Assessment

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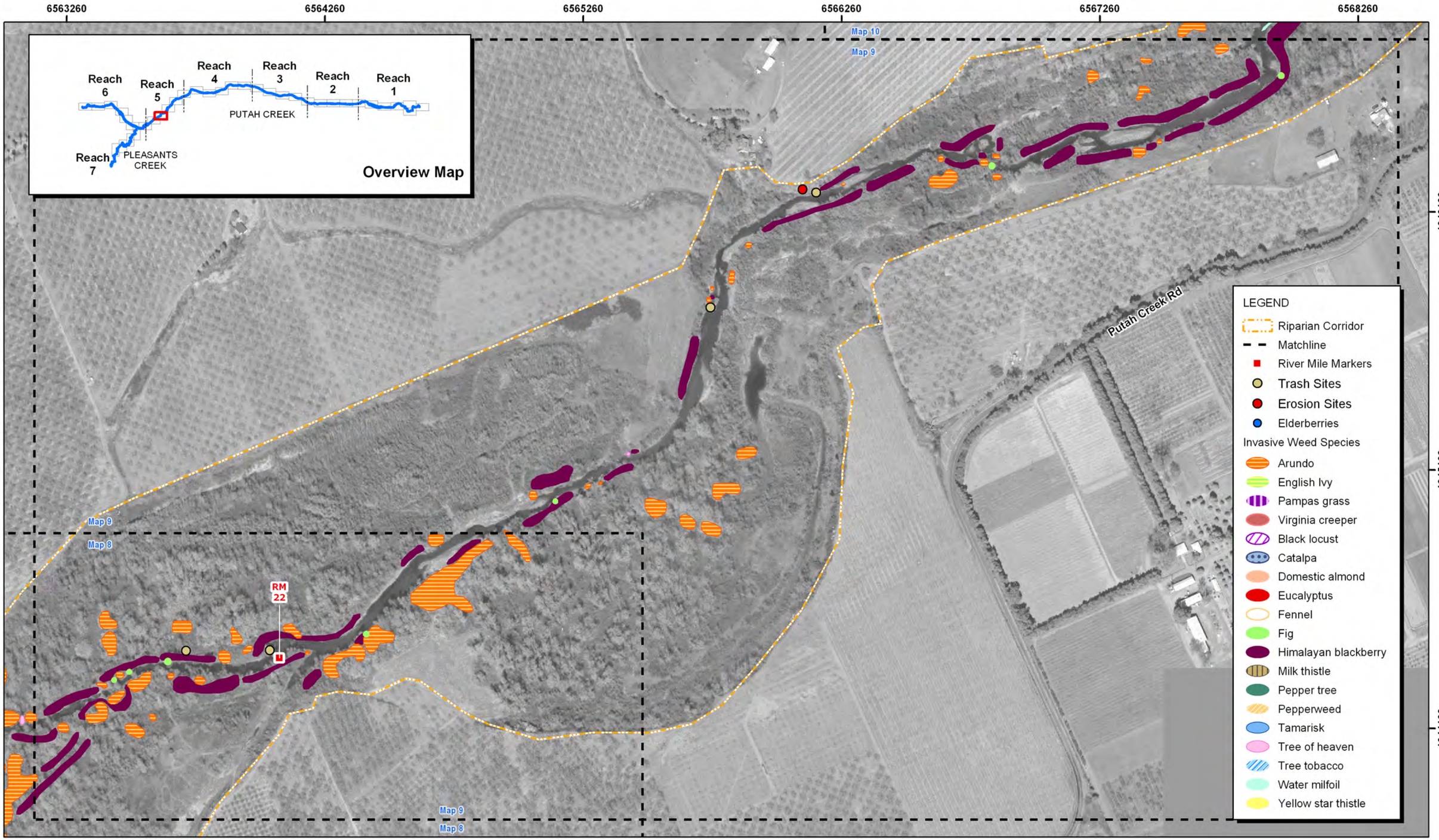

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Resource Assessment

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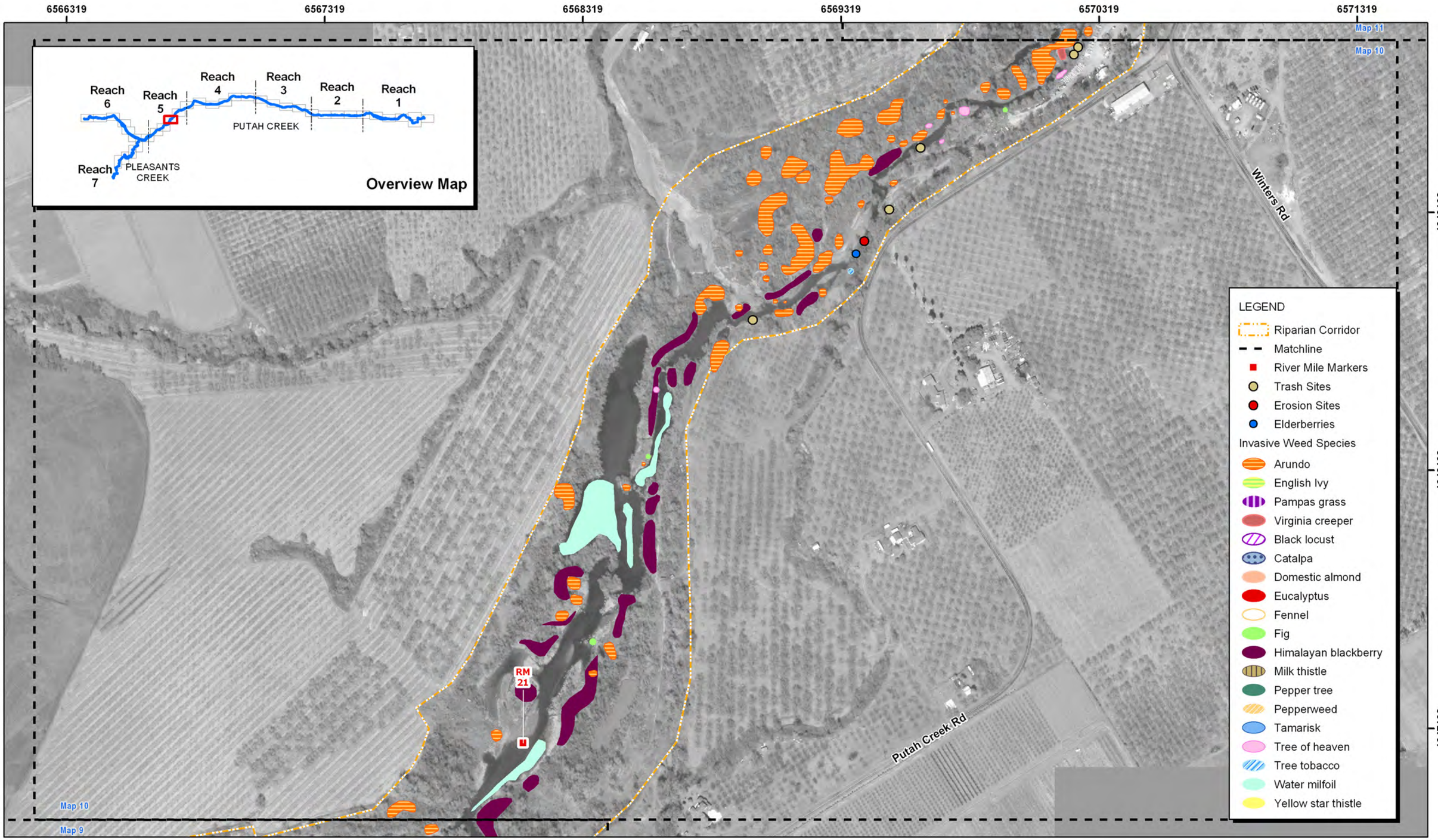

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Resource Assessment

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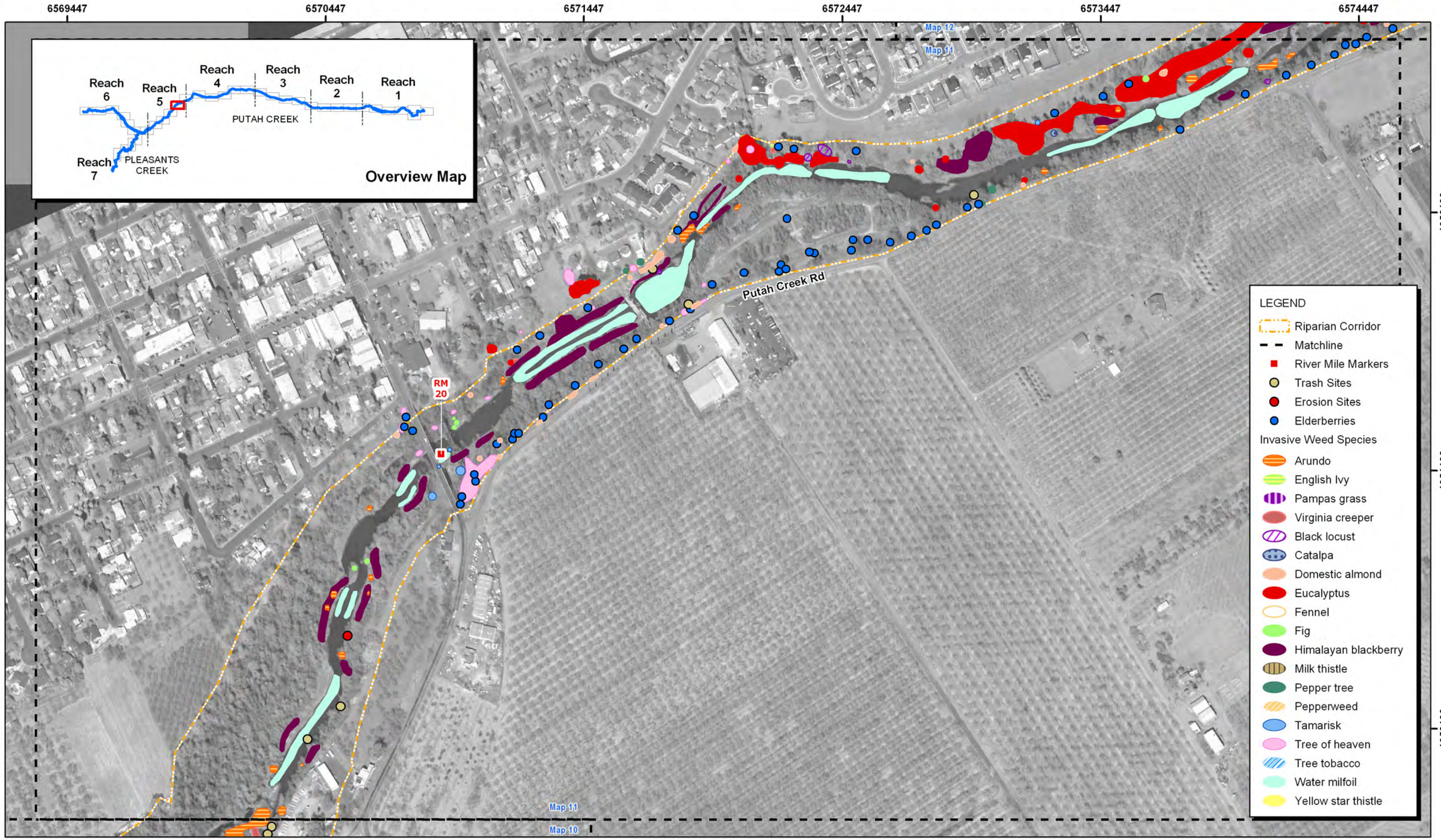

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Resource Assessment

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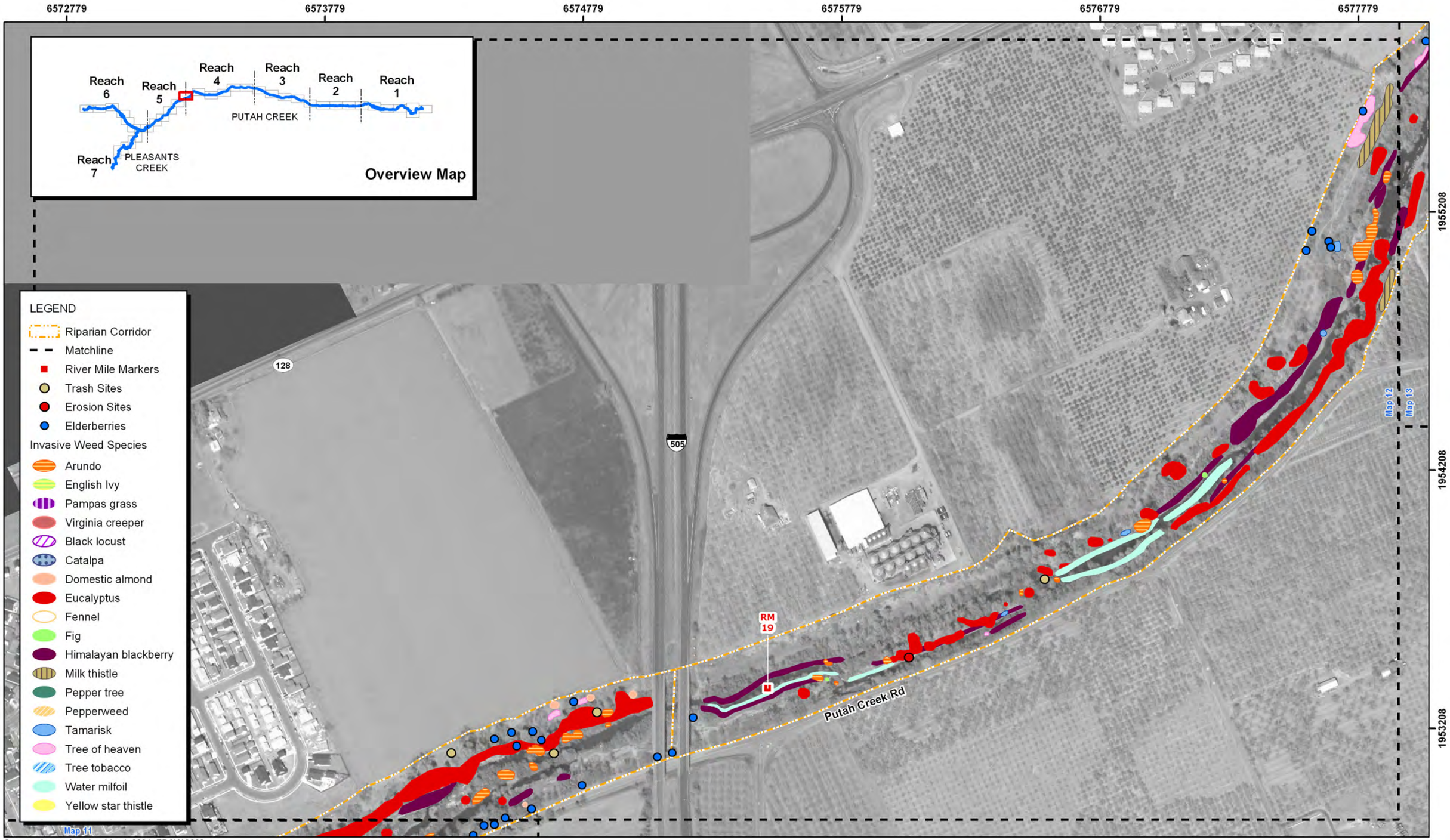

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Resource Assessment

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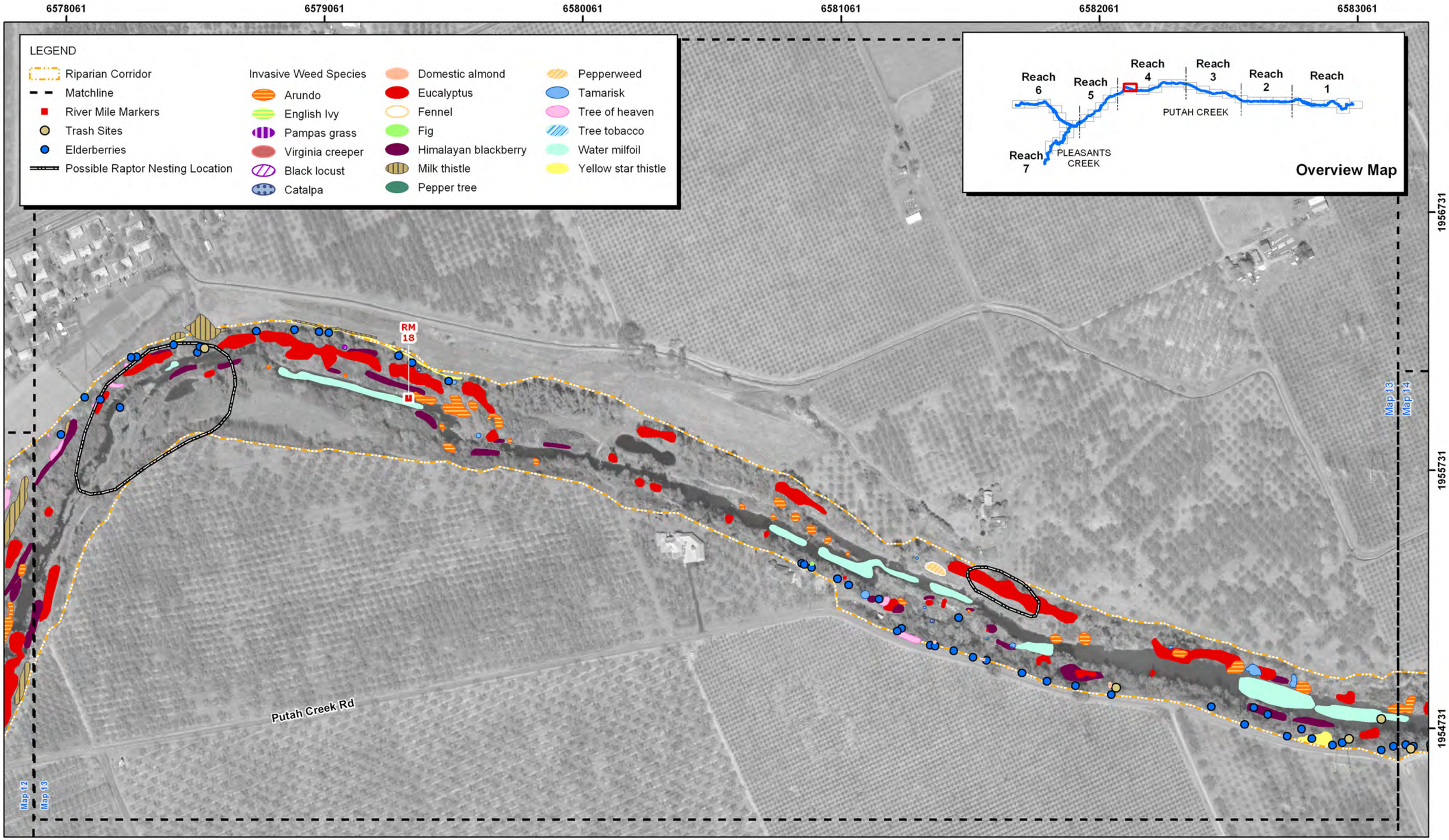

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Resource Assessment

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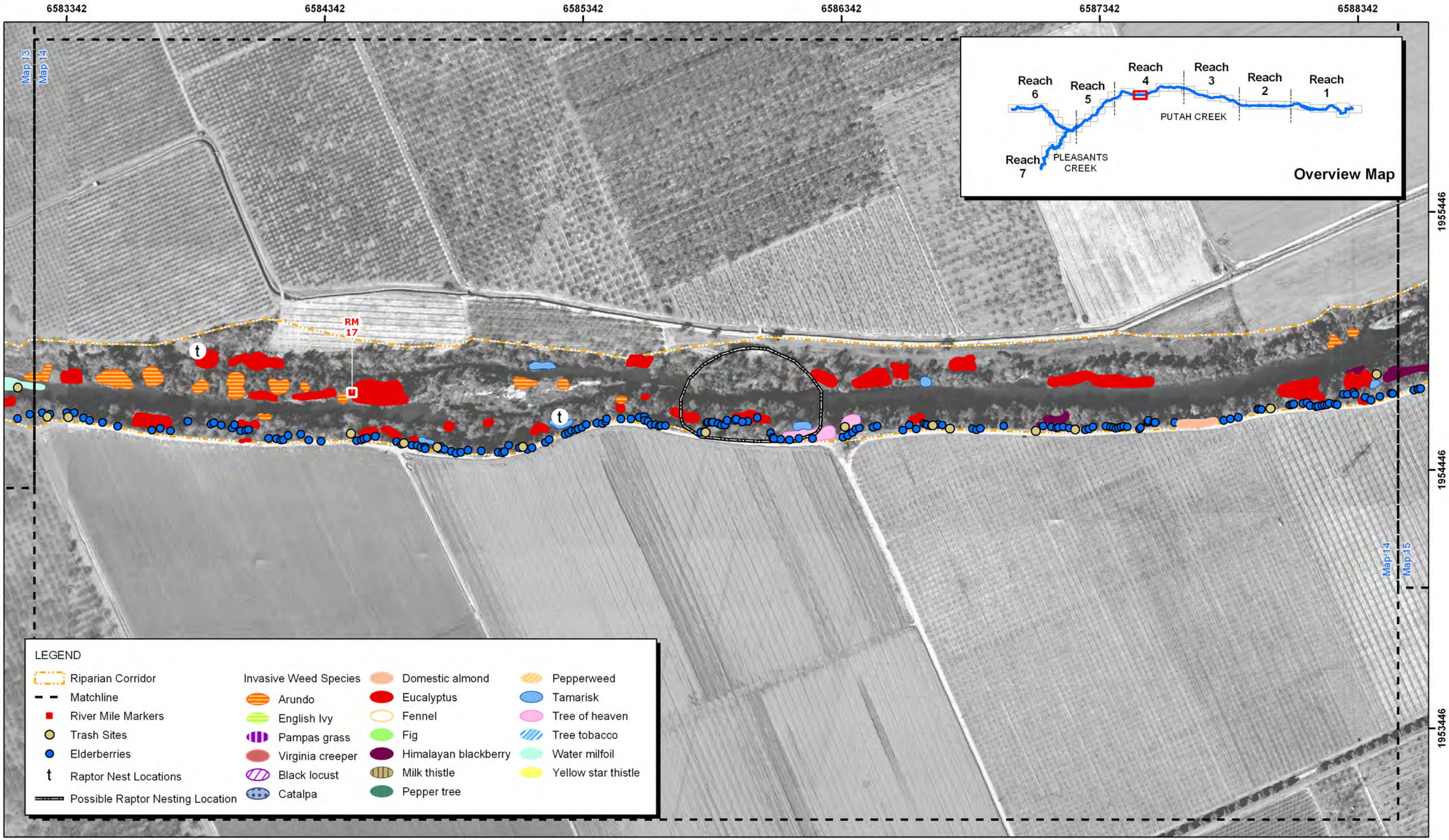

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Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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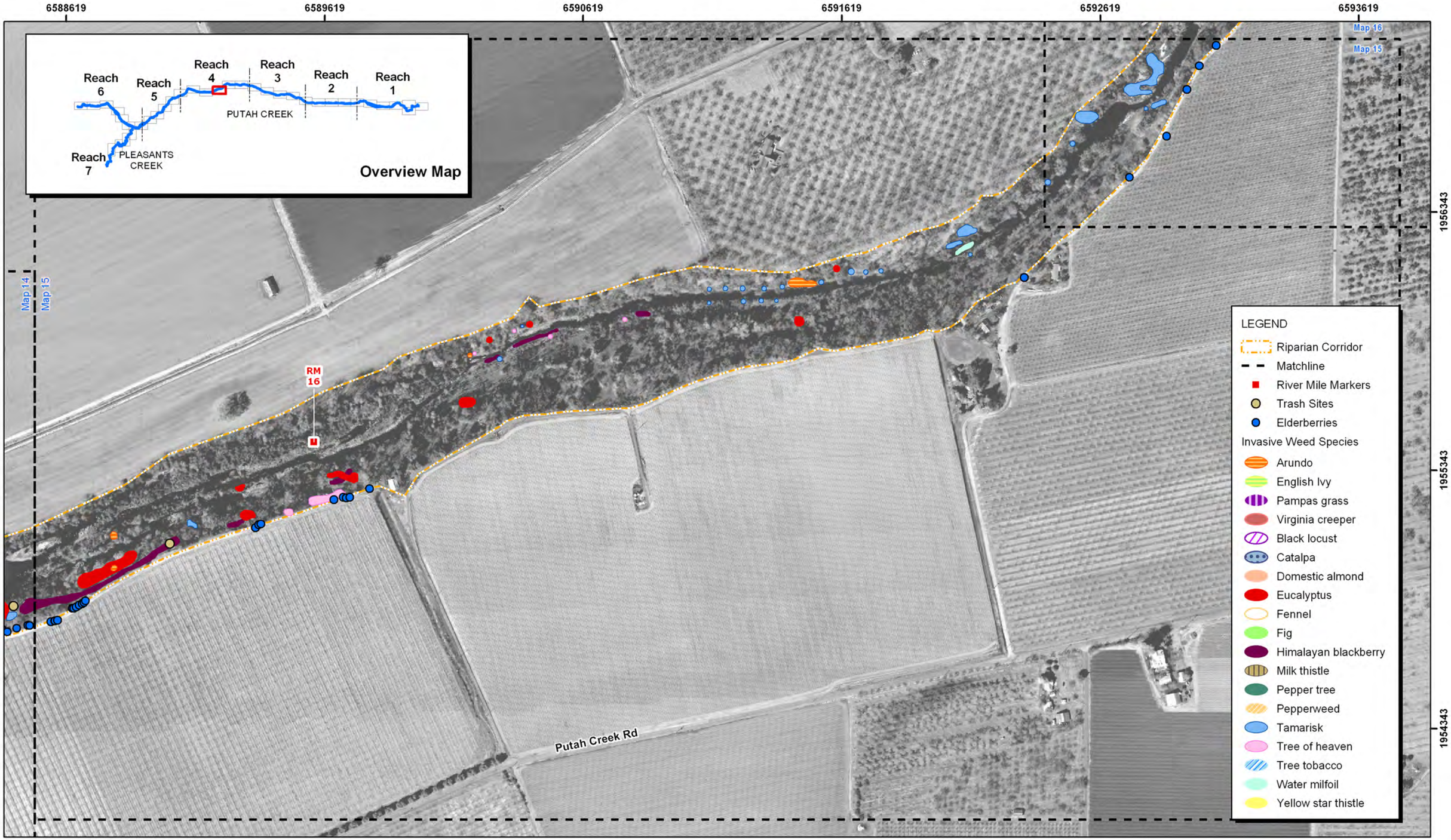

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Resource Assessment

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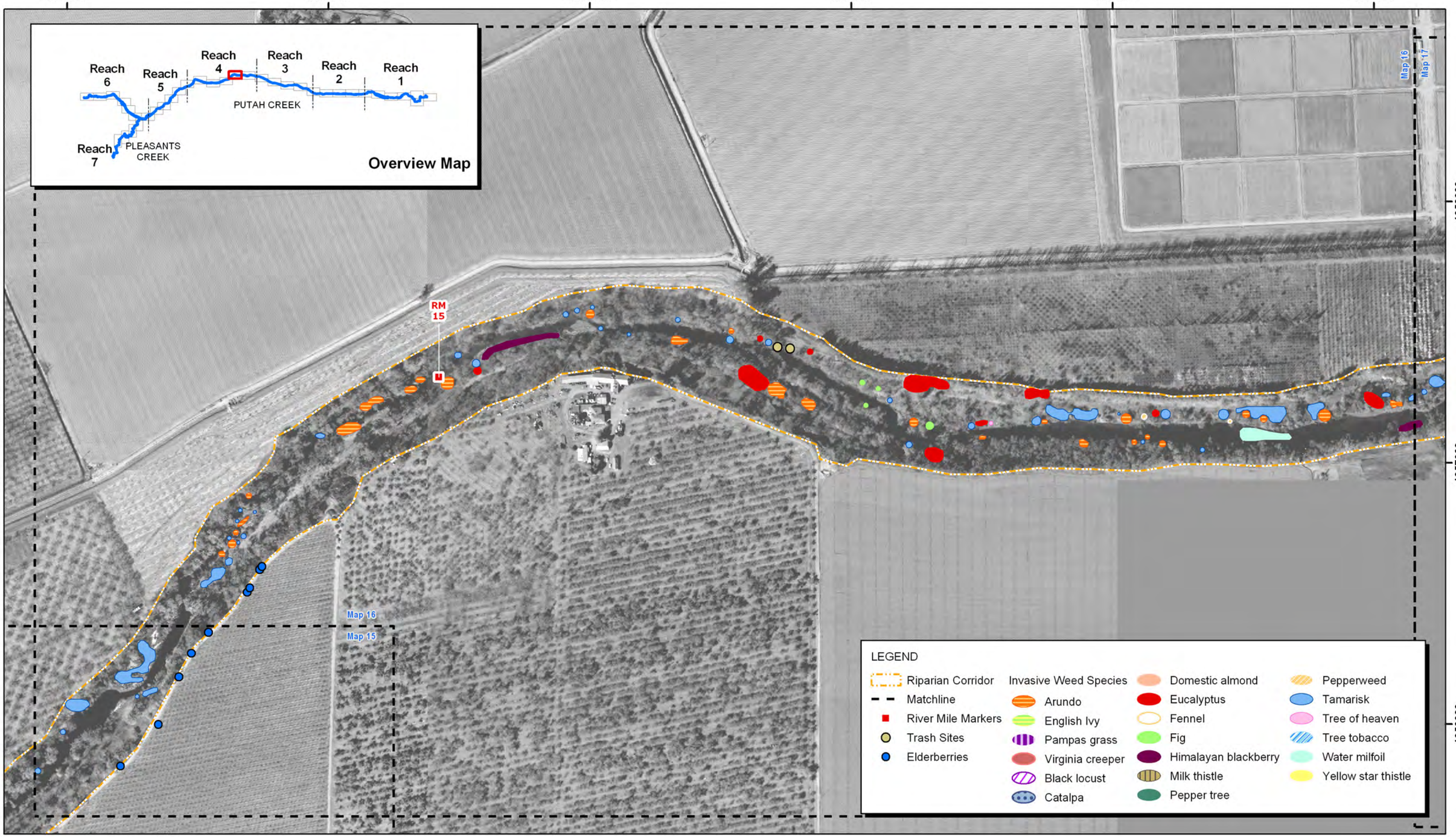

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Resource Assessment

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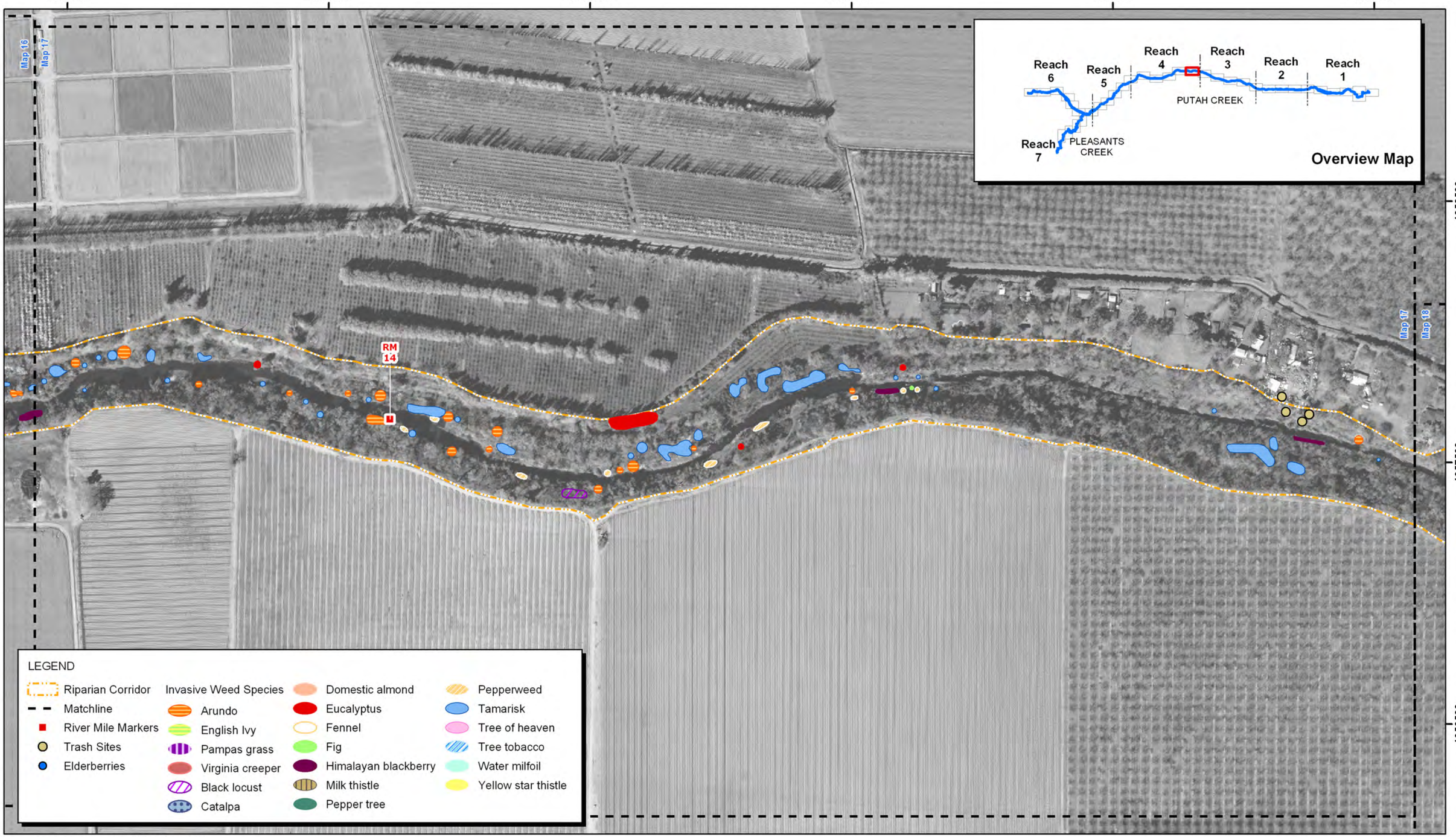

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Resource Assessment

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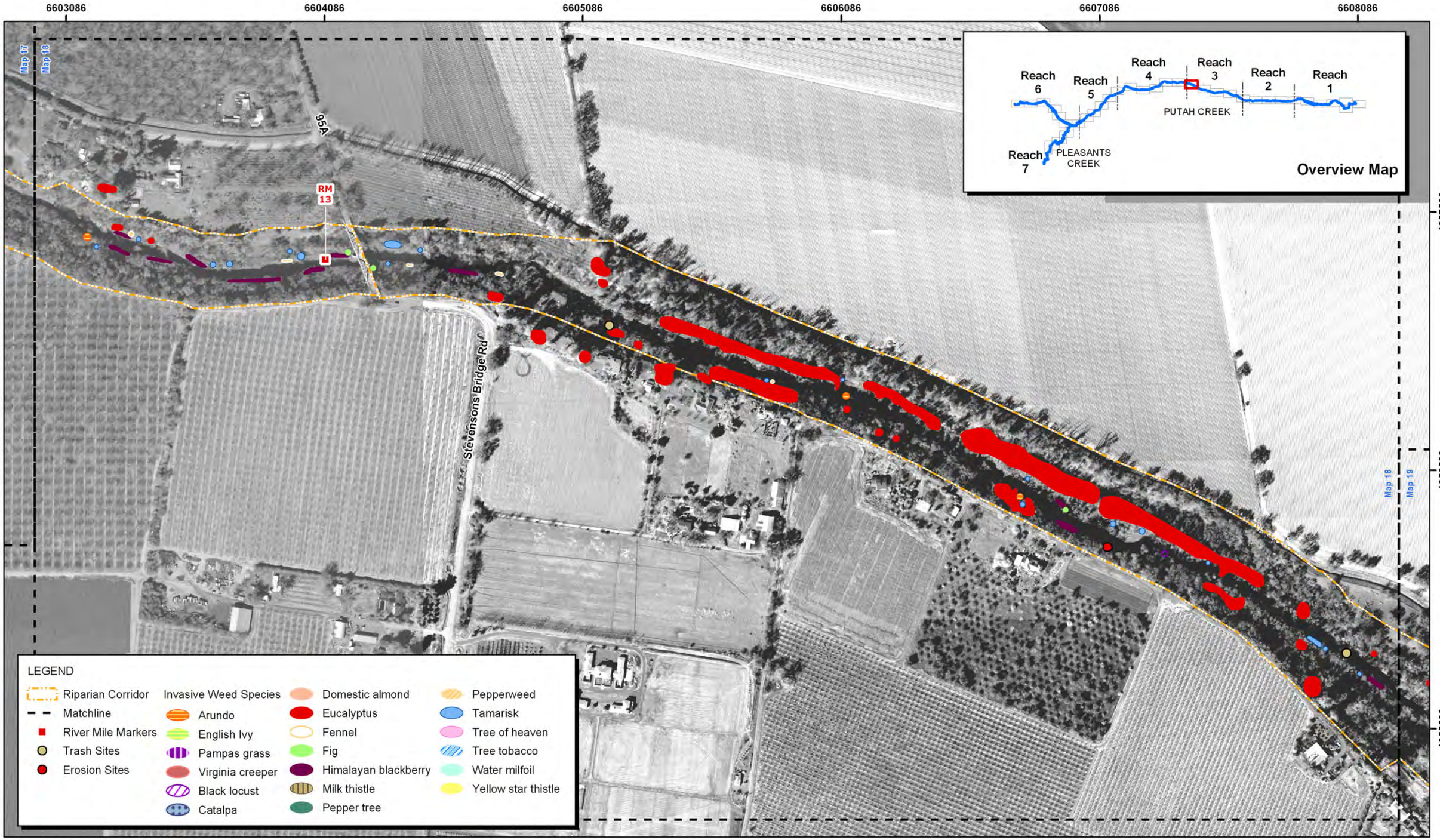

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Resource Assessment

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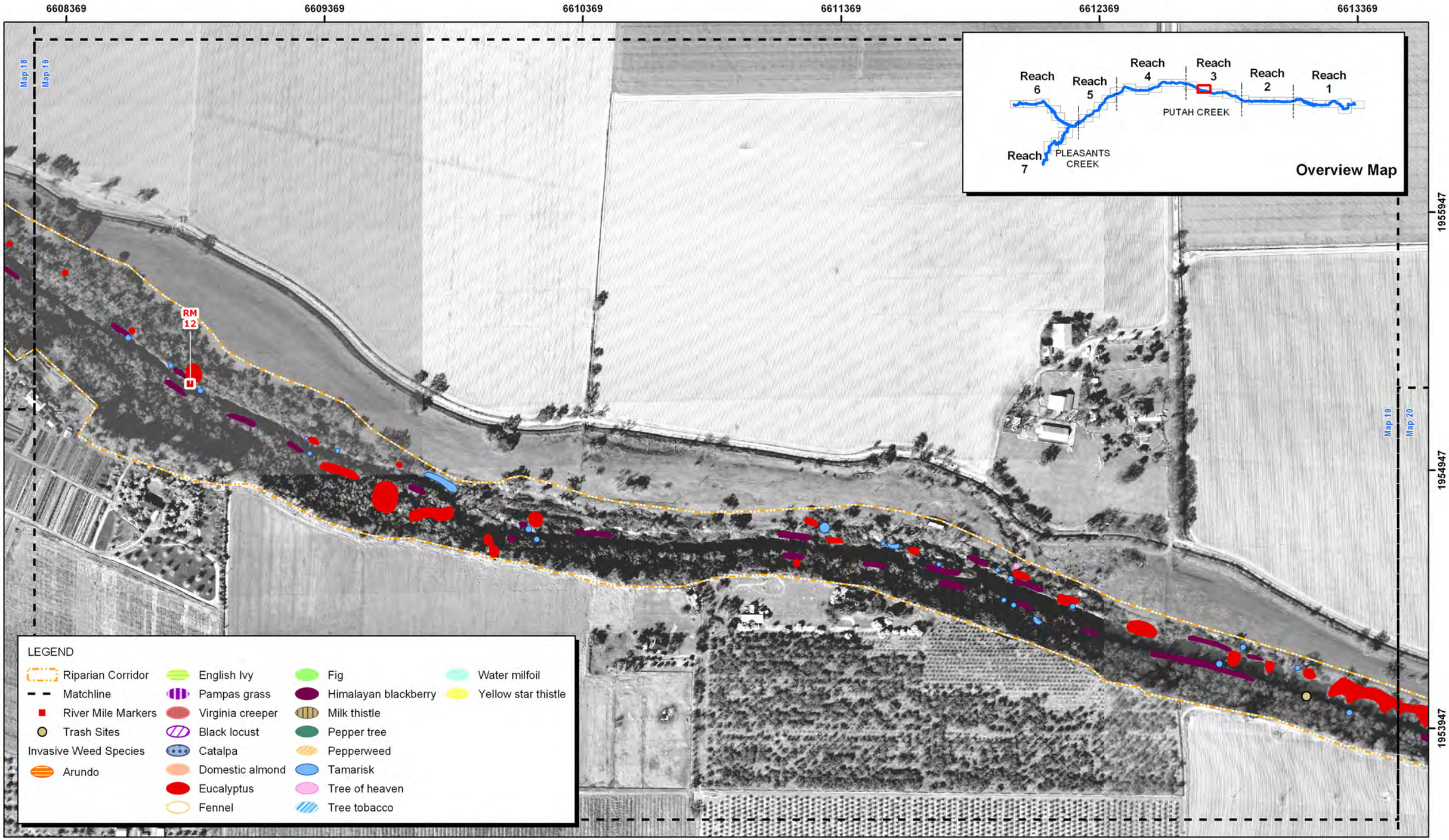

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Resource Assessment

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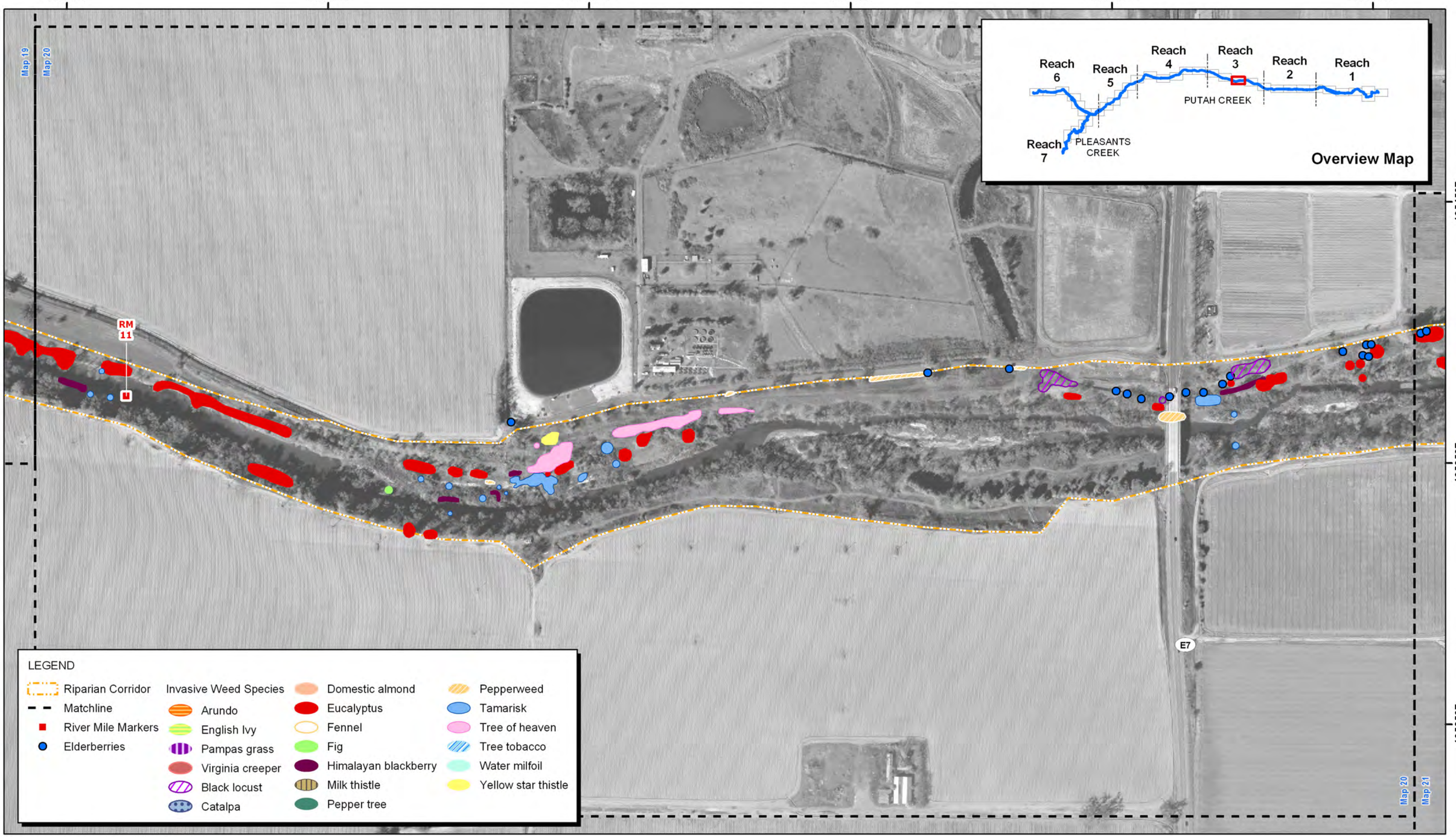

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Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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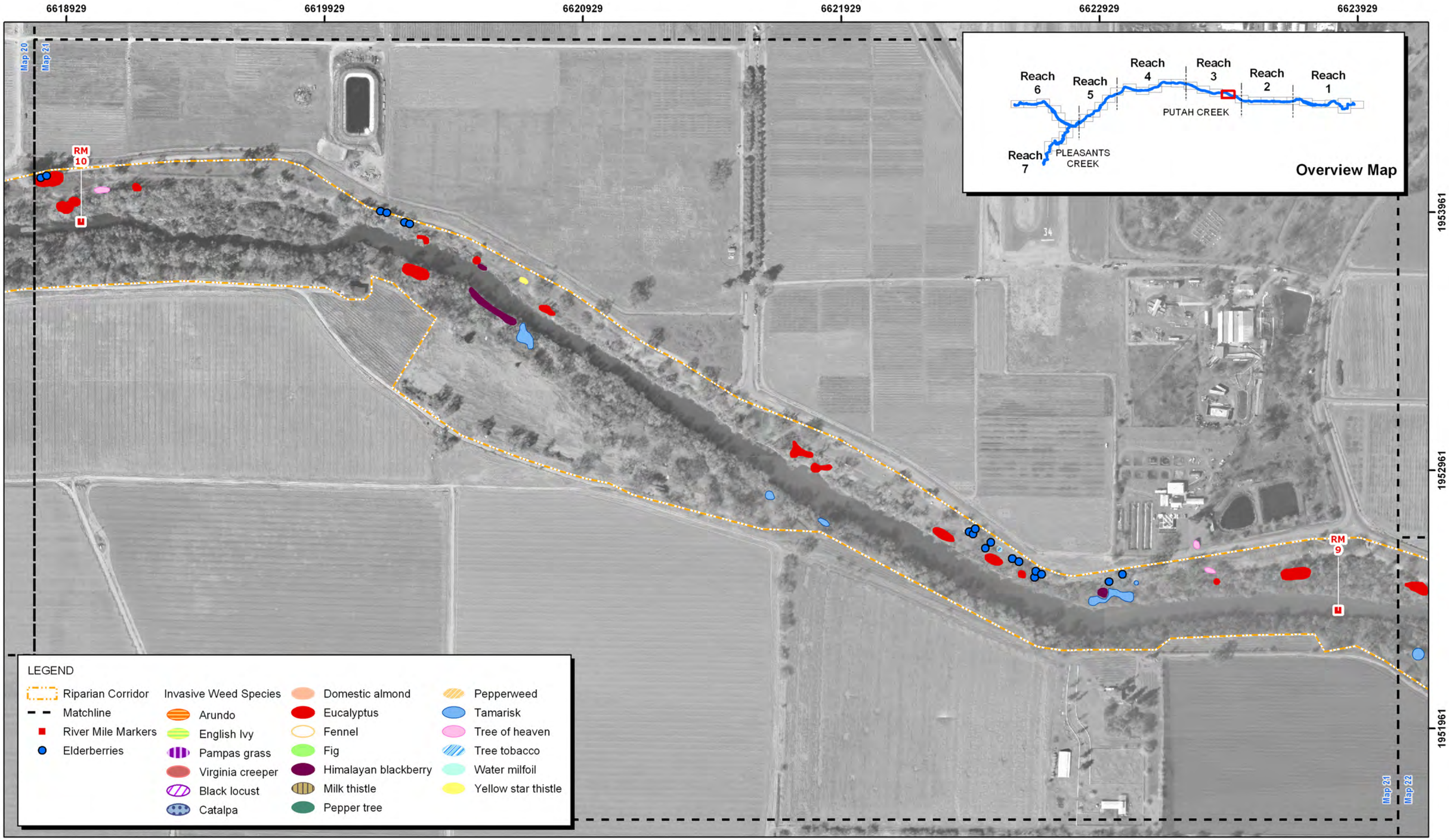

Sources: Image America, March 2001; EDAW 2002
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Resource Assessment

MAP EXHIBIT R21

Lower Putah Creek Watershed Management Action Plan

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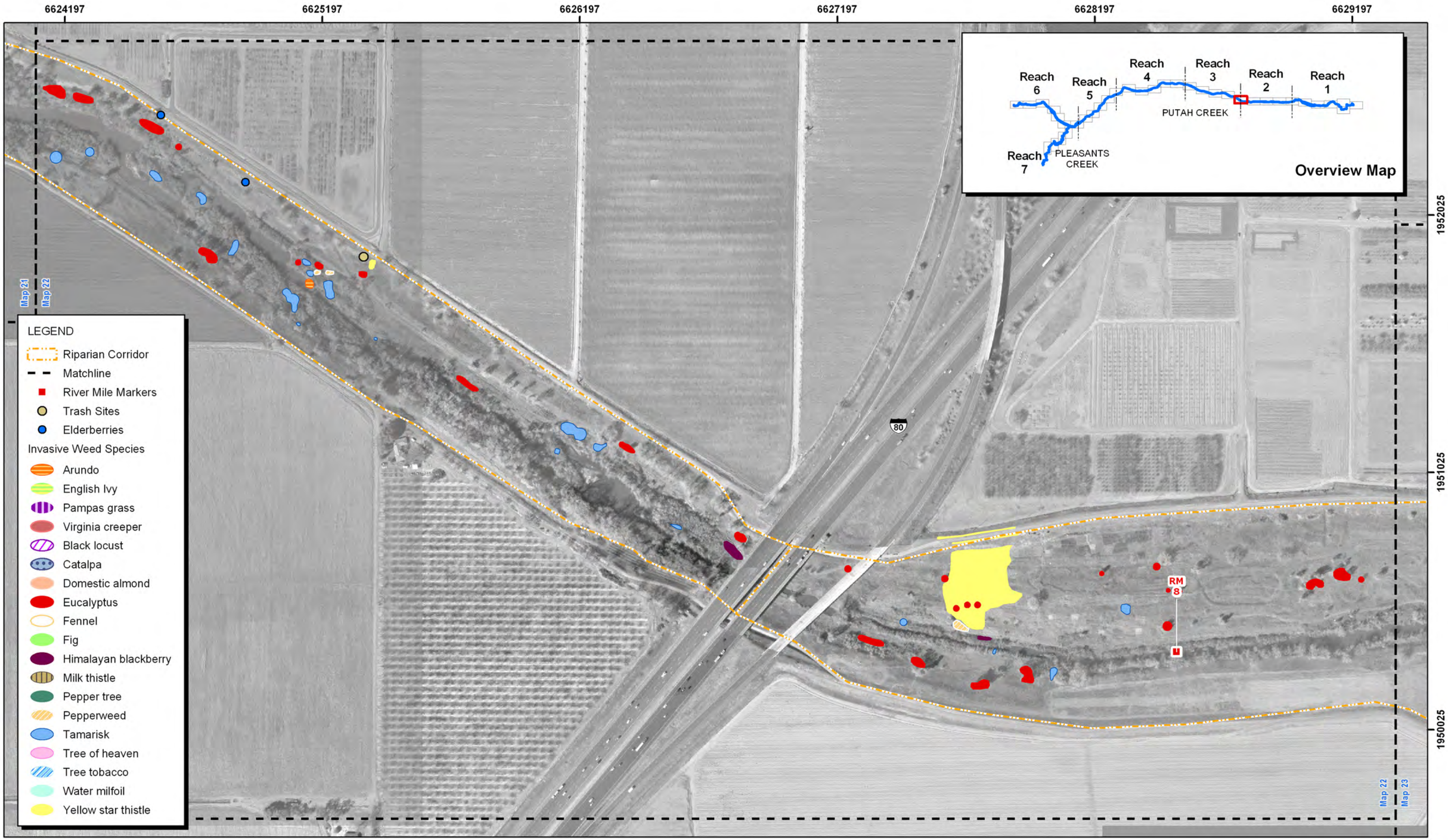

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Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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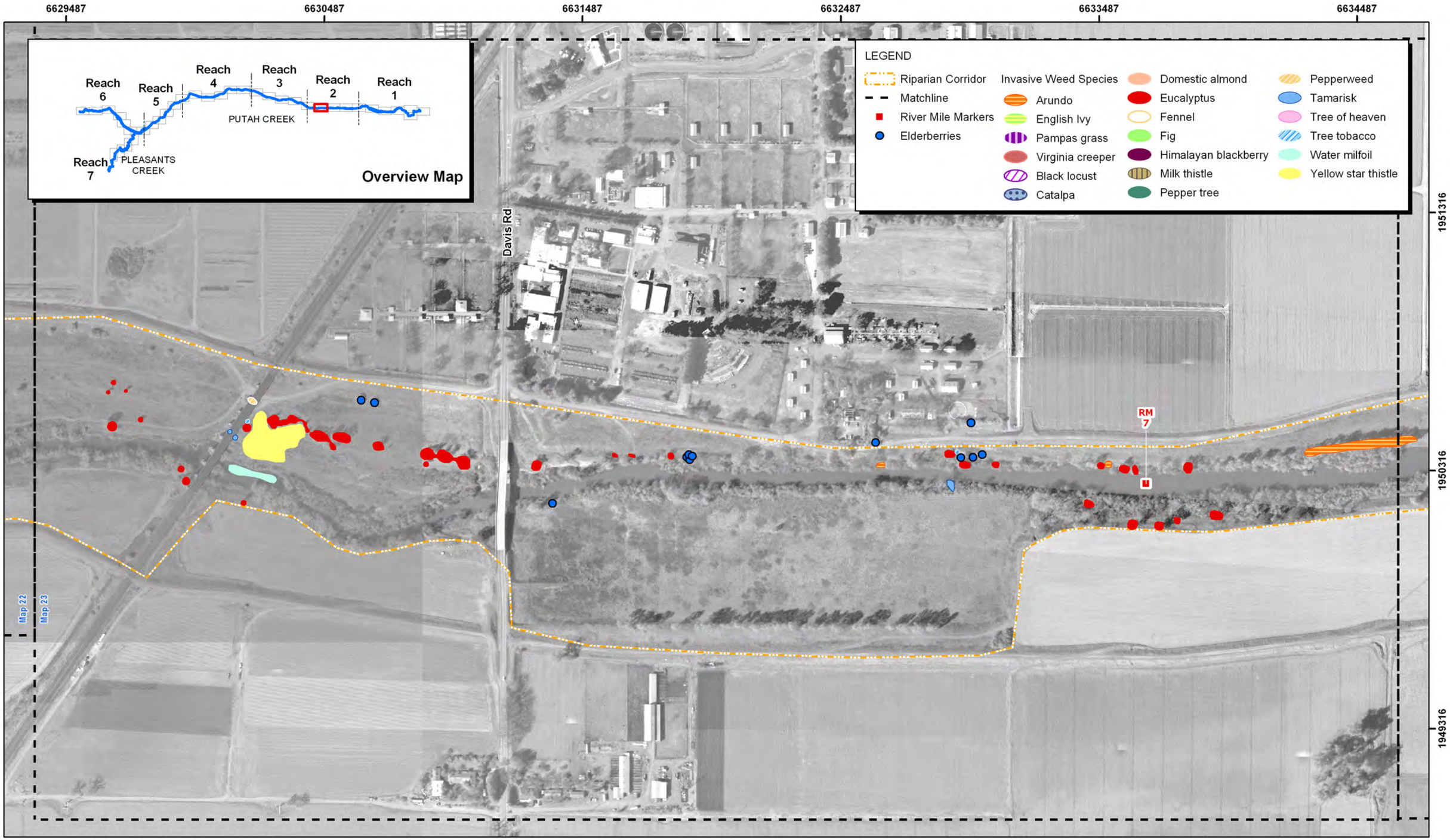

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Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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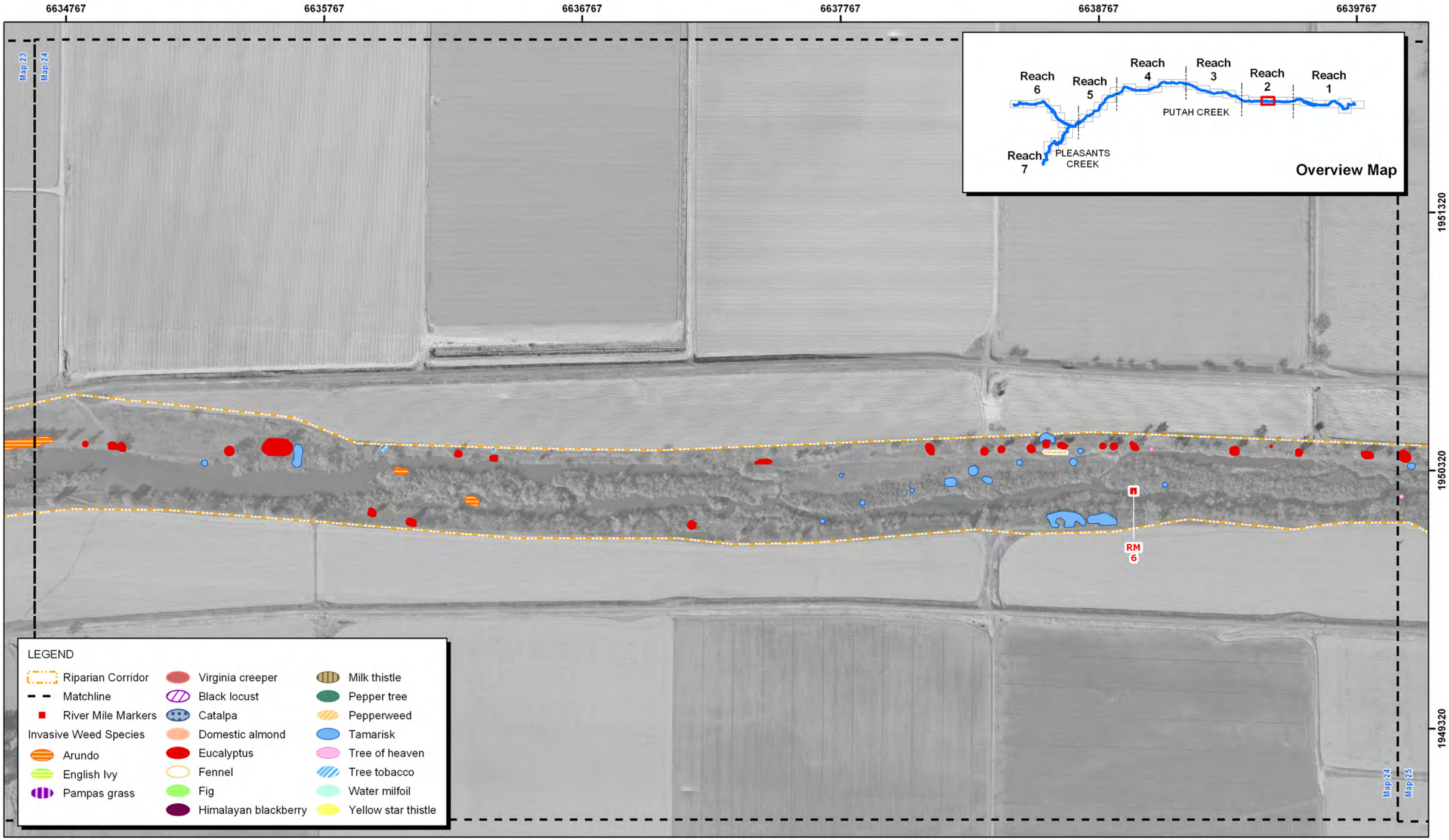

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Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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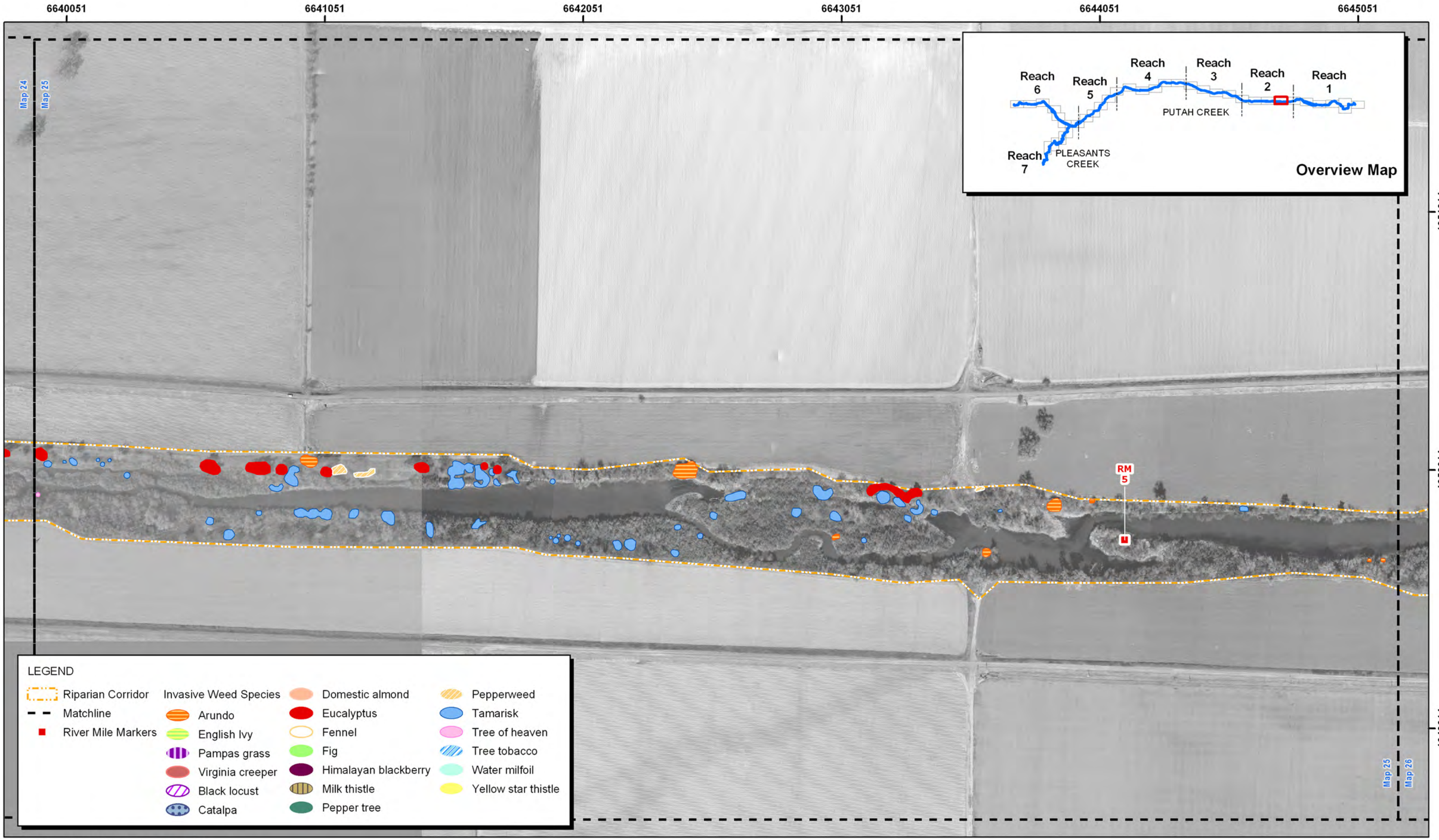

Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

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Lower Putah Creek Watershed Management Action Plan

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Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R26

Lower Putah Creek Watershed Management Action Plan

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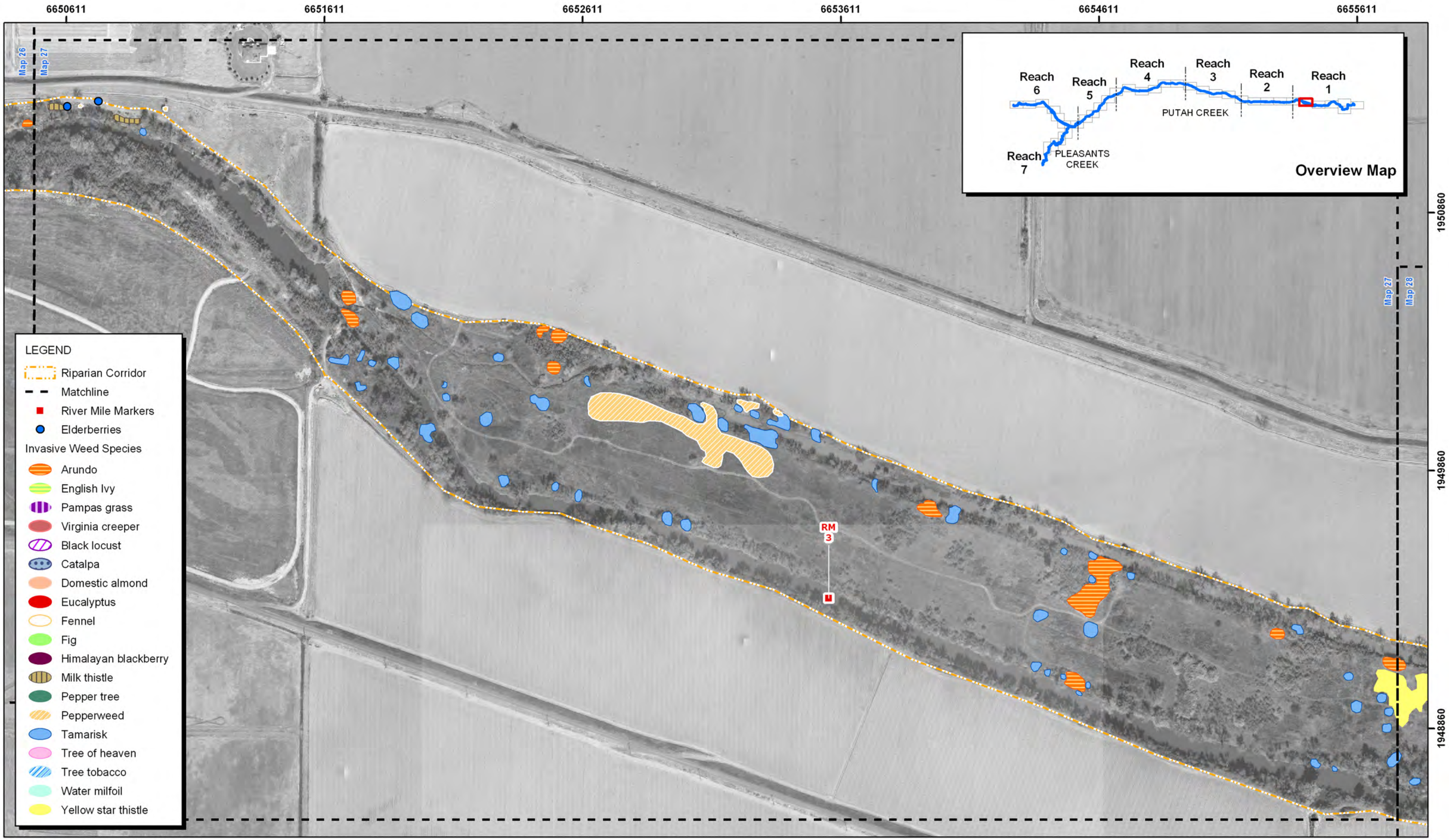
EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R27

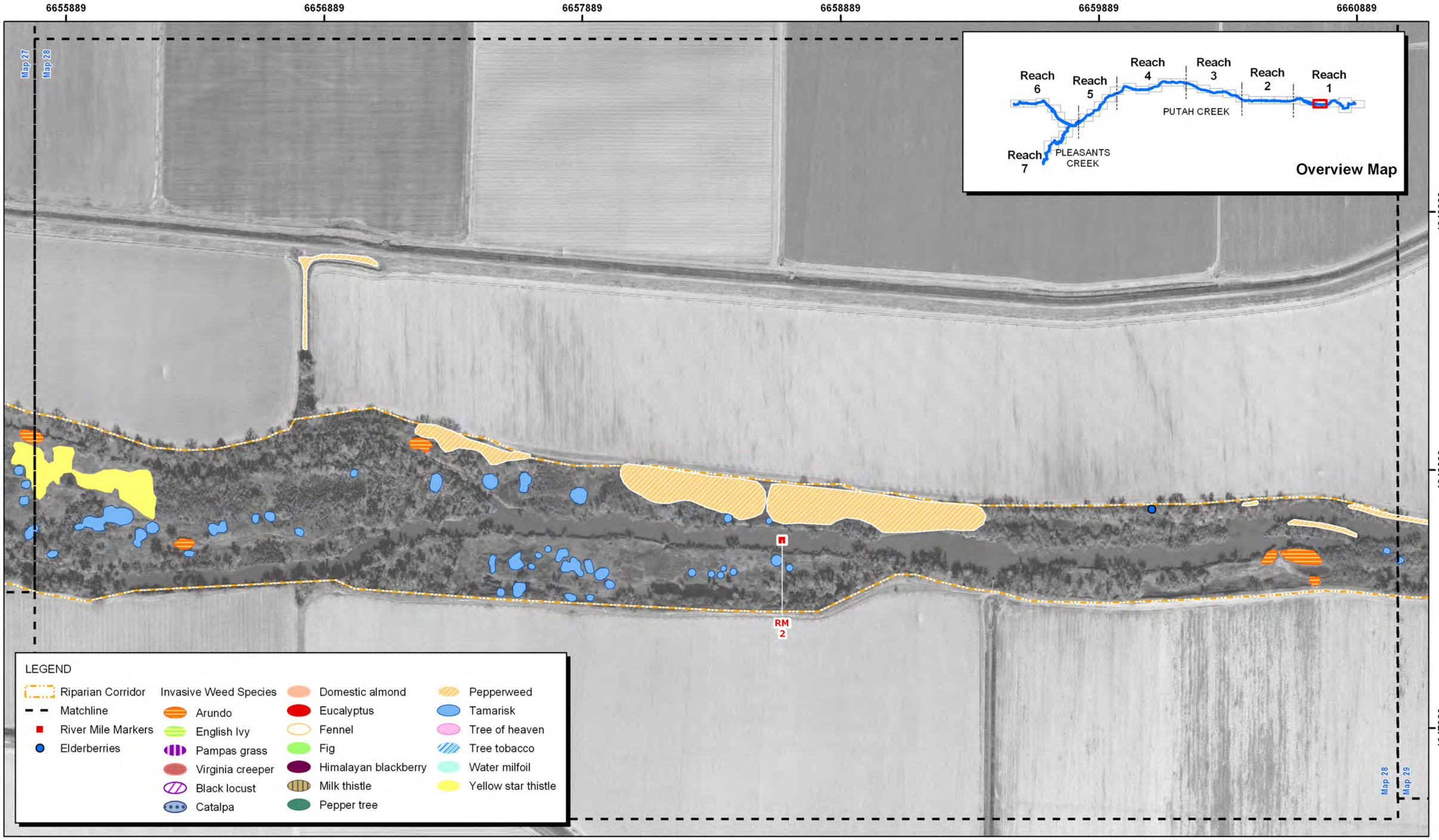
Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R28

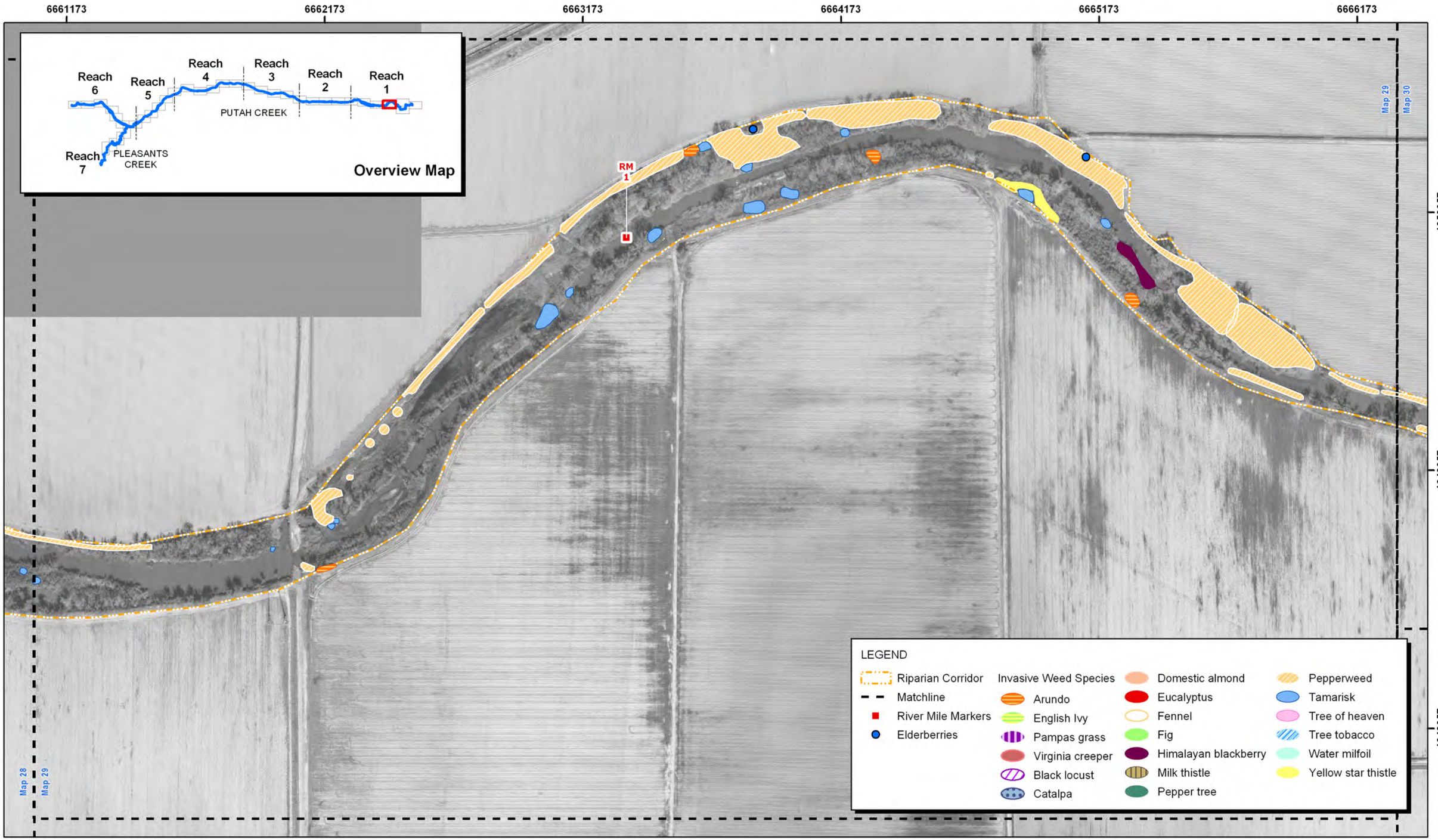
Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R29

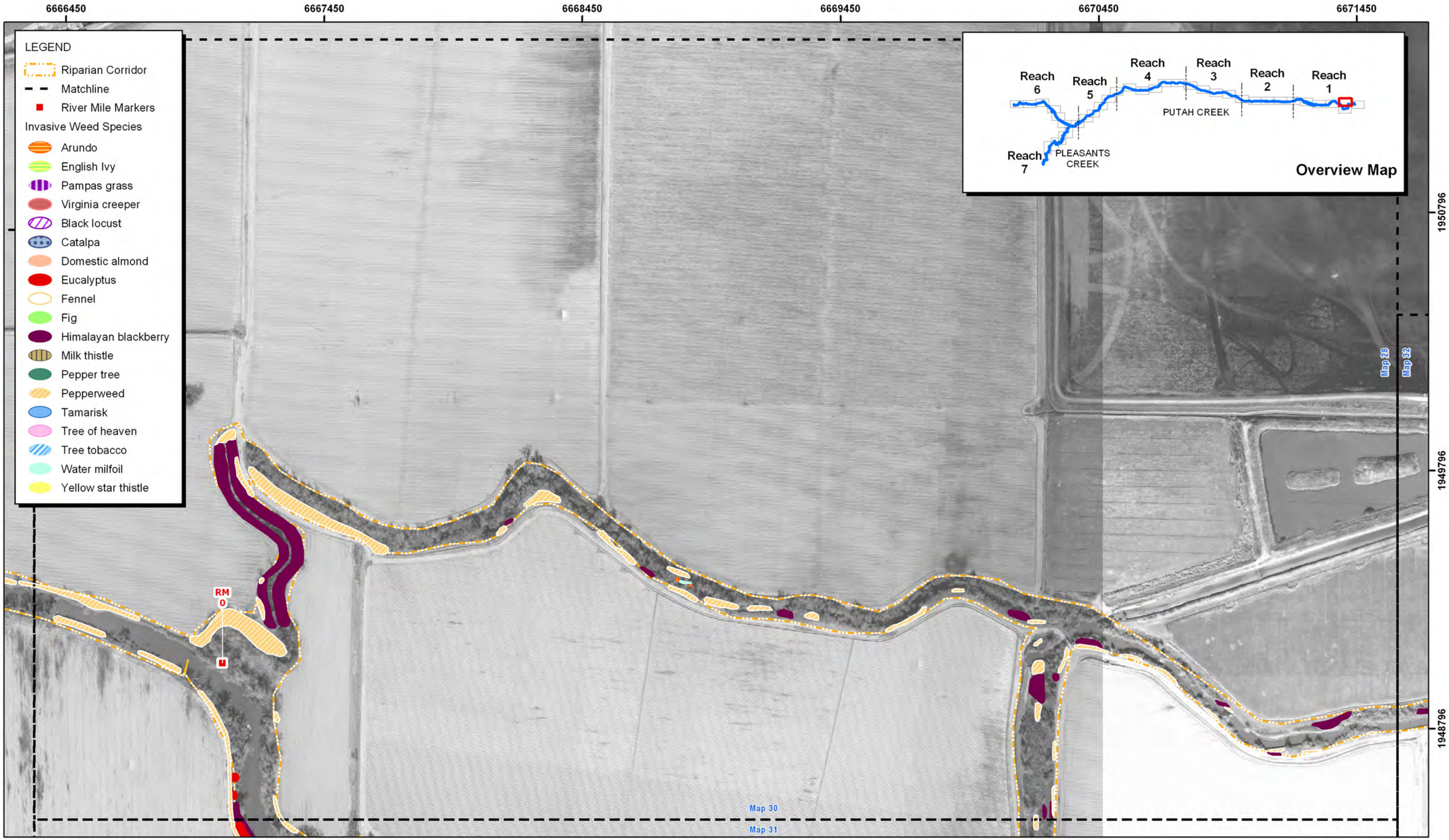
Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R30

Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05

Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R31

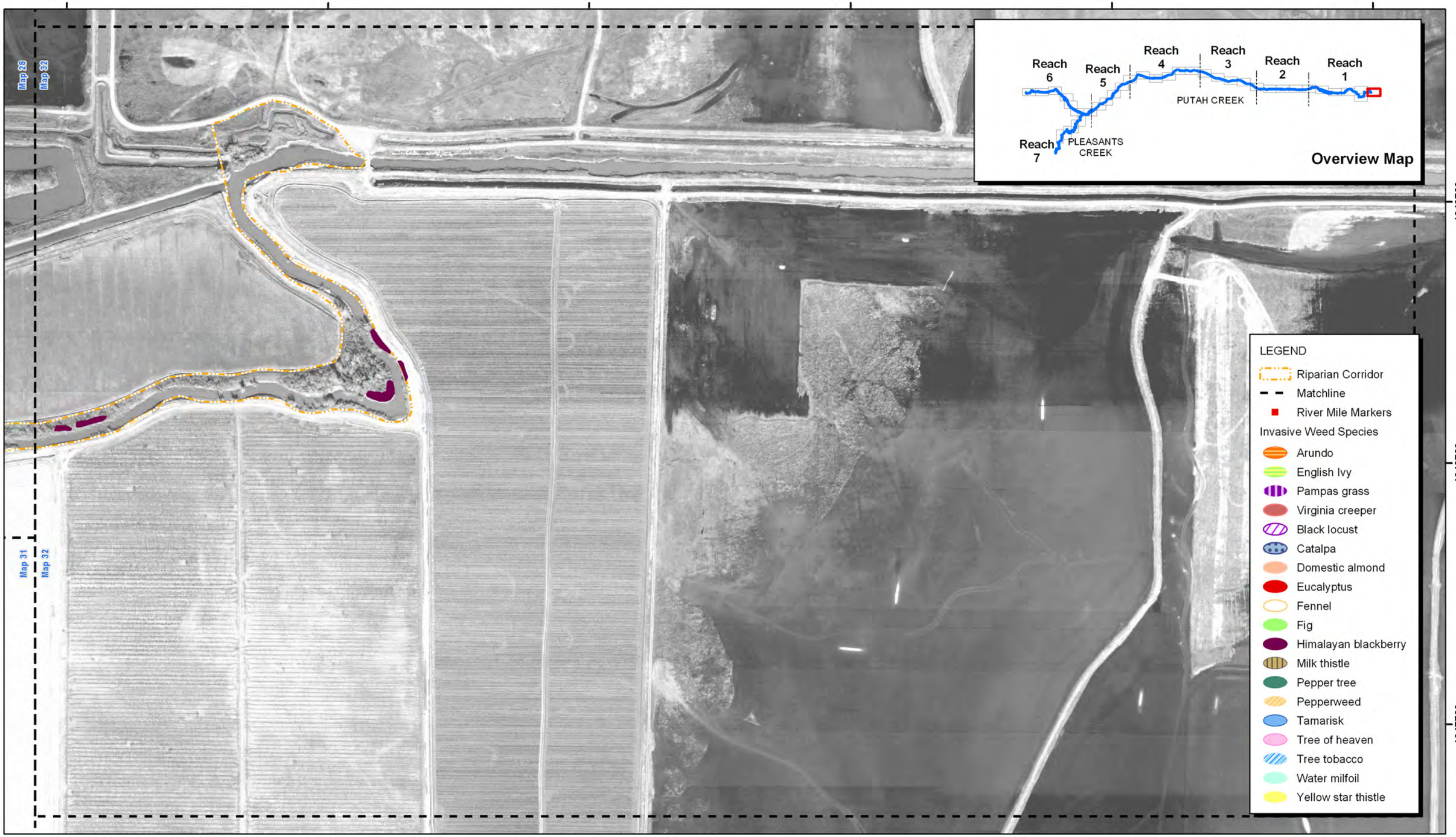
Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R32

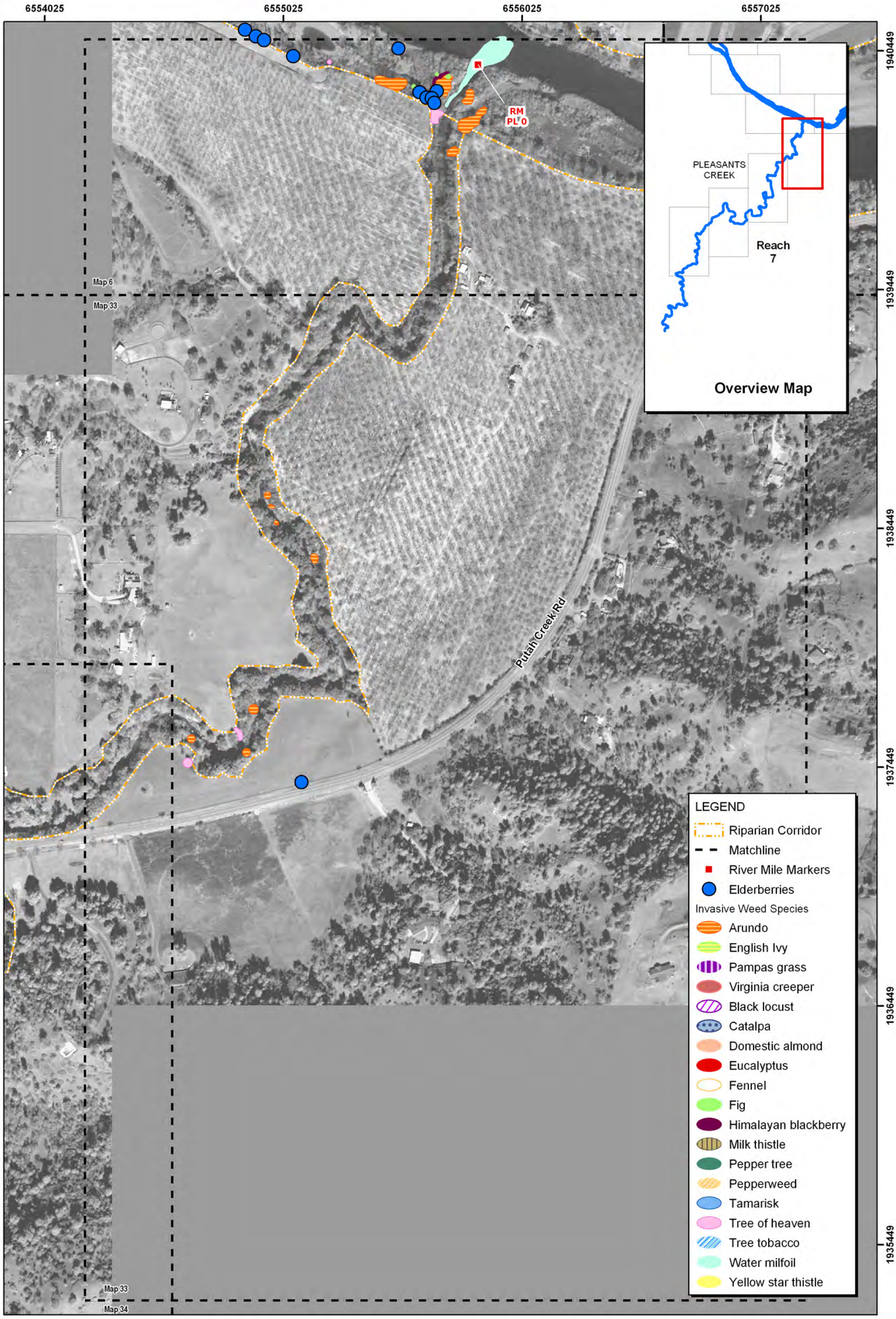
Lower Putah Creek Watershed Management Action Plan

0 350 700
FEET

NORTH

EDAW

X 1T136.02 11/05



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R33

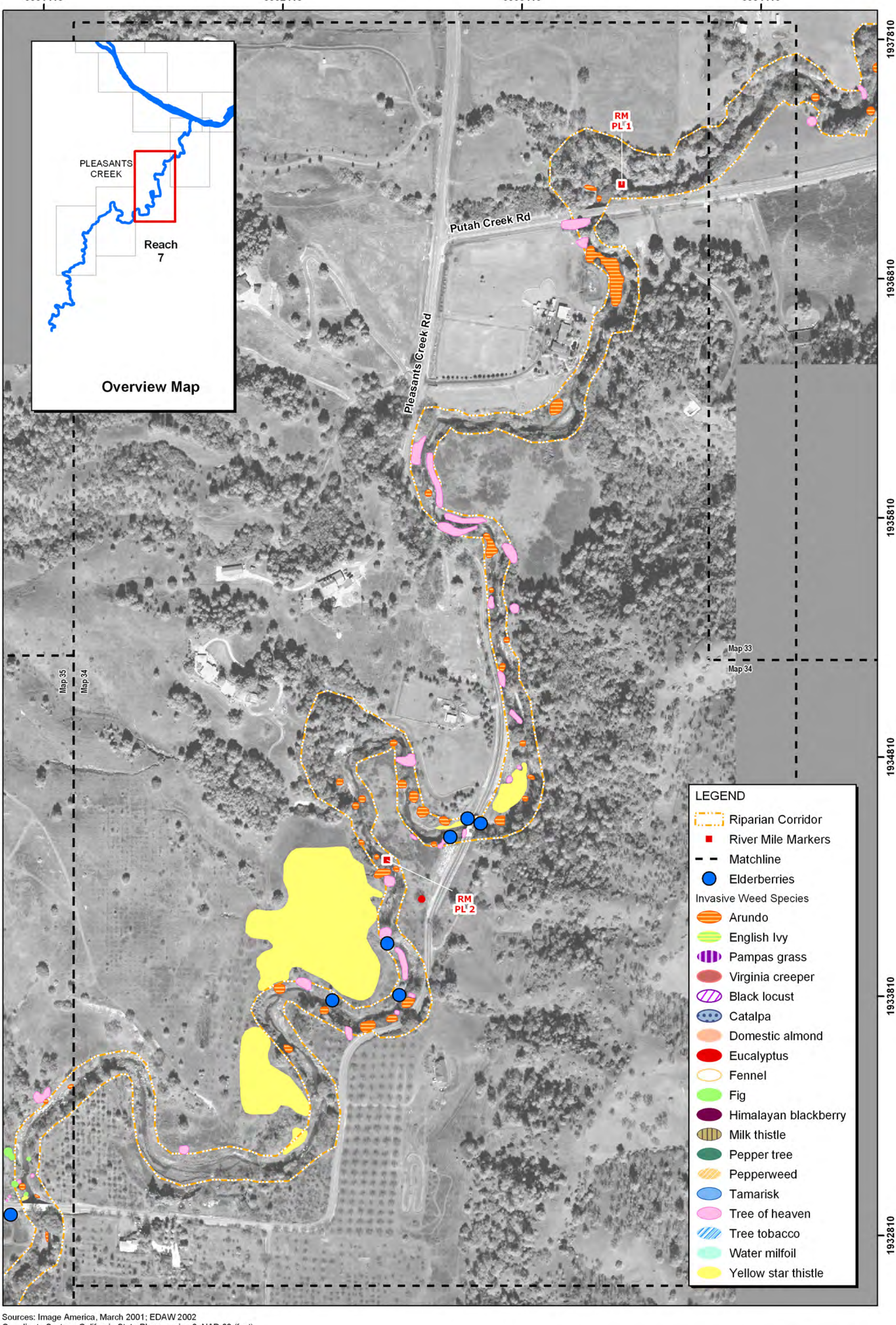
Lower Putah Creek Watershed Management Action Plan

X 1T136.02 11/05

0 250 500
FEET

NORTH

EDAW



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R34

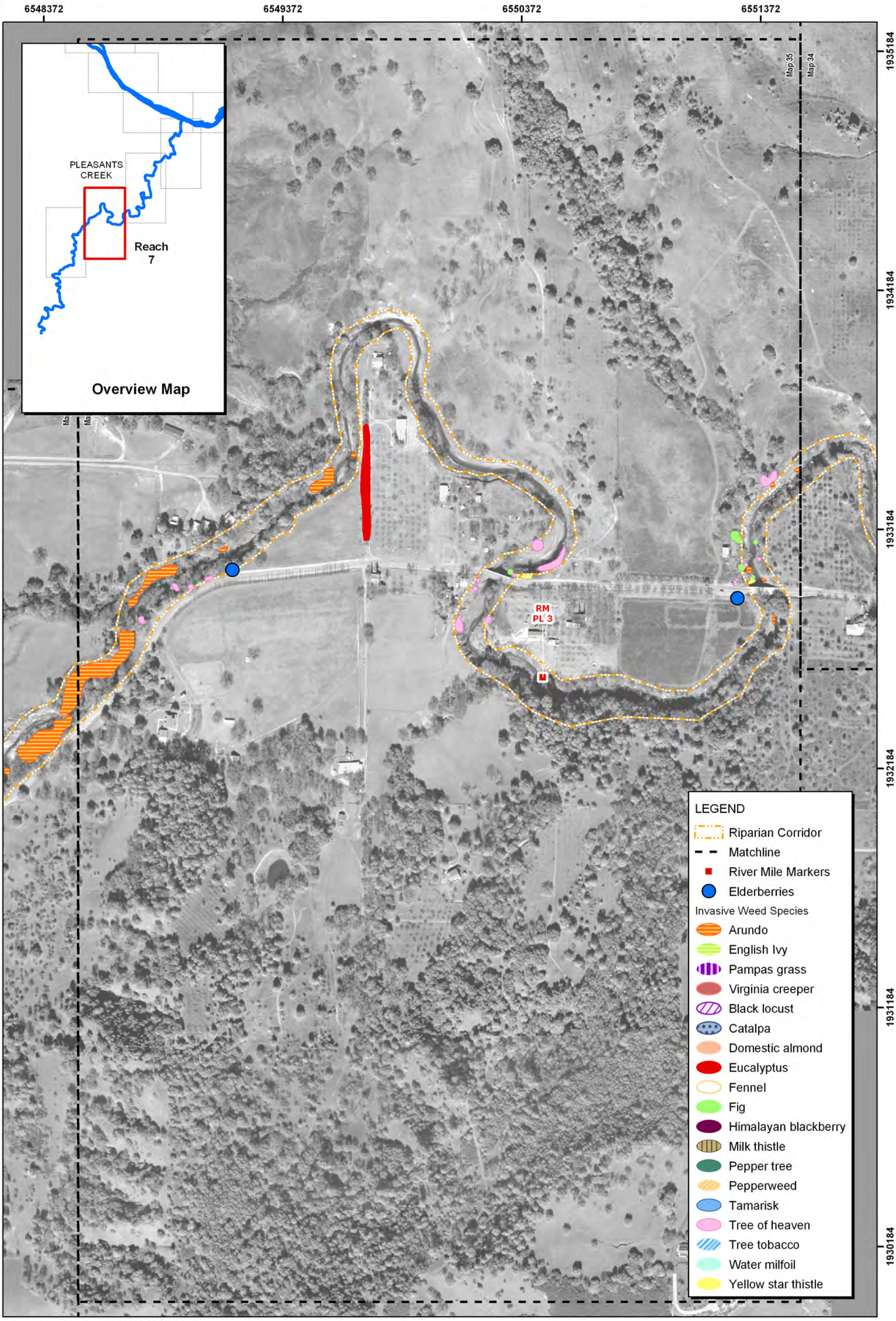
Lower Putah Creek Watershed Management Action Plan

X 1T136.02 11/05

0 250 500 FEET

NORTH

EDAW



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R35

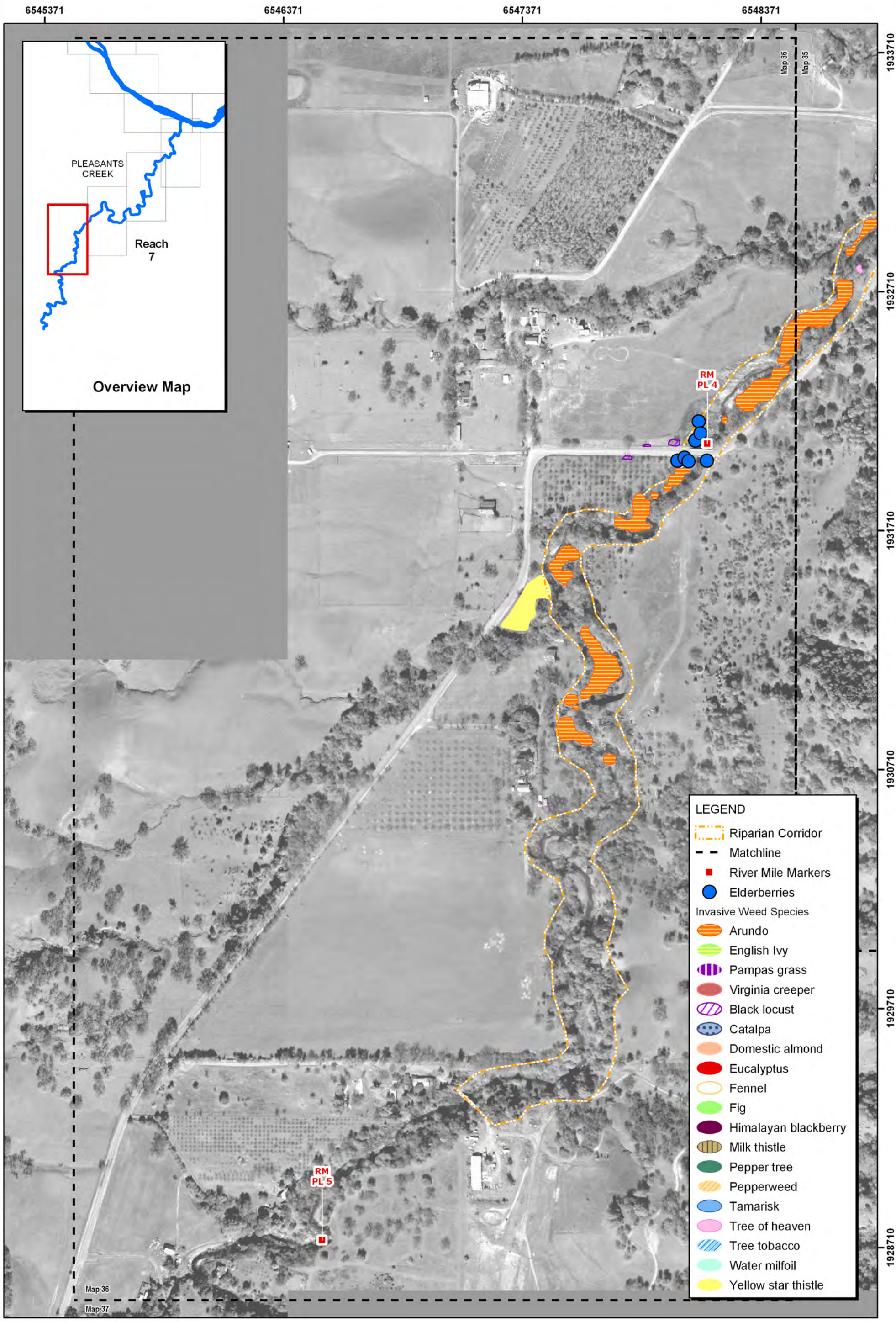
Lower Putah Creek Watershed Management Action Plan

X 1T136.02 11/05

0 250 500 FEET

NORTH

EDAW



Sources: Image America, March 2001; EDAW 2002
Coordinate System: California State Plane, region 2, NAD 83 (feet)

Resource Assessment

MAP EXHIBIT R36

Lower Putah Creek Watershed Management Action Plan

X 1T136.02 11/05

0 250 500
FEET

NORTH

EDAW