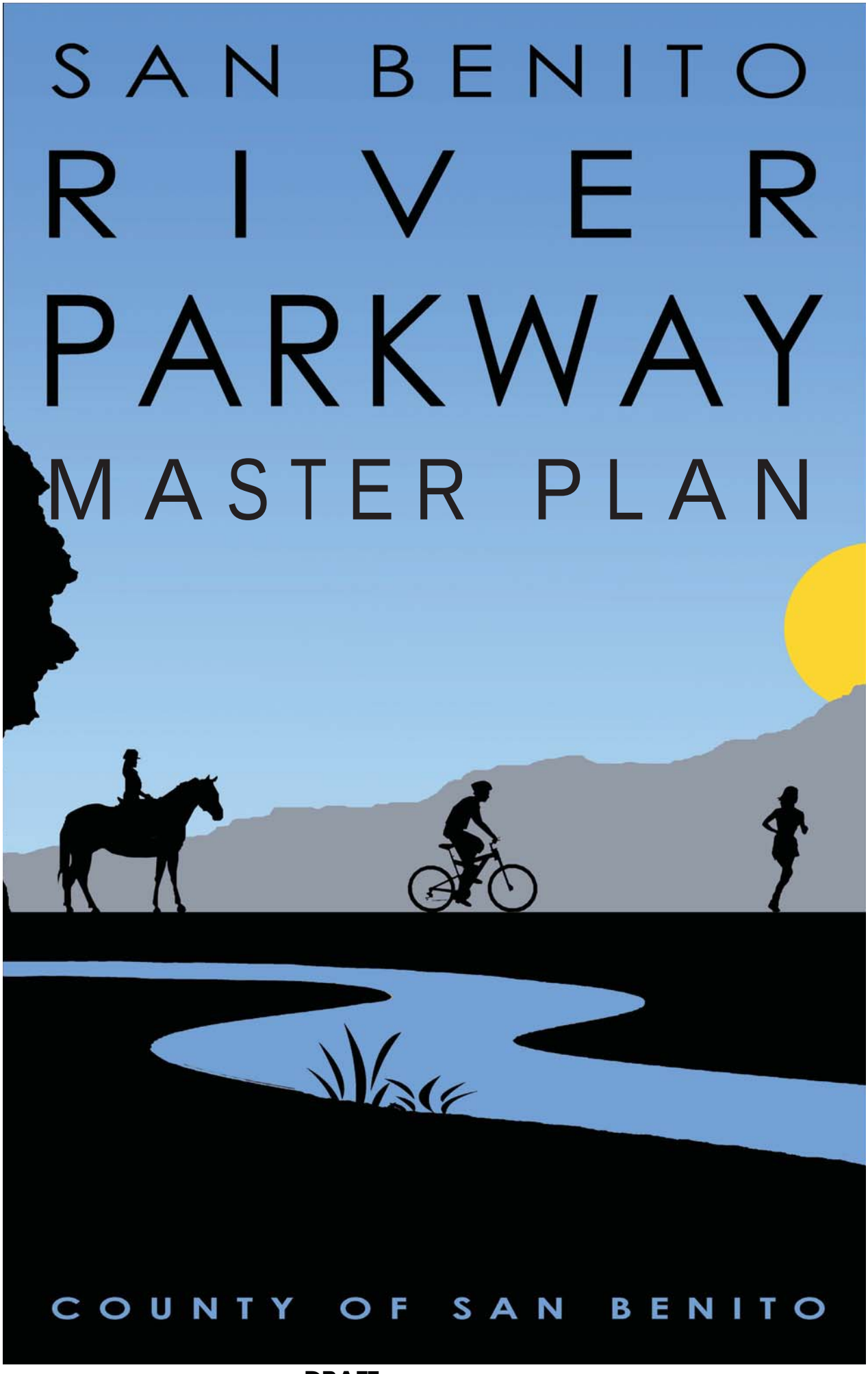
SAN BENITO RIVER PARKWAY MASTER PLAN



COUNTY OF SAN BENITO

Prepared by SSA Landscape Architects: April 26, 2013
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1 INTRODUCTION

1.1 THE RIVER PARKWAY

San Benito County is a region of meandering waterways, pastoral valleys, rolling hills, high peaks, and historic communities. The San Benito River meanders over 50 miles, from south to north, through the County. In the northwestern area of the County, the San Benito River flows along the City of Hollister and through the San Juan Valley, just to the north of San Juan Bautista. Tres Pinos Creek, the largest tributary, joins the San Benito River near the community of Tres Pinos. The San Benito River and Tres Pinos Creek corridors have long been valuable resources for the region, providing fertile lands for agriculture, grazing lands, and sand and gravel for mining. Though these waterways are seasonal in flow, they provide valuable riparian and wetland habitats for diverse wildlife.

Beyond the economic and environmental values of the San Benito River and Tres Pinos Creek, these waterways also offer potential recreational and educational values for residents of Hollister, San Juan Bautista, Tres Pinos and rural lands between these communities. Public input for the San Benito County Park and Recreation Facilities Master Plan and the San Benito County General Plan update revealed community

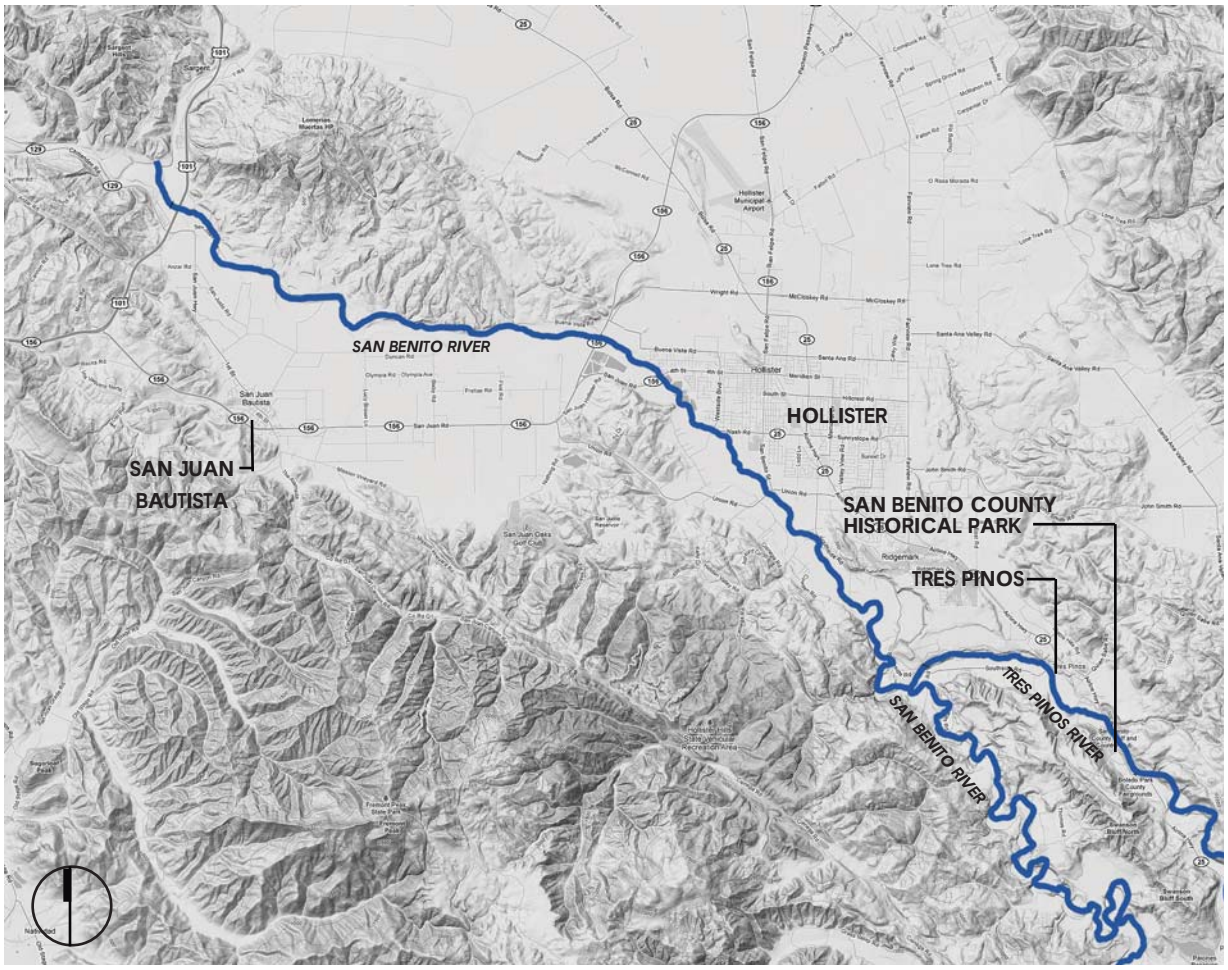

FIGURE 1-1 REGIONAL LOCATION MAP

interest in future opportunities to enjoy riverside parks, hiking, biking, and horseback riding, bird watching, and outdoor education along these waterways.

A vision of a 20-mile parkway along the northern San Benito River and a segment of Tres Pinos Creek has emerged in San Benito County. The parkway is seen as an opportunity to attract both residents and visitors, with the potential to promote tourism and offer economic opportunities for existing and future businesses. Opportunities to share the region's cultural and historic heritage are also envisioned.

This River Parkway Master Plan was prepared as an initial step toward achieving these community visions. A key issue for any potential future river parkway and recreational use is the existing land ownership and land use. Most of the San Benito River and Tres Pinos Creek corridors, and adjacent lands, are in private ownership. With so little existing public land along the San Benito River and Tres Pinos Creek, respect for private property rights and future cooperation of willing landowners will be critical to the success of a river parkway.

The conceptual vision of a river parkway is a long-term planning effort which must ensure compatibility with the economic livelihood and interests of private landowners. Successful implementation will also require a multi-pronged approach, involving San Benito County, other public/quasi-public agencies, and non-profit organizations. Support and participation by volunteers, an array of interested groups, and businesses will also be essential to fulfilling the long-term vision. As this project does not have an official name at this time, it will be referred to as, "River Parkway" in the body of this report.

1.2 PLANNING BACKGROUND AND PROCESS

The concept of a River Parkway within San Benito County has been discussed for many years. Some residents may have informally suggested the idea several decades ago. Within more recent years, County residents expressed desire for trails, including opportunities for walking, hiking, biking and equestrian use during public outreach for the San Benito County Parks and Recreation Facilities Master Plan. One of the recommendations in the Parks and Recreation Facilities Master Plan, adopted in 2010, is that the County should develop a "San Benito River Parkway Master Plan to plan locations and alignments of trails and other parks and recreation facilities proposed for the future San Benito River Parkway." Trail Planning and Design Guidelines in the countywide parks plan further recommended trail development rely on the use of existing public lands and easements, and future acquisition from willing sellers.

In 2011, San Benito County issued a Request for Proposals to prepare a San Benito River Parkway and Regional Park Master Plan. The project would include three components, including an overall Master Plan for a 20-mile River Parkway along the San Benito River and Tres Pinos Creek, a focused plan for Parkway Reach Three along the San Benito River, and a park master plan for a new regional park adjacent to San Benito High School in the City of Hollister. A consultant team, led by SSA Landscape Architects, Inc., was selected to prepare the River Parkway and Regional Park plans. This Master Plan focuses on the first component of this process – the 20-mile River Parkway. Separate, more site specific plans were drawn by SSA Landscape Architects, Inc. for the focus Parkway Reach and the Regional Park.

The County organized an Advisory Committee to provide input to the River Parkway and regional park planning process. The Committee represented a broad range of stakeholders, including members representing Hollister and San Juan Bautista, school districts, regional economic and transportation agencies and organizations, and various community organizations. County staff representing parks and recreation interests and the Parks and Recreation Commission oversaw the planning effort.

In 2012, the Advisory Committee met and community workshops were held to gather suggestions and ideas regarding the goals, concepts, trail routes, and amenities of the proposed River Parkway. Meetings were conducted with the San Benito County Parks and Recreation Commission and the County Board of Supervisors. Input from these various workshops and meetings were incorporated into the goals and concepts presented in this River Parkway plan.

1.3 MASTER PLAN OVERVIEW

This Master Plan is organized into four main sections: 1) Introduction, 2) Opportunities and Constraints, 3) River Parkway Concepts and Guidelines, and 4) Plan Implementation. The intent of the first section is to provide a brief introduction to the River Parkway corridor and the planning process. Section 2 provides an overview of various River Parkway opportunities and constraints, including geologic and hydrologic conditions, biotic resources (vegetation and wildlife), the cultural heritage of the region and historic resources along the corridor, overview of land ownership and land uses, and potential connections to the River Parkway. Section 3 presents the key components of the Master Plan. These include the River Parkway vision and goals, guiding concept, overview of the five Reaches of the project (described in detail and illustrated in Figure 3-1), interpretive and outdoor education program concepts, trail design guidelines, and recommendations for River Parkway amenities. The final section presents implementation concepts, including guiding principles, funding concepts, opportunities for partnership and collaboration, and an overview of the River Parkway phasing.

2 OPPORTUNITIES AND CONSTRAINTS

The purpose of this Chapter of the River Parkway Master Plan is to describe the setting, existing conditions, and potential opportunities and constraints to creating a River Parkway along portions of the San Benito River and Tres Pinos Creek within San Benito County. Geology and Hydrology, Section 2.1, provides an overview of the geologic and hydrologic setting, and identifies potential geologic and hydrologic hazards. Biotic Resources, Section 2.2, provides an overview of vegetation types and wildlife, and identifies potential special status plant and wildlife species within the River Parkway Master Plan area. A brief overview of historic resources along the River Parkway Plan area is presented in Section 2.3, Cultural Heritage. Existing land use and land ownership patterns are described in Section 2.4. Opportunities for potential community, regional, and bicycle facility connections to the River Parkway are described in Section 2.5.

2.1 GEOLOGY AND HYDROLOGY

GEOLOGY

Situated within the California Coast Ranges province, the River Parkway setting is characterized by valleys and ridges. The Coast Ranges are most noticeable as a series of rugged, linear ridges and valleys following the pronounced northwest to southeast structural grain of central California geology. Throughout the Cenozoic Era, this portion of California has been dominated by tectonic forces associated with lateral or “transform” motion between the North American and Pacific crustal plates, producing long, northwest-trending faults such as the San Andreas and Calaveras, with horizontal displacements measured in tens to hundreds of miles. Accompanying the northwest-southeast direction of the horizontal (strike-slip) movement between the plates were episodes of compressive stress, causing repeated uplift, deformation, erosion and subsequent redeposition of sedimentary rocks. This tectonic deformation is most evident in the mountainous areas above the San Benito River where sedimentary rocks older than Pleistocene are found. These rocks show evidence of steeply dipping folds, overturned bedding, faulting, jointing, and fracturing. Along the river, the ongoing tectonic activity is most evident in the formation of a series of elevated terraces. The Loma Prieta earthquake of 1989 and its aftershocks are the most recent reminders of the geologic unrest in the region.

Within the River Parkway Master Plan area, the land immediately adjacent to the active channels of the San Benito River and Tres Pinos Creek consists of floodplain and uplifted terraces and/or lakebeds which are all Quaternary in age (recent and up to about 700,000 years old). The elevations of these deposits are controlled by the Calaveras, Sargent and San Andreas Faults, which have caused tectonic uplift and subsidence within the San Juan and Hollister Valleys. The fault-controlled topography affects the gradient of the waterways which in turn affects their propensity to form a straight braided channel or a broad meandering channel. Tres Pinos Creek and the San Benito River typically exhibit both channel types as they course through the River Parkway Master Plan area. Appendix A includes maps depicting the existing geologic conditions within the planning area.

HYDROLOGY

The River Parkway Master Plan area lies within the San Benito River watershed. From its headwaters in the southernmost portion of San Benito County, the San Benito River extends approximately 100 miles northwestward to its confluence with the Pajaro River. The San Benito River is a major tributary to the Pajaro River, which empties into the Pacific Ocean at Monterey Bay. The River Parkway Master Plan area includes approximately 13 miles of the San Benito River corridor.

Much of the San Benito River corridor within the River Parkway Master Plan area is dry during many months of the year, depending on seasonal rainfall. Within some Reaches, the low flow channel may at times feature surface water during the dry season. Hernandez Reservoir, operated by the San Benito Water District, is located on the San Benito River to the southeast of the River Parkway Master Plan area. In the future, there may be opportunities to release additional flow to the San Benito River.

Tres Pinos Creek is the largest tributary to the San Benito River. The creek extends from its headwaters near Panoche Pass northwestward to its confluence with the San Benito River. Tres Pinos Creek joins the San Benito River just to the west of the community of Tres Pinos. The River Parkway Master Plan area includes approximately 3.75 miles of the Tres Pinos Creek.

Flooding of San Benito River and Tres Pinos Creek has resulted in dramatic impacts on the channel, banks and floodplains of these waterways. During the El Nino winter of 1997-1998, record flood levels were recorded on the San Benito River and Tres Pinos Creek. These floods caused severe erosion along the riverbanks including lateral scour up to 650 feet from the bank.

Approximate floodplain studies exist for some of the reaches within the River Parkway project area. In

these areas the base flood elevations (BFEs) have not been determined, nor has the floodway been located; however, the approximate limit of the 100-year floodplain is known. The floodplain is mostly contained within the main channel.

Within the City of Hollister, more accurate flood studies have determined the base flood elevations and the floodway alignment. The floodway is usually the main channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment, such as structures and fill, thus allowing the 100-year flood to be carried without a substantial increase in flood heights. The floodway is the region where flood water is moving most swiftly and maintaining a clear path is critical. Only approximate information is known regarding the floodplain of the San Benito River to the south of Hollister and for Tres Pinos Creek.

The current FEMA Flood Insurance Rate Maps (FIRMs) delineate the location of the 100-year floodplain and the accompanying FEMA Flood Insurance Study (FIS) contains additional information such as floodplain width, flow velocity and depth, river profiles and hydrologic discussion. This information is revised over time as more development occurs driving more rigorous hydrologic and hydraulic studies using site specific and high-resolution topography that refine the definition of the floodplain limits. As such, differences were noted between the floodplain boundaries shown on the older paper FEMA FIRM maps and the newer digitally-available information (FEMA National Flood Hazard Layer) during the preliminary hydrologic constraints analysis. Further study is required to review and develop an accurate map of all current flood studies. It may also be helpful to define the Floodway in areas where this has not been determined.

GEOLOGIC AND HYDROLOGIC HAZARDS

Potential geologic and hydrologic hazards include the following: flooding, lateral scour, unstable terrace/bank edges, seismic shaking/liquefaction/lateral spreading, ground surface rupture and landslides. These potential hazards are described in more detail in the following paragraphs.

FLOODING

Flooding is a concern for much of the River Parkway Master Plan area. As discussed above, information regarding the location of the 100-year floodway and floodplain varies. Generally, any parkway improvements should be located outside of the floodway. Any unimproved public access within the floodway should anticipate inundation and may require seasonal closures. Any river parkway improvements situated within the 100-year floodplain should be designed to accommodate flooding and comply with any applicable FEMA regulations.

LATERAL SCOUR

Lateral scour occurs along the banks of the waterway where the current becomes focused either by obstructions (natural or man-made) and during floods. Based on the aerial photo analysis by the geologic consultant, several locations were noted where significant scour occurred during the 1998 El Nino winter storms. Most of the scours were located along the San Benito River immediately west of Hollister where up to 330 feet of lateral scour was measured based on the aerial photo analysis. A lateral scour of up to 650 feet occurred during the 1998 floods along a portion of Tres Pinos Creek near Highway 25. It is extremely difficult to determine where lateral scour will occur, though it appears that past scours have occurred on the outsides of meander bends and within straight channels where obstructions may have existed. It is reasonable to

assume that areas where lateral scour has occurred in the past are likely to experience lateral scours in the future. However, lateral scour may also occur in the future in areas where it has not been observed in the past.

UNSTABLE TERRACE/BANK EDGES

Some areas along the top of the natural riverbank and terrace are potentially unstable due to the existence of non-engineered fill and debris which has been pushed out to the edge of the bank. Areas underlain by non-engineered fill should have site-specific geologic and geotechnical work performed to determine the extent of the unstable materials. Alternatively, these areas of non-engineered fill and debris could be avoided.

Lateral scour and flooding can result in over steepening of riverbanks. As a result, the bank may be prone to failure some distance back from its edge. In one instance, bank failure was observed to extend up to 50 feet landward based on an aerial photographic analysis by the geologic consultant. The location of this failure is a zone where an outside meander bend transitions to an inside bend. Site-specific geologic and geotechnical work is recommended to determine appropriate setbacks from the edges of potentially unstable riverbanks and terraces.

SEISMIC SHAKING/LIQUEFACTION/LATERAL SPREADING

Seismic shaking along the San Benito River and Tres Pinos Creek will likely be intense during the next major earthquake along one of the local fault systems. Liquefaction induced subsidence may occur during an earthquake when unconsolidated sands and silts lie within and above the water table. Lateral spreading can occur when a liquefied layer and its overlying deposits flows toward a free face, such as a river bank. Much of the River Parkway Master Plan area is underlain by unconsolidated fluvial sands and silts which are moderately to very highly susceptible to liquefaction.

GROUND SURFACE RUPTURE

Along its length, the River Parkway corridor crosses the Calaveras fault zone and presumably traces of the Sargent fault. These fault zones are considered active and capable of generating earthquakes with associated ground rupture along the surface trace of the fault. Any structures or improvements situated across an active fault are subject to damage caused by fault rupture. The Calaveras fault has also been identified as a creeping fault, which means that displacement may occur slowly. A trace or traces of the Calaveras fault transect the area just south of San Benito High School.

LANDSLIDES

Upstream from Hollister, the San Benito River cuts through hilly terrain within the Calaveras and Paicines fault zones. The earth materials within these fault zones are weak and landsliding is occurring in locations where slopes have been incised by the river. Several large, active landslides are depicted on the geologic map of the River Parkway Master Plan area.

2.2 BIOTIC RESOURCES

River and creek corridors provide valuable habitat for a diversity of wildlife. Tree canopies offer cover for nesting birds. Scrub provides berries and seed for foraging, cover for mammals, and nesting habitat for birds. Seasonal flows and ponds provide drinking water for wildlife and habitat for fish and amphibians. The San Benito River and Tres Pinos Creek feature several vegetation types, which support a diverse range of plants and wildlife species. Existing and previous land uses, as well as stream flow and flooding, greatly influence the distribution of vegetation types and habitat features within the San Benito River and Tres Pinos Creek corridors. Eight major vegetation types/habitats occur within the parkway project area as briefly described in the following paragraphs (please refer to the refer to the Existing Biological Conditions Report prepared by Biotic Resource Group as part of this project for more detailed information). Vegetation Maps (see Appendix B) depict the general location of the vegetation types within the River Parkway Master Plan area along the San Benito River and Tres Pinos. These areas were mapped using aerial photograph interpretation and field visits where access was permitted. No site specific surveys for plants or wildlife were conducted within the biotic study area, except for limited surveys within the City of Hollister along the San Benito River.

Several special status plant and wildlife species also have the potential to occur within the vicinity of the River Parkway Master Plan area. These species are officially listed by the State and/or Federal government, and/or by the California Native Plant Society. Special status species which may occur in the vicinity of the River Parkway planning area are described later in this section. Appendix B includes a table listing which special status species may be associated with the various vegetation types.

VEGETATION TYPE	VEGETATION SPECIES	STATE RANKING*	ACREAGE
Willow Cottonwood Riparian Woodland	Willow/Black Cottonwood	S3	561
Freshwater Marsh	Cattail/Bulrush	S5	3
Mulefat Scrub	Mulefat/Narrow-leaved Willow	S4	895
Coyote Brush Scrub	Coyote Brush/California Blackberry Annual herbs	S5	57
Sagebrush Scrub	California Sage/Black Sage	S4	18
Grassland	Wild Oat/Soft Chess	-	648
Oak Woodland	Coast Live Oak/Grasses	S4	14
Other Non-Native Vegetation Types	Tree groves, Row Crops, Poison Hemlock, Thistles, Mustards Bare,	-	424
Total			**2,622**

**Ranking Codes: Vegetation types are ranked between S1 and S5. For vegetation types with ranks of S1-S3, all associations within the type are considered to be highly imperiled. If a vegetation alliance is ranked as S4 or S5, these alliances are generally considered common enough to not be of concern; however, it does not mean that certain associations contained within them are not rare (CDFG 2007 and 2010).*

FIGURE 2-1 VEGETATION TYPES CHART

VEGETATION TYPES/HABITATS

WILLOW COTTONWOOD RIPARIAN WOODLAND

Willow cottonwood riparian woodland grows on slopes and terrace deposits along the San Benito River and Tres Pinos Creek channels. The vegetation is characterized by the presence of willows and black cottonwood, species that are adapted to frequent inundation and require their roots to be in close contact to surface or groundwater. In drier locations other species can be observed, such as coast live oak, California buckeye, box elder, scattered western sycamore, poison oak, and coyote brush. Some areas along the top of the creek banks support non-native trees, including blue gum eucalyptus, tree tobacco, tamarisk, tree of heaven, and English walnut.

Riparian habitat has high wildlife value due to the presence of surface water, the variety of niches provided by the high structural complexity of the habitat, and the abundance of plant growth. Riparian habitat may be used by a diversity of wildlife species for food, water, escape cover, nesting, migration and dispersal corridors, and thermal cover. The value of riparian areas to wildlife is underscored by the limited amount of remaining habitat which has not been disturbed or substantially altered by other land uses, such as mining, agriculture, and urbanization. Common wildlife species that would be expected to occur within the parkway area include Pacific chorus frog, bullfrog, raccoon, opossum, and black-tailed deer. Commonly observed bird species include great blue heron, white-tailed kite, red-shouldered hawk, belted kingfisher, Pacific-slope flycatcher, and tree swallow.

FRESHWATER MARSH

Portions of the active riverbed support patches of freshwater marsh. The marsh is found in areas with ponded or slow-moving water areas enabling plants adapted to wet soil or open water to grow; dense stands of cattails, bulrush water smartweed, and watercress characterize these marsh areas. Willows can also be present, such as areas near the old San Juan Highway and Highway 156.

The presence of cattails, bulrush and willows provide cover, breeding sites and a food base of a diversified aquatic invertebrate fauna, which forms a link in many food webs. The open water in freshwater marsh also provides at least a seasonal source of drinking water for wildlife from adjacent upland habitats. Common wildlife species that are expected to occur within these freshwater marsh areas include Pacific chorus frog, western toad, mallard, ruddy duck, black phoebe, raccoon, Virginia opossum, and several species of bats.

MULEFAT SCRUB

Mulefat scrub is the dominant vegetation type within the floodplain of the San Benito River and Tres Pinos Creek within the River Parkway Master Plan area. Mulefat scrub provides dense cover within the riverbed, particularly in years when winter flows are not excessive. Some areas, such as downstream of Highway 156, that are periodically grazed by cattle display a more open canopy. Some mulefat scrub areas also support scattered narrow-leaved willow, as well as arroyo willow, California sagebrush, and wet-tolerant herbaceous plants. Commonly observed species are summer mustard, annual burweed, peppergrass, and horseweed. Invasive, non-native plant species include Italian thistle, yellow star thistle, poison hemlock, jubata (pampas) grass, and young tamarisk.

The berries and leaves of the mulefat scrub provide important forage for wildlife, and the seasonal presence of open water in the river channel provides wildlife with a source of drinking water. This habitat is typically more open and arid than the coyote brush scrub, and thus less utilized by nesting birds that need dense cover. There are abundant small mammals that inhabit mulefat scrub, which attract several reptile, raptor, and larger mammalian predators. Common wildlife species that are expected to inhabit mulefat scrub include side-blotched lizard, western whiptail, southern alligator lizard, racer, western rattlesnake, mourning dove, greater roadrunner, California towhee, golden-crowned sparrow, Audubon's cottontail, black-tailed jackrabbit, deer mouse, coyote, and black-tailed deer.

COYOTE BRUSH SCRUB, SAGEBRUSH SCRUB, AND MIXED SCRUB

Coyote brush scrub, sagebrush scrub, and mixed scrub are found as patches on dry exposed river slopes and hillsides adjacent to the San Benito River and Tres Pinos Creek. The scrub types are dominated by coyote brush or California sagebrush, often lesser amounts of saltbush, black sage, and buckwheat. Openings between the shrubs support grasses typical of nearby grasslands, such as wild oat, ripgut brome, and soft chess. Non-native forbs are also common, such as summer mustard and yellow sweet clover.

The berries of shrubs and the seeds of herbaceous plants in the scrub habitat provide important forage for wildlife. Wildlife may perch on the outer perimeter of mixed scrub to take advantage of hunting opportunities in adjacent openings, and to take cover in the denser shrub patches as needed. The dense shrub patches also provide nesting habitat for birds. Where the scrub abuts riparian or wetland habitat, the diversity of the fauna is expected to be higher because of the presence of water and foraging opportunities in the adjacent riparian and wetland, and the increased complexity of habitat providing additional niches for nesting, foraging and cover. Common wildlife species that may inhabit the scrub include western fence lizard, Anna's hummingbird, California thrasher, California quail, spotted towhee, California towhee, white-crowned sparrow, brush rabbit, deer mouse, and coyote.

GRASSLAND/SUCCESSIONAL SCRUB

The amount of grassland within the San Benito River and Tres Pinos Creek within the River Parkway area is limited; however, small patches are present and these often abut larger grassland areas, such as in Reach One. The grassland in the parkway area is characterized by the dominance of annual, non-native grasses and forbs. Wild oat, ripgut brome, foxtail barley, and soft chess are common; other species include long-beaked filaree, yellow sweet clover, poison hemlock, Italian ryegrass, hoary cress, yellow star thistle, fennel, horehound, wild mustard, and milk thistle. Native plant species were observed in some areas; these species include common fiddleneck and mugwort. Subshrubs were also scattered is some area, particularly grassy areas abutting scrub; observed shrubs include California sagebrush, poison oak, beach saltbush and red saltbush. Individual black cottonwood, narrow-leaved willow, and blue elderberry trees were also observed. These areas are considered to be early successional scrub.

Grasslands provide an important foraging resource for a wide variety of wildlife species. The grasses and forbs produce an abundance of seeds and attract numerous insects, providing food for granivorous and insectivorous wildlife. Sparrows, rabbits and rodents are commonly found in this habitat. Consequently, grasslands are valuable foraging sites for raptors such as hawks and owls, and other predators including coyote, fox, skunk and snakes. Aerial foraging species that occur over grasslands include bats and swallows. Common wildlife species that may inhabit grasslands in the project area species also occur in the nearby

scrub. The larger grassland areas are suitable for foraging species such as turkey vulture, white-tailed kite, northern harrier, red-tailed hawk, American kestrel, barn owl, and great horned owl.

OAK WOODLAND

Undeveloped slopes abutting the San Benito River and Tres Pinos Creek support small groves of oak woodland. Trees of coast live oak and valley oak are common. Other trees include California buckeye and blue elderberry. The understory supports grasses typical to the adjacent grassland, as well as scattered shrubs of coyote brush, California sagebrush, and mugwort.

The wildlife value of oak woodland varies with the degree of canopy cover and the density and diversity of understory plants. Acorns from oaks provide an important food resource for many wildlife species, and natural cavities in the oaks provide nesting opportunities for some birds and mammals. Snags are an important component of oak woodlands to some wildlife such as woodpeckers, which excavate nests in snags and holes for storing acorns. The denser oak woodlands also provide escape cover during the day for species such as deer. Common wildlife species that might be observed in the oak woodlands include western fence lizard, red-tailed hawk, wild turkey, California quail, acorn woodpecker, downy woodpecker, western scrub jay, oak titmouse, chestnut-backed chickadee, and western gray squirrel.

NON-NATIVE VEGETATION

The San Benito River and Tres Pinos Creek corridors support other types of non-native vegetation including non-native tree groves, agricultural fields, and disturbed (ruderal) areas. Although these other vegetation types have a lower diversity and abundance of native wildlife as compared to native vegetation types, they can provide habitat value.

Non-native tree groves and individual non-native trees along the San Benito River and Tres Pinos Creek corridors are often associated with agricultural facilities or are residential plantings along the top edge of the river corridor. Trees groves include eucalyptus, tree tobacco, English walnut, and pine. In general, non-native trees have a lower diversity and abundance of native wildlife. However, some trees such as eucalyptus provide valuable perching and nesting habitat for raptors, and the flowers are a source of nectar for other birds. The dense duff and leaf litter under mature Eucalyptus trees also provides habitat for lizards and small mammals. Common wildlife species that inhabit non-native trees along this portion of the California coast include alligator lizard, Anna's hummingbird, red-tailed hawk, red-shouldered hawk, great horned owl, and house mouse.

Many of the terraces above the river channel support row-crop agriculture and orchards. Compared to native habitat types, wildlife use of agricultural lands is low. The annual disked croplands have the lowest value to native wildlife and orchards provide forage and nesting opportunities for several birds. Common wildlife utilize agricultural lands, such as band-tailed pigeon, mourning dove, American crow, American robin, northern mockingbird, Botta's pocket gopher and California ground squirrel.

The San Benito River and Tres Pinos Creek corridor include disturbed areas that are conducive to the growth of weedy, non-native annual and perennial plants. These areas, such as slopes abutting agricultural fields, support a mixture of non-native grasses and forbs. Some areas within the river channel have been disturbed by off-highway vehicle and are bare or support non-native ruderal vegetation. The ruderal/disturbed habitat

has low value to native wildlife because these areas are often associated with high human use and have more non-native plants. Wildlife which are more tolerant of human presence do sometimes utilize this habitat for occasional foraging, nesting, or denning opportunities. Common wildlife that utilize ruderal/disturbed habitats along the central California coast region include western fence lizard, red-tailed hawk, American kestrel, killdeer, rock dove, American crow, cliff swallow, American robin, European starling, Brewer's blackbird, house finch, American goldfinch, Botta's pocket gopher, and California ground squirrel.

SPECIAL STATUS SPECIES

Special status plant species are those species which are officially listed by the State and/or Federal government, and/or by the California Native Plant Society (CNPS) List 1B. Based on an analysis of habitats, the following species have the highest potential to occur in the vicinity of the River Parkway corridor: alkali milk-vetch, San Joaquin spearscale, Pinnacles buckwheat, and Indian Valley bush mallow (see Appendix B). A small patch of Indian valley bush mallow was observed upstream of Hospital Road.

Special status wildlife species include federal or state listed, proposed or candidate species, as well as those identified as State species of special concern. In addition, all raptor nests are protected by Fish and Game Code, and all migratory bird nests are protected by the Federal Migratory Bird Treaty Act. Golden eagles and bald eagles received additional protection under the federal Golden and Bald Eagle Protection Act of 1940. Based on an analysis of habitats, steelhead, three amphibian species, two reptile species, seven bird species, and three bat species may occur in the river area (see Appendix B).

2.3 CULTURAL HERITAGE

A River Parkway would provide opportunities to share the cultural heritage of San Benito County from the early Native Americans, the expedition of Juan Bautista de Anza, the Mission Period, and the historic settlements of San Juan Bautista, Hollister, and Tres Pinos. The naming of the San Benito River dates back to 1772, when Father Juan Crespi named the river for Saint Benedict. Historic and cultural themes along the river corridor could also focus on the region's farming and ranching heritage, which gives the River Parkway a distinct character compared to river trails in more urbanized communities.

NATIVE AMERICANS

San Benito County lies within the region occupied by the Ohlone (also referred to as Costanoans) during the historic period. Several tribelets of the Ohlone are believed to have lived in the region surrounding the River Parkway planning area,

among them the Mutsun in the San Juan Canyon area, the Ausaima in the San Juan Valley and northeast of Hollister, and the Pagsin to the south of Hollister. This region most likely supported both small permanent and seasonally occupied villages. Any waterway such as the San Benito River or Tres Pinos Creek would have been an area of cultural activity for a very long period. The banks of permanent and seasonal streams in the region most often contain archaeological sites. The arrival of the Spanish and establishment of the Missions within the Coastanoan region led to a decline in populations and changes in their way of life.

The River Parkway provides an opportunity to share information about the Ohlone ways of life. Some of the types of vegetation that Native Americans used for food and shelter can still be seen today along the River Parkway. For example, acorns from oak trees were important sources of food. Other types of vegetation, such as tule and grass, were used to build domed-shaped thatched structures. The Ohlone hunted for deer and rabbit, and relied on many other faunal and floral resources. Many aspects of the Ohlone way of life could also be told along the River Parkway.

ANZA EXPEDITION

In 1774-75, Juan Bautista de Anza established a 1,200-mile overland route from New Spain (now Mexico) to San Francisco, which was then a Spanish settlement within Alta California. At that time, much of this vast inland region was largely unknown to Europeans. In 1774, Juan Bautista de Anza, a Spanish captain, completed an exploratory expedition. The following year he led over 200 settlers and a large head of cattle along the same overland route to establish a mission and presidio in what would later become San Francisco. Unlike later settlers, the expedition did not travel by wagons but instead traveled by foot with supplies transported by animals. Tents were set up and taken down each day during this arduous journey. Throughout the expedition, the Anza expedition encountered many Native Americans, many of whom were instrumental in the success of the expedition.

This historic expedition traveled through northwestern San Benito County. From the south, the trail route generally followed along what is now San Juan Grade Road to the site of what would later become Mission San Juan Bautista. From the mission site, the route continued northward along what is now the San Juan Highway, crossing the San Benito River, and continuing northward to what is now Santa Clara County. The 1,200 mile historic trail corridor, including the San Benito County segment, is now designated as the Juan Bautista de Anza National Historic Trail. Specific trail segments can be further designated as recreational trail components of the Anza Trail, as discussion in Section 2.5.

MISSION PERIOD

Mission San Juan Bautista, fifteenth of the twenty-one missions in then Alta California, was founded in 1797 by Father de Lasuen. An adobe church, barracks for soldiers, a nunnery, a corridor of 20 arches, and other buildings were constructed around a large plaza during the early 1800s. The mission was situated in the area of the Native American Mutsun. By the early 1800s, there were over a thousand Native Americans living at the Mission grounds, though the population soon declined by half. Later, Native Americans from tribes in the Central Valley were brought to the mission.

After the mission was secularized in 1835, the mission was seized by the Mexican government. The land surrounding the mission was ceded to Spanish ranchers during the era of Mexican land grants, one of which was Rancho San Justo totaling over 36,000 acres. The mission buildings and surrounding 55 acres were

given back to the church by federal decree in 1895. Today, the mission features a museum, gardens, and a parish church of the Diocese of Monterey. The mission is located to the south of the San Benito River, which could potentially be linked to the River Parkway by a connecting trail following the Anza Historic Trail route.

HISTORIC SETTLEMENTS

San Benito County's historic character is reflected in the communities of San Juan Bautista, Hollister and Tres Pinos. While the historic districts and buildings may not be situated directly along the River Parkway corridor, there are potential opportunities to provide connections between the River Parkway and these historic resources. The historic resources reflect cultural influences from Native Americans to Spanish, Mexican and late 19th/early 20th century American. This span of cultural influences could be reflected in interpretive themes along the River Parkway.

San Juan Bautista grew surrounding the Mission grounds, becoming the largest settlement in Central California by the mid-1800s. The town was a vital crossroad on the stagecoach trails between southern and northern California, as well as for travelers to the San Joaquin Valley via the Pacheco Pass. Several adobe buildings and other structures from the 1800s remain today. Some of these valuable historic resources are now part of the San Juan Bautista Historic State Historic Park, which is also part of a National Historic Landmark. Also within the community of San Juan Bautista, the Third Street Historic District features 24 buildings constructed in the mid-1800s to early 1900s, featuring several architectural styles including Western False Front and Spanish Colonial.

Hollister was founded as a town in 1868 by a civic-minded group called the San Justo Homestead Association. This Association purchased 21,000 acres from Colonel (honorary title) William Welles Hollister, for whom the town was named. Hollister had led a large sheep drive from Ohio in the 1850s and acquired a half interest in Rancho San Justo, though later left for Santa Barbara after selling his land. The Association divided the large landholding into homestead lots, auctioning land to highest bidders, and set aside 100 acres for the town of Hollister. Hollister grew rapidly, especially with the arrival of the railroad in 1870, and in 1872 it was officially incorporated as a city. It soon became the most important city in the area and was named the County seat when San Benito County was established in 1874. The fertile lands supported the hay industry which brought growth and prosperity, with Hollister becoming known as "Hay City." Hollister now has two historic districts listed in the National Register of Historic Places. The downtown Hollister Historic District, concentrated along San Benito Street, features over 50 contributing buildings in a range of architectural styles. The Monterey Street Historic District features 188 buildings, mostly residential, which contribute to its historic character.

Tres Pinos was established as a new town after the extension of the Southern Pacific Railroad in 1873. The end of the rail line from San Francisco, Tres Pinos became a shipping center for hay and other products. Miners working claims in the New Idria mines also relied on Tres Pinos for supplies. During this period, the town's main street featured wooden sidewalks and Western false front buildings, with several stores, saloons, storage barns, and a large hotel. When the railroad ended service in the 1940s, the town's business declined. Today, Tres Pinos is a small residential community with several of the older buildings remaining. Tres Pinos does not have a designated historic district. The community of Tres Pinos is situated just to the east of the Tres Pinos Creek corridor.

RANCHING AND FARMING HERITAGE

From the late 1700s, the fertile valleys along the San Benito River and Tres Pinos Creek have been important for ranching and farming. Cattle and sheep were grazed on the lands surrounding the San Juan Bautista Mission during the Mission period. During the land grant period, cattle ranching was a way of life on the ranchos. Historic sheep drives from the mid-west in the 1850s brought thousands of head of sheep to San Benito County. Throughout the 1900s, ranching continued to be an important part of San Benito County's cultural heritage and economy.

Fertile valley soils have long supported agriculture within the region. During the late 1800s, the region was best known for hay production. Since then, agriculture has expanded into row crops, orchards and vineyards. Agriculture is San Benito County's largest industry, with increasing interest focused on organic farming. Vineyards also have a long history in San Benito County. Grapes were grown at the Mission grounds, and in the 1850s vineyards were grown in the Cienega Valley and wine was brought to market in San Juan Bautista. Since then, vineyards and wineries have expanded throughout the region.

2.4 LAND USE AND OWNERSHIP

Much of the River Parkway planning area retains its rural character, reflecting the region's agricultural and ranching heritage. Although the central reach bordering the City of Hollister is more urbanized in comparison, within this reach the San Benito River corridor remains as undeveloped open space featuring an unconfined channel and braided floodplain. Most of the River Parkway planning area is in private ownership. Within the more rural areas, there are generally larger landholdings along the San Benito River and Tres Pinos Creek. Mining companies own several portions of the River Parkway planning area.

Within the unincorporated area of San Benito County to the west of Hollister, land use along the San Benito River is predominantly agricultural with the open grasslands of the Flint Hills situated along the north side of the river. There are several large private landholdings which include portions of the river corridor, including lands owned by mining companies. To the south, land use is primarily agricultural fields on the river terraces. San Benito County land use designations within these reaches are primarily Agricultural Ranchland (AR) to the north of the San Benito River and Agricultural Production (AP) to the south. The unincorporated community of San Juan Bautista is situated to the south of the San Benito River.

Upstream of Highway 156, the setting along the San Benito River is more urbanized. The City of Hollister is located along the eastern side of the San Benito River. The western side of the river and much of the floodplain are located within the unincorporated area of San Benito County. Land use to the west is less developed, featuring rural residences and agriculture. Much of the river corridor within this central reach is owned by mining companies. Several public lands are located along the San Benito River within this Reach,

including property previously owned by the Brigantino family, now owned by the City of Hollister, hereinafter referred to as “Riverside Park” in this master plan document, and the City of Hollister wastewater treatment facilities.

To the south of Hollister, land uses include primarily rural residences and agriculture. The General Plan land use designation is primarily Agricultural Production (AP). A portion of the San Benito River corridor has been previously mined within this reach. The river corridor narrows further upstream as the terrain becomes steeper along the west side of the San Benito River. There is little existing development within the hills to the west rising above the river channel. Larger private landholdings include much of the river channel within this reach.

At the confluence of Tres Pinos Creek with the San Benito River, the River Parkway planning area continues eastward along the Tres Pinos Creek corridor. The Tres Pinos Creek floodplain widens in comparison to the narrower San Benito River channel upstream. Active mining operations are located along the north side of the creek. Much of the creek floodplain is owned by mining operations within this final River Parkway Reach, though the active channel is not presently mined. Land uses also include rural residences and agriculture, with the land use designation of Agricultural Production. The community of Tres Pinos is situated to the east of Tres Pinos Creek. The River Parkway planning area ends within the County Historical Park.

2.5 CONNECTION OPPORTUNITIES

One of the goals of the River Parkway is to be a primary trail corridor which can then promote connectivity to communities and other trail/bicycle routes along the River Parkway. There are various opportunities for connections, including:

- Community connections
- Regional trail connections
- Bicycle improvements

A general overview of these connection opportunities is provided in this section. See Appendix C - Community Resources and Points of Interest Map for additional connection opportunities.

COMMUNITY CONNECTIONS

Connections between community destinations and the River Parkway could be used by both local residents as convenient routes to the River Parkway and by visitors enjoying the River Parkway who could then use spur trail routes to visit historic business districts and other attractions. Connections to the River Parkway could be designated between schools, parks, business centers, historic districts, etc. Neighborhood connections and access points should be established as conveniently as possible to encourage uses to walk or bike to the River Parkway rather than drive. Connections across the San Benito River and Tres Pinos Creek will also be important to ensure convenient access. Where pedestrian/bicycle access on existing bridges is not feasible, or a preferred route in terms of safety, new pedestrian/bicycles bridges could be considered. While it may not be feasible to develop designated trails to all community destinations, existing sidewalks and bicycle facilities could also be used and identified by wayfinding signs, or other types of markers.

REGIONAL TRAIL CONNECTIONS

The Juan Bautista de Anza National Historic Trail is an important potential regional connection. Commemorating the 1775-76 Spanish colonial expedition led by Juan Bautista de Anza, the Anza National Historic Trail route intersects with the westernmost reach of the River Parkway. The National Park Service is responsible for administration of the Juan Bautista de Anza National Historic Trail (Anza Trail), which includes coordination with agencies and organizations along the 1,200 mile route to plan, mark, certify, and interpret the Anza Trail. Designation of recreational trail segments along the National Historic Trail route can provide local residents and visitors with opportunities to learn about the Anza expedition and appreciate the region's cultural heritage.

The Anza Trail route enters San Benito County from Monterey County in the vicinity of State Route 91 and continues northward along in the vicinity of San Juan Grade Road. A designated recreational trail segment of the Anza Trail presently exists at Old Stage Road, which is located in the hills to the south of San Juan Bautista. The route continues through Mission San Juan Bautista northward in the vicinity of San Juan Highway before crossing the San Benito River. Santa Clara County has identified potential Anza Trail route opportunities within the San Juan Highway/Highway 101/Pajaro River corridor. A future opportunity may exist to connect Anza Trail segments between San Benito County and Santa Clara County.

The Hollister Hills State Vehicular Recreation Area (SVRA) Non-Motorized Buffer Trails' project offers another potential future regional trail connection opportunity. The California Department of Parks and Recreation project would involve construction of hiking, mountain biking, and equestrian trails on a portion of the SVRA property which is designated as a buffer area from the motorized recreational use. The project would also include two staging areas for trail users. The non-motorized trail use area is located approximately four miles to the south of the San Benito River. A multi-use trail connection between the River Parkway and the future Hollister Hills trails would be an opportunity to link the two trail systems, greatly expanding the length of possible trail rides. No trail alignment has yet been identified as a regional trail connection.

BICYCLE IMPROVEMENTS

Existing and future bicycle improvements provide potential connections, as well as alternate routes for the River Parkway. These improvements may include bicycle paths (Class I), bicycle lanes (Class II), and bicycle routes (Class III). Future bicycle improvements may be on City, County, or State roadways, including bridges, along the River Parkway. As an example, future State Highway 156 improvements may include conversion of the existing State Route in some sections to frontage path with a designated bicycle facility. This route would parallel the western reaches of the River Parkway. A recently completed bicycle lane along the San Juan Highway connects the community of San Juan Bautista to Anzar High School, which is located near the San Benito River. Existing and future bicycle routes and lanes within the City of Hollister can also provide opportunities for community connections to the River Parkway. Refer to the San Benito County Bikeway and Pedestrian Master Plan dated December 2009 for existing and proposed improvements outside the River Parkway. This master plan can be found on the Council of San Benito County Governments (COG) webpage, www.sanbenitocog.org.

3 RIVER PARKWAY PLAN CONCEPTS AND GUIDELINES

This section of the Master Plan describes the overall goals, concepts, themes and design guidelines for the River Parkway. This plan focuses on general guidelines and concepts because most of the planning area is privately owned. Specific trail alignments and detailed plans for specific segments will be prepared as opportunities arise in areas with cooperative landowners and/or willing sellers. The key elements of the Parkway concepts and guidelines include:

- Designation of Five Parkway Reaches
- Themes and guidelines for each Reach
- A multi-use trail system
- Outdoor education and nature viewing areas
- Staging areas and parkway amenities
- Habitat protection and enhancement

The San Benito River and Tres Pinos Creek meander through various landscapes and land use areas, each with its unique character, site conditions, opportunities and challenges. As a result of the opportunities and constraints analysis conducted for this Master Plan, five Parkway Reaches have been identified within the 20-mile River Parkway corridor.

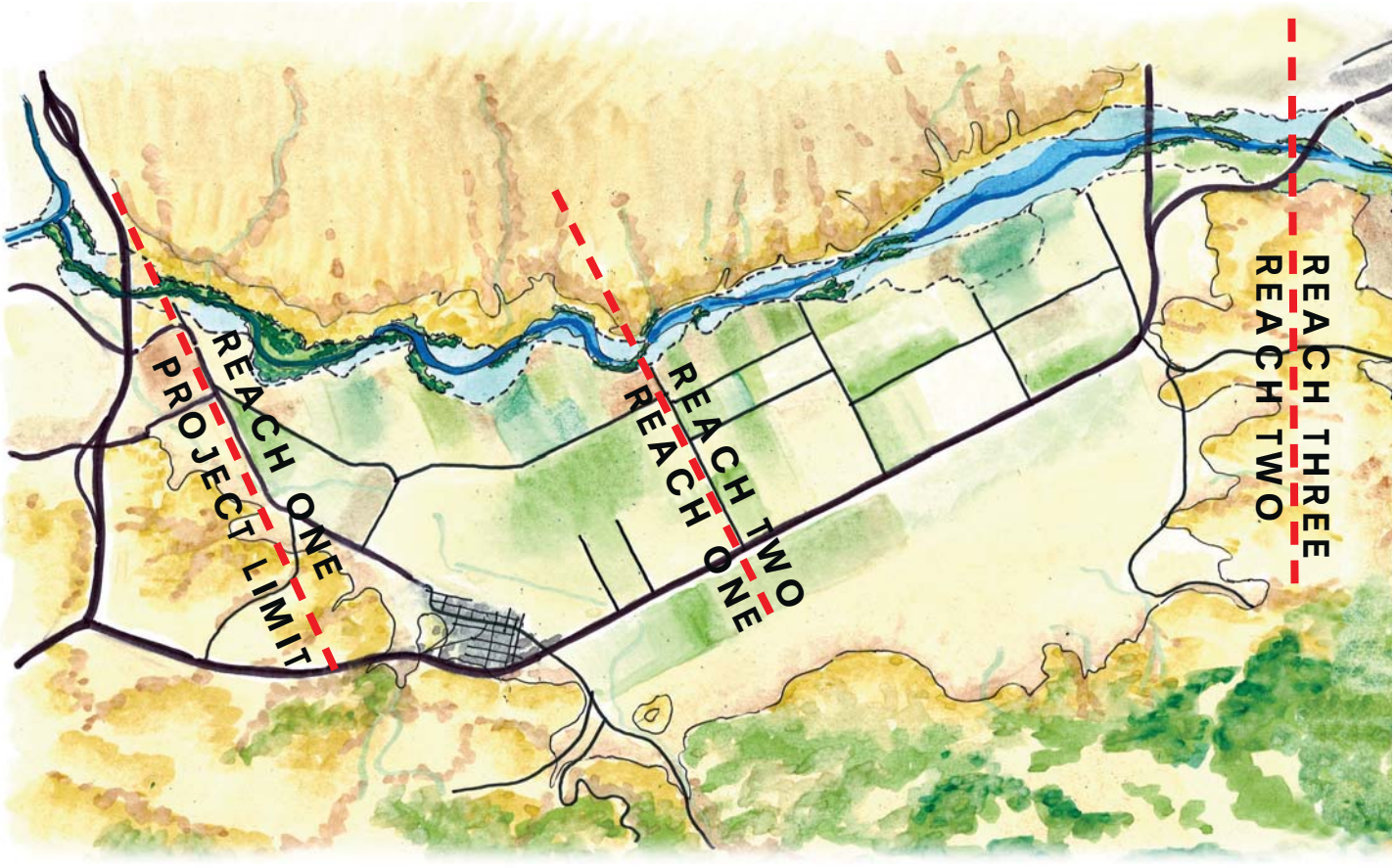

FIGURE 3-1 River Parkway Reach Map (Reaches 1-2)

The reaches are:

Reach One – San Benito River (Old San Juan Highway to Lucy Brown Lane)
Reach Two – San Benito River (Lucy Brown Lane to 4th Street bridge)
Reach Three – San Benito River (4th Street bridge to Hospital Road)
Reach Four – San Benito River and Tres Pinos Creek (Hospital Road to Southside Road bridge)
Reach Five – Tres Pinos Creek (Southside Road bridge to the County Historical Park)

The future vision and goals for the River Parkway, presented in Section 3.1, reflect community and stakeholder input gathered during public workshops and meetings. Sections 3.2 through 3.6 describe the setting and character, concepts, and guidelines for each of the five Parkway Reaches. Trail design guidelines, including specific guidelines for various site conditions and trail uses, are presented in Section 3.7. General concepts for staging areas and parkway amenities are described in Section 3.8. Habitat Protection and Enhancement Guidelines are presented in Section 3.9.

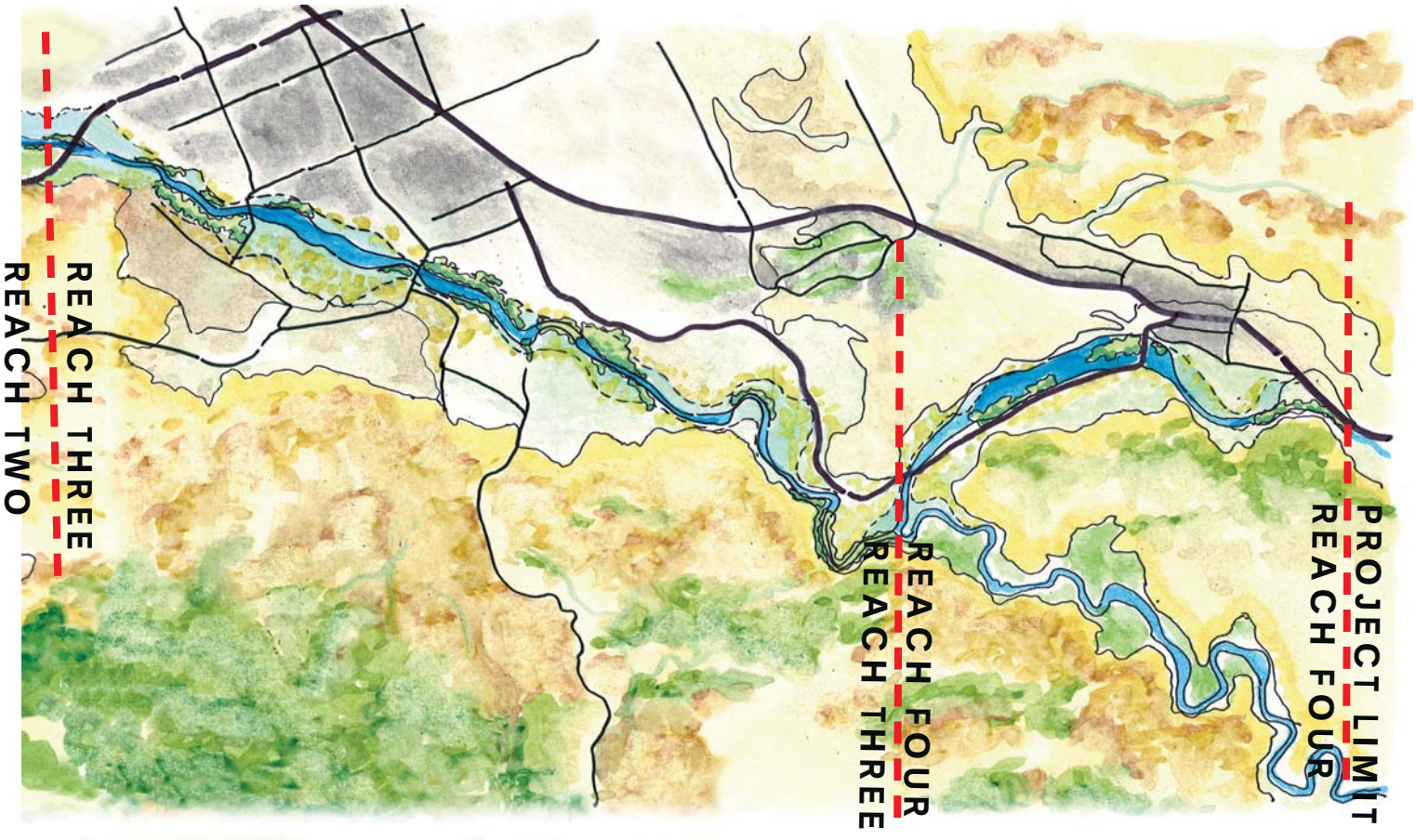

FIGURE 3-1 River Parkway Reach Map (Reaches 3-5)

3.1 RIVER PARKWAY VISION, GOALS AND CONCEPTS

The guiding vision for the River Parkway is to provide public trails, open space and parks along a 20-mile corridor of the San Benito River and Tres Pinos Creek. The River Parkway provides opportunities for recreation and outdoor education, while also showcasing the region's natural resources and cultural heritage. This long-term vision will be accomplished through cooperative efforts with landowners, respect for private property, and compatibility with adjacent land uses.

The vision and goals for the River Parkway are a synopsis of ideas and input from community residents and stakeholders gathered during the River Parkway planning process. The specific goal statements were created based on a compilation of similar ideas expressed during public workshops and meetings. As a result of community input, it became clear the River Parkway is envisioned to provide recreation and a broad range of benefits, including economic, health and fitness, educational, environmental, and cultural/historic benefits. The synopsis of goals is organized under these general categories to reflect the broad range of interest and input.

RIVER PARKWAY GOALS

RECREATION

- Provide a continuous multi-use trail for as much of the corridor length as feasible.
- Provide a variety of trails, spaces, and experiences for all types of users. Provide ADA compliant and universally accessible trail opportunities that encourage use by all ages and abilities.
- Include playful and fun concepts into the River Parkway.
- Where conditions and space allow, create separate equestrian/hiking and bike trails.
- Provide access to the river corridor where compatible with environmental and safety considerations.
- Provide convenient staging areas, including staging areas for equestrians.
- Provide clear access points along the River Parkway, with bilingual signage (English and Spanish).
- Ensure trails provide access points and routes for emergency response.

ECONOMIC

- Develop themes along reaches of the River Parkway which reflect the character of the surrounding area.
- Promote community awareness to preserve and enhance the ecological, scenic and recreational resources of the River Parkway.
- Promote economic opportunities which will benefit the community and the River Parkway.
- Promote tourism through the River Parkway, including providing special events.
- Ensure the Parkway and trail access is compatible with adjacent agricultural operations and fields.

HEALTH AND FITNESS

- Promote healthy lifestyle through the River Parkway.
- Provide options for users of all abilities and ages to encourage walking or biking instead of driving.
- Provide spur trails that promote connectivity with the adjacent communities, including neighborhoods, schools, business centers, local, state, and national parks, etc.
- Provide outdoor opportunities for youth as a therapeutic aspect.
- Coordinate trail access with school athletic programs, such as cross-country running.

EDUCATIONAL

- Provide educational components for all users, ages and abilities.
- Showcase positive features and attributes of the region.
- Feature hydrologic, geologic, ecological, and historic/cultural interpretive themes.
- Include various educational components such as interpretive displays, interactive electronic applications, and volunteer docents.
- Coordinate educational programs with schools and community organizations.

ENVIRONMENTAL

- Promote conservation of natural resources and habitat enhancement.
- Encourage environmental stewardship.
- Coordinate with the water district to increase summer flow.
- Use sustainable trail building techniques.
- Use native and non-invasive planting along the Parkway, which minimizes water use and maintenance needs.
- Trail amenities should use natural materials and complement the natural surroundings.

CULTURAL/HISTORIC

- Provide opportunities to share the region's cultural/historic heritage along the River Parkway.
- Include opportunities to learn about the Native American heritage.
- Connectivity to County Historical Park and the Juan Bautista de Anza National Historic Trail.

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3.2 RIVER PARKWAY REACH ONE *SAN BENITO RIVER*

San Juan Highway To Lucy Brown Lane (3-¾ MILES)

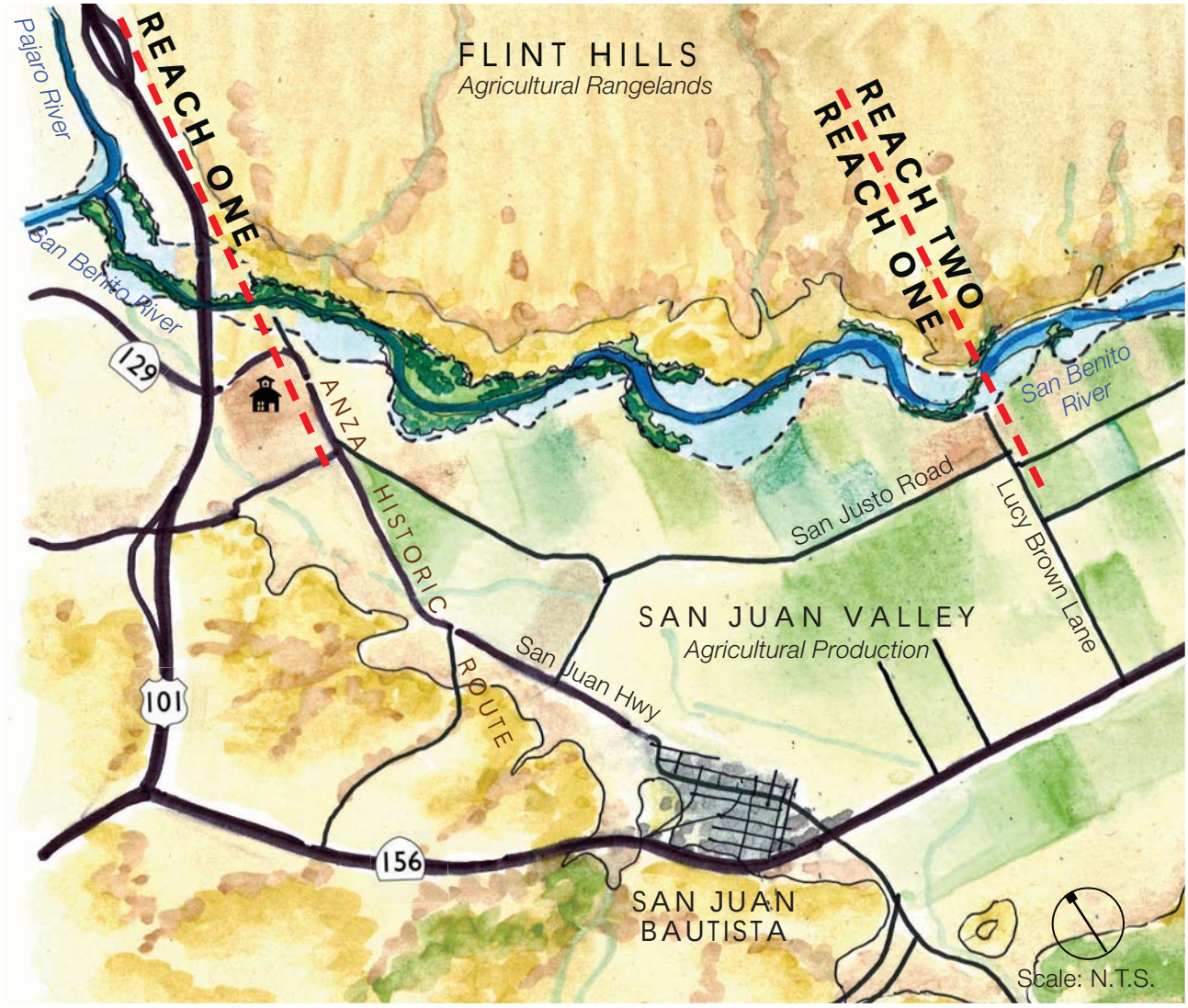

FIGURE 3-2 Parkway Reach One

LONG TERM GUIDING VISION

The guiding vision for Reach One is to provide trails and parkway amenities which reflect the rural agricultural and cultural heritage of the San Juan Valley and San Juan Bautista area. The primary multi-use trail system, an outdoor education area, and staging areas are envisioned to be developed on the upper terrace lands on the south side of the San Benito River. Secondary trails and staging areas may also be developed along the Flint Hills on the north side of the river.

THEMES AND KEY FEATURES

- San Juan Valley farming and ranching heritage
- Historic community of San Juan Bautista
- Juan Bautista de Anza National Historic Route
- Riparian woodland and wildlife habitats

REACH ONE – SETTING AND CHARACTER

The River Parkway Master Plan area begins at the San Juan Highway, which is located just to the east of Highway 101. Reach One features approximately 3-¾ miles of the San Benito River extending upstream (eastward) to Lucy Brown Lane. Further downstream to the west of Highway 101, the San Benito River flows into the Pajaro River.

The San Benito River flows westward, though most of the riverbed is dry for much of the year. The corridor follows along the base of the Flint Hills, which feature rolling hills covered in grassland. The land along the north side of the river is currently open rangeland, though development has been proposed in previous years. The terrain on the north side of the river near San Juan Highway is relatively gentle, while further to the east the slopes steepen closer to the river. Several intermittent drainages, creating ravines on the hillsides, flow into the river from the Flint Hills.

On the south side of the San Benito River, the terrain of the valley is level in comparison to the Flint Hills. The landscape along the south side features lower and old river terraces. The lower terraces lie closer to the active river channel and are at a lower elevation. Lower terraces are more prone to flooding as compared to the more stable upper terraces. These river terraces feature fertile agricultural fields. A mining plant is also located at the western end of the reach just to the east of San Juan Highway.

This Reach of the San Benito River features extensive riparian woodland habitat and consequently provides high value wildlife habitat. Dense stands of willows, black cottonwoods and mulefat scrub grow along the channel, often with patches of in-stream freshwater marsh (cattail patches). The intermittent drainages flowing down from the Flint Hills also provide wildlife in the grasslands with seasonal drinking water. The large extent of grassland of the Flint Hills and its contiguous location along the upper terrace of the northern river bank provide high quality habitat for grassland wildlife

species, including western burrowing owl, a special status species. Some areas disturbed by previous sand and gravel mining support ruderal (weedy) vegetation and former mining pits; other mined areas have been colonized by mulefat scrub.

As the river channel widens within the eastern segment of Reach One, the willow-cottonwood riparian woodland transitions to mulefat scrub. Mulefat scrub is found on the large sand and gravel terraces within the river corridor. The mulefat scrub in this reach is also some of the least disturbed within the River Parkway Master Plan area, and thus provides good quality habitat for wildlife. The mulefat scrub may provide potential habitat for special status plant species, such as alkali milk-vetch and San Joaquin spearscale. There are also small patches of sagebrush scrub along the north bank of the river. This scrub type, characterized by the presence of California sagebrush, may also provide suitable habitat for two special status plant species: Pinnacles buckwheat and Indian Valley bush mallow.

Special status wildlife species that may occur within Reach One include steelhead, California tiger salamander, western spadefoot toad, San Joaquin whipsnake, western burrowing owl, northern harrier, white-tailed kite, western mastiff bat, western red bat, San Joaquin kit fox, and American badger. These species and their habitats are described in Appendix B.

Reach One retains a rural agricultural character, reflecting the ranching and farming heritage of the San Juan Valley. The river channel and adjoining lands within this reach are all privately owned, most of it in large landholdings. As described in Section 2.3 Cultural Heritage, the fertile river terraces along the San Benito River were grazed and farmed from the days of the Mission Period during the late 1700s. Mission San Juan Bautista and the San Juan Bautista Historic Park are located a little less than 3 miles to the south of the San Benito River. The Juan Bautista de Anza National Historic Route (see Section 2.5) extends north from the San Juan Bautista Mission to the San Benito River, continuing to Santa Clara County.

REACH ONE – CONCEPTS

The primary trail system and permanent parkway improvements would be most feasible and sustainable if located on the level upper river terrace along the south side of the San Benito River rather than the Flint Hills along the north side. The south side of the river is also more conveniently located to the community of San Juan Bautista and Anzar High school. If development is proposed within the Flint Hills area, secondary trails on the north side of the San Benito River should also be pursued.

A specific trail alignment within Reach One has not been identified because the land is presently in private ownership. Any future specific trail alignment would be dependent on negotiations with interested landowners and/or willing sellers. Any future trail alignment would also need to avoid conflicts with adjacent agricultural operations through appropriate buffers and other measures such as fencing and no trespassing signage. Improved trail access along existing public roadways parallel to the San Benito River could provide alternate routes, if there are no willing landowners within the corridor along the San Benito River.

Anzar High School is located near the San Benito River, just across San Juan Highway. The convenient proximity of the high school to Reach One provides a valuable opportunity for outdoor education. This extensive stand of riparian woodland within this reach of the parkway offers abundant opportunities for nature study and viewing. A primary staging area in the vicinity of the San Juan Highway would provide

convenient access for both residents and visitors. This location could easily be accessed from Highway 101. The staging area should provide access for pedestrians, bicyclists, and equestrians. A secondary staging area and public access nodes should also be explored further to the east.

Permanent structures, such as restrooms, should be located on the upper river terrace lands to minimize potential flooding impacts. Other improvements, such as paved trails and staging areas, should also be located on the upper river terrace where feasible, or designed to withstand periodic flooding if located on the lower terrace lands. Unpaved trails and minimal structures which can withstand periodic flooding may be located on the lower terraces. Trail improvements and secondary staging may also be located on the north side of the San Benito River pending any future development proposals. Trails, staging areas, and parkway amenities should be sited and designed to avoid or minimize impacts to sensitive habitats and special status species that occur within Reach One.

Presently there are no existing road crossings of the San Benito River within Reach One. A future primary trail crossing at the San Juan Highway would provide a convenient connection to any future Santa Clara County trails, including a future potential recreational Anza Trail route. If secondary trails are developed along the north side of the river, another river crossing further to the east could be explored to provide a loop route.

Potential trail and pedestrian/bicycle connections to Reach One could include connections to the community of San Juan Bautista and establishing a recreational trail along the Anza Historic Trail route. Recreational trail segments of the Anza Trail could also be developed to connect the River Parkway to San Juan Bautista and to Santa Clara County. A future connection to the Pajaro River could also be explored if any future trails are planned along the Pajaro River corridor by adjoining counties.

Any future trails and River Parkway amenities would be the result of negotiations with interested property owners/willing sellers or as conditions of future development. Specific trail alignments and locations of parkway amenities/staging areas would be determined as future opportunities arise.

REACH ONE – PROGRAM

TRAILS

- Develop the primary multi-use trail system on the level river terrace lands along the south side of the San Benito River (see Trail Design Guidelines - Section 3.7).
- Develop any paved trails and permanent structures on the upper terraces. If trails are located on lower terraces, design the trails to withstand periodic flooding.
- Designate alternate routes along existing public roadways as needed to provide continuous trail access along the south side of the San Benito River. Public roadways to be considered for access improvements include San Juan Highway, Highway 156, San Justo Road, and Duncan Lane.
- Develop pedestrian/bicycle bridge improvements at the San Juan Highway crossing of the San Benito River. Provide a designated equestrian crossing in the vicinity of the San Juan Highway.
- Coordinate development of trails along the north side of the San Benito River with any future development in the Flint Hills.
- Provide a pedestrian/bicycle connection from the River Parkway to the community of San Juan Bautista.
- Where the future River Parkway trail coincides with the Anza historic route, coordinate with the National Park Service regarding designation as a National Historic Trail Recreational Trail segment.
- Coordinate with Santa Clara County regarding any future Anza Trail connection to the north.

OUTDOOR EDUCATION

- Develop an outdoor education area with access to the San Benito River near Anzar High School.
- Provide nature viewing and bird watching overlooks in the vicinity of tree groves.
- Provide interpretive displays in vicinity of staging areas and public access nodes highlighting natural resources and cultural heritage of the San Juan Valley, including the Anza expedition.

STAGING AREAS AND ACCESS

- Provide staging areas at the west and east ends of Reach One, with interim public access nodes as feasible (see Staging Area and Amenity Guidelines - Section 3.8).
- Develop a primary staging area, including equestrian staging, in the vicinity of the San Juan Highway.
- Develop a secondary staging area in the vicinity of Lucy Brown Lane.
- Provide public access nodes where feasible at the terminus of public rights-of-way.
- Implement measures to restrict off-highway vehicles from accessing the riparian corridor.

HABITAT PROTECTION AND ENHANCEMENT

- Protect and enhance the willow-cottonwood riparian woodland, mulefat scrub, grassland and any freshwater marsh (see Habitat Protection and Enhancement Guidelines - Section 3.9).
- Retain existing stands of riparian woodland, particularly large mature native trees.

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3.3 RIVER PARKWAY REACH TWO *SAN BENITO RIVER*

Lucy Brown Lane To 4th Street Bridge (4-¾ MILES)

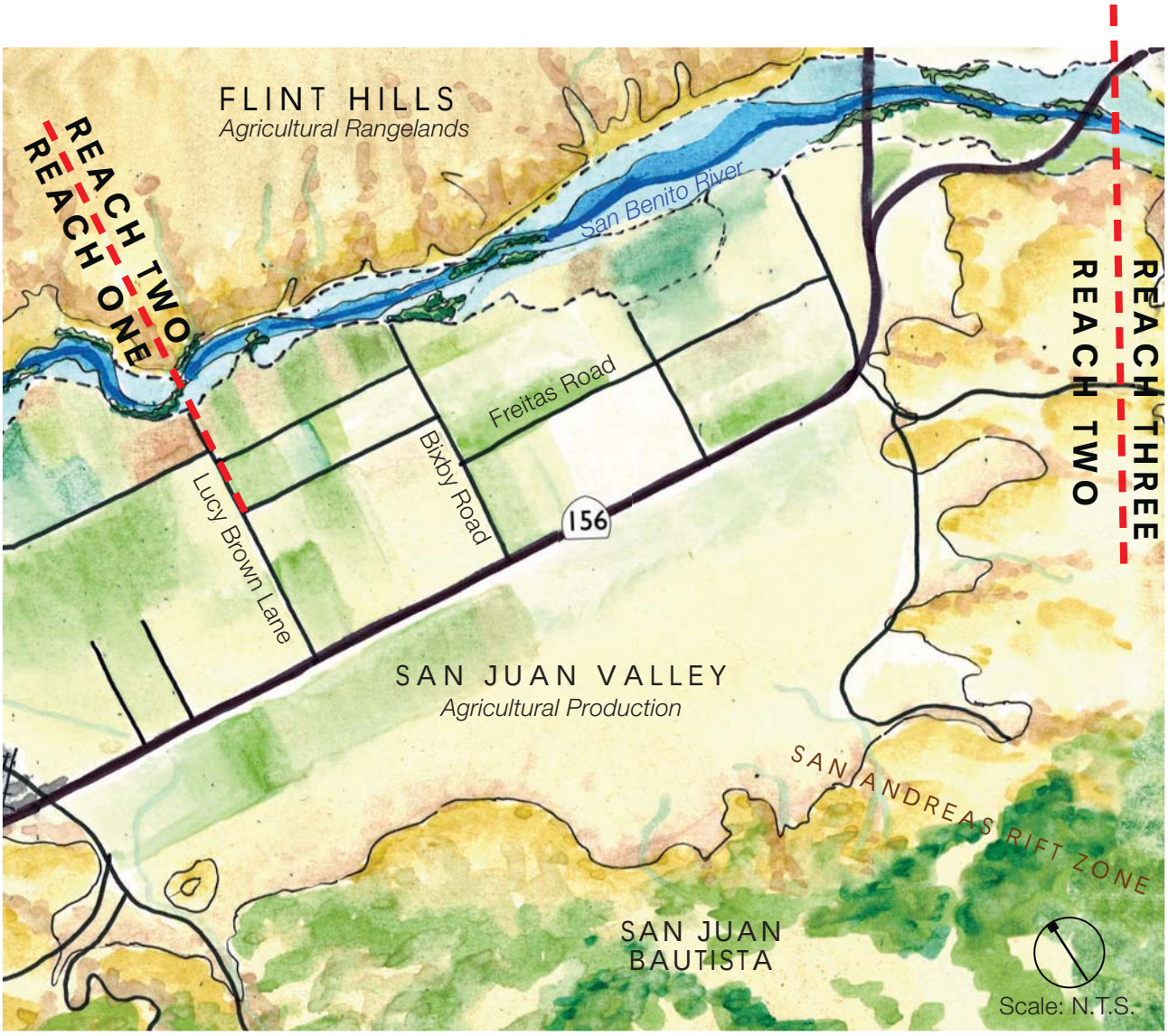

FIGURE 3-3 Parkway Reach Two

LONG TERM GUIDING VISION

The guiding vision for Reach Two is to provide trails and parkway amenities which reflect the rural agricultural heritage of the San Juan Valley. The primary multi-use trail system and secondary staging areas are envisioned on the upper terrace lands on the south side of the San Benito River. Nature trails and wildlife viewing areas would also be designated within the river corridor.

THEMES AND KEY FEATURES

- San Juan Valley farming and ranching heritage
- Mulefat scrub habitat
- Water treatment and reclamation

REACH TWO – SETTING AND CHARACTER

Reach Two begins at Lucy Brown Lane and extends approximately 4-¾ miles upstream (eastward) to the 4th Street bridge. This reach features a broad expanse of floodplain, which is dry much of the year similar to Reach One. Much of this reach abuts the rangeland of the Flint Hills to the north and agricultural lands to the south.

Steep hillsides rise above the north side of the San Benito River along much of this reach. Intermittent drainages in the Flint Hills have created several deep ravines, resulting in a landscape of steep hillsides and canyons along the north side of the river. The physical setting along the south side of the San Benito River is very level as compared to the north side. The segment of this reach to the east of Bixby Lane is characterized by a wide river corridor. The deposits within this broad floodplain are considered sand and gravel mining resources.

Mulefat scrub is the predominant vegetation type within this reach where it occupies the active channel bed, as well as in-channel flood terraces. In the downstream (west) portion of the reach the mulefat scrub habitat is relatively undisturbed and of good quality for wildlife. Cottonwood and willow-dominated woodland lines the south bank of the river and occupies some in-channel areas in the Bixby Road area and upstream of the 4th Street bridge. The woodland is interspersed with non-native tree groves, such as the large eucalyptus trees near Mitchell Road. The grasslands along the upper river terrace on the north side of the river are of excellent quality for grassland wildlife species. Western burrowing owl, a special status species, has been recorded from these grasslands. The mulefat scrub may provide suitable habitat for two special status plant species, Pinnacles buckwheat and Indian Valley bush mallow. Other special status wildlife species that may occur along portions of this reach include steelhead, California tiger salamander, California red-legged frog, western spadefoot toad, San Joaquin whipsnake, northern harrier, white-tailed kite, western mastiff bat, western red bat, San Joaquin kit fox, and American badger. Nests for the dusky-footed

wood rat, a special status species, were observed within the mulefat scrub.

Most of Reach Two retains a rural agricultural character, featuring undeveloped rangeland to the north and agricultural fields to the south. In the eastern portion of the reach towards the City of Hollister, land use transitions from open grasslands to rural residential properties on the north side of the river. On the south side, land use changes from agricultural fields and rural residences to municipal and light industrial uses, including the City of Hollister's Domestic Water Reclamation Facility. Much of the river corridor from Bixby Lane eastward and continuing along the Domestic Water Reclamation Facility is presently owned by a company which includes sand and gravel mining operations. This eastern segment also shows evidence of illegal off-highway vehicle activity.

REACH TWO – CONCEPTS

Steep hillsides and deep ravines of the Flint Hills create very challenging conditions for developing a multi-use trail and staging areas along the north side of the San Benito River within Reach Two. The wide expanse of floodplain also creates a substantial challenge to developing a multi-use trail bridge crossing of the river. Similar to Reach One, the level river terrace along the south side of the San Benito River offers the most feasible and sustainable location for a future multi-use trail and parkway improvements. The broad expanse of floodplain within this reach also offers opportunities for natural surface trails on the lower terraces within the river corridor.

A specific alignment for a multi-use trail within Reach Two has not been identified because most of the land is presently in private ownership. Land owned by the City of Hollister for the Domestic Water Reclamation Facility may provide opportunities for a future trail alignment. Large parcels of land owned with the intent of future mining operations may also offer potential trail opportunities at some time in the future .

Any future specific trail alignment would be dependent on negotiations with interested landowners and/or willing sellers. Any future trail alignment would also need to avoid conflicts with adjacent agricultural operations, mining operations, and operation of the Domestic Water Reclamation Facility. Improved trail access along existing public roadways parallel to the San Benito River could provide alternate routes if there are no willing landowners within the corridor along the San Benito River.

Existing unpaved roadbeds and natural surface user-created trails within the river corridor may provide future River Parkway trail opportunities. Trails on the lower river terraces would need to be sited to ensure protection of sensitive habitats and avoid impacts to the low flow channel. Clearly designated trails may help to curtail existing off-highway vehicle activity. Some natural surface trails within this reach may feature loose sandy soils which are more desirable for equestrian and hiking use as compared to biking. Where natural surface conditions are more compacted, trails may also be suitable for mountain biking. Specific alignments for natural surface trails within this reach have not been identified due to private land ownership.

Most of Reach Two features mulefat scrub, with some grassland and only a few small stands of riparian woodland. The scrub in upstream areas has been degraded by off-highway vehicle use. In these areas, the scrub has been trampled and the habitat fragmented by a mosaic of user-created trails and otherwise disturbed areas. This transition from the extensive stand of riparian woodland in Reach One to the scrub and grassland habitats in Reach Two provides an opportunity for nature study and observation of wildlife species

associated with scrub and grasslands. Although no schools are situated in close proximity to Reach Two, the Domestic Water Reclamation Facility may offer educational opportunities. Water treatment and reclaimed water uses are possible educational themes.

Secondary staging areas along Reach Two would provide convenient access for trail users. Staging areas could potentially be developed in the vicinity of public roadways, including Lucy Brown Lane, Bixby Road and Mitchell Road. No specific locations have been identified due to private land ownership. Coordination with the City of Hollister may identify a staging area opportunity in the vicinity of the Water Reclamation Facility. Secondary staging areas with minimal permanent structures that can withstand periodic flooding may be feasible on lower terrace lands, while permanent structures such as restroom facilities should be located on upper terrace lands to minimize potential flooding impacts.

Highway 156 is a major road crossing within this reach. No separated bicycle or pedestrian facilities presently exist on the bridge crossing. The 4th Street bridge, located at the eastern end of Reach Two, also does not presently provide separated bicycle or pedestrian access on the bridge. Future pedestrian/bicycle access from the south side across the river to the City of Hollister could potentially be provided as part of the 4th Street crossing or as a pedestrian/bicycle bridge within the next reach, Reach Three. Providing a convenient bicycle/pedestrian connection across the San Benito River will be a key challenge in connecting trails between Reach Two and Three. Depending on whether the bridge crossing is suitable for equestrian use, an equestrian crossing of the river channel may also be needed. If a bridge crossing for pedestrians and bicycles is not feasible, a seasonal river crossing for all trail users may need to be explored. An analysis of the river channel conditions and land use constraints would be needed to identify potential locations for a seasonal trail crossing. Any crossing of the river channel may also require seasonal restrictions due to potential flooding constraints. Optimally, an all-season river crossing for pedestrians and bicyclists should be provided in the future to create a convenient continuous trail route.

REACH TWO – PROGRAM

Any future trails and River Parkway amenities would be the result of negotiations with interested property owners/willing sellers or as conditions of future development. Specific trail alignments and locations of parkway amenities/staging areas would be determined as future opportunities arise.

TRAILS

- Develop the primary multi-use trail system on the level river terrace lands along the south side of the San Benito River (see Trail Design Guidelines - Section 3.7).
- Develop any paved trails and permanent improvements on upper terraces. If trails are located on lower terraces, design the trails to withstand periodic flooding.
- Designate alternate routes along existing public roadways as needed to provide continuous trail access along the south side of the San Benito River. Public roadways to be considered for access improvements may include Duncan Lane and other roadways as needed.
- Develop a designated river crossing for pedestrians, bicyclists and equestrians in the vicinity of the 4th Street bridge to provide a trail connection between Reach Two and Three. A seasonal river crossing may be considered as an alternative if a bridge crossing is not feasible for equestrians or other trail users.
- Provide trail under crossings of the 4th Street bridge, on both the south and north side of the San Benito River.
- Designate trails on the lower terraces within the river corridor, primarily utilizing existing unpaved roadbeds and other existing natural surface pathways. Trails should be sited in areas which ensure protection of the sensitive habitats and minimize impacts to the low flow channel.

OUTDOOR EDUCATION

- Provide nature viewing overlooks.
- Provide interpretive displays in the vicinity of staging areas and public access nodes highlighting natural resources and river stewardship.
- Provide educational displays near the City of Hollister Domestic Water Reclamation Facility, focusing on water treatment and reclaimed water.

STAGING AREAS AND ACCESS

- Provide secondary staging areas and interim public access nodes (see Staging Area and Amenity Guidelines - Section 3.8).
- Develop a staging area adjacent to the 4th Street bridge, on the north side of the San Benito River.
- Develop additional secondary staging areas at the terminus of public rights-of-way where feasible.
- Implement measures to restrict off-highway vehicles from accessing the riparian corridor.

HABITAT PROTECTION AND ENHANCEMENT

- Protect and enhance the willow-cottonwood riparian woodland, mulefat scrub, grassland and any freshwater marsh (see Habitat Protection and Enhancement Guidelines - Section 3.9).
- Retain existing stands of riparian woodland, particularly large mature native trees and snags.
- Encourage passive restoration of mulefat scrub and riparian woodland vegetation and implement actions to allow existing degraded and disturbed areas to naturally recover. Implement active revegetation to close gaps in the riparian woodland.

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3.4 RIVER PARKWAY REACH THREE *SAN BENITO RIVER*

HWY 156 / 4th Street Bridge to Hospital Road (3-¾ MILES)

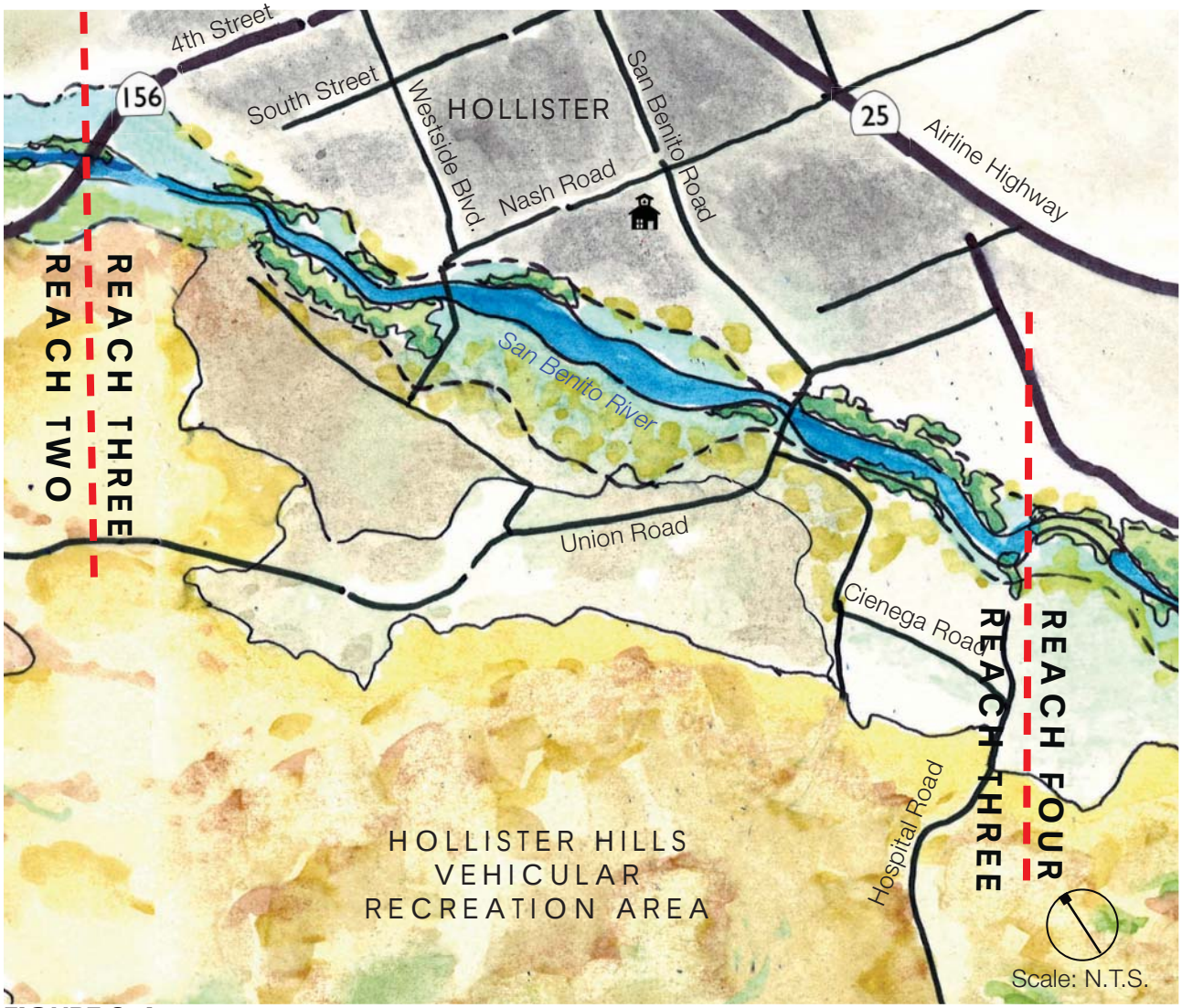

FIGURE 3-4 Parkway Reach Three

LONG TERM GUIDING VISION

The guiding vision for Reach Three is to provide trails, parkway amenities, and a natural refuge of open space and habitat adjacent to Hollister city limits. Provide the primary multi-use trail system, an open space area, and staging areas on river terrace lands along the northeast side of the San Benito River. Sensitively sited natural surface trails and overlooks on the lower river terraces, with closure and restoration of degraded areas, are also envisioned. Secondary trails and staging areas may also be developed along the southwest side of the river.

THEMES AND KEY FEATURES

- Reflect agrarian heritage of Hollister
- Bird watching and wildlife viewing
- Habitat enhancement and river corridor mining reclamation
- Connections to neighborhoods, schools, parks, and historic districts of Hollister

REACH THREE – SETTING AND CHARACTER

Parkway Reach Three extends along the San Benito River from the 4th Street bridge upstream approximately 3-¾ miles to Hospital Road. Within this reach, the river corridor orientation trends north/south. The City of Hollister is situated along the northeastern side and less developed land within unincorporated San Benito County along the southwestern side.

The setting of Reach Three is in contrast to the other Parkway Reaches as it is more urbanized and the river corridor has been altered more by sand and gravel mining and other human-related impacts. Within the boundaries of the City of Hollister, the setting along much of the river is developed with residential neighborhoods and public facilities. An undeveloped area, proposed for a future regional park and open space, presently exists within the central portion of the reach adjacent to San Benito High School. Across the river from Hollister city limits, the setting features agricultural fields, rural residences, and Riverside Park. Between Union Road and Hospital Road, both sides of the river feature primarily agricultural fields.

The landscape along both sides of the San Benito River within Reach Three is characterized by level river terraces. On the southwest side, rolling hillsides rise up beyond the upper terrace. To the east, the level terrain of the Hollister Valley extends to the east. Similar to Reach Two, the lower terraces and floodplain are relatively broad.

Sand and gravel deposits in the area between just north of Union Road to the south of Hospital Road were previously mined. Within the riverbed and on the riverbanks, prior sand and gravel mining operations have altered the landscape, including creation of former mining pits or settling basins, levees, unpaved mining roads, and piles of spoils. Reclamation of the mining area has not yet been completed.

The dominant habitat within this reach is mulefat scrub, however, there are also stands of riparian woodland

habitat, particularly along the south bank and upstream of Union Road. Previously mined areas are being colonized by mulefat, as well as young willows and cottonwoods; however, the value of habitat recovery is moderated by the myriad of recreational trails that fragment the habitat. The scrub habitat area upstream (from Nash Road to Hospital Road) has been degraded by illegal off-highway vehicle use. In these areas, the scrub has been trampled and the habitat fragmented by a mosaic of unpaved roads, user-created trails, and otherwise disturbed areas. Upland scrub occurs on the upper floodplain, such as near Nash Road. The urban and rural land uses adjacent to Reach Three moderates the value of the river habitats to wildlife as evidenced by the deposition of debris from the top-of-bank and off-highway vehicle use. Still, several stands of riparian woodland habitat that exist within this reach provide valuable wildlife habitat. Mature willow and cottonwood trees occur in the upstream area and a large stand of riparian woodland is establishing north of Hospital Road. This reach also abuts the City wastewater treatment ponds, which attract waterfowl and other avian species depending upon the time of year and water levels in the ponds.

The mulefat scrub may provide suitable habitat for two special status plant species: Pinnacles buckwheat and Indian Valley bush mallow. The area also supports invasive, non-native trees, most notably occurrences of tamarisk. Some grassland areas within this reach add to the plant diversity; some areas support showy wildflowers, such as bi-colored lupine and owl's clover. Portions of Reach Three may provide marginal habitat, primarily as occasional foraging or as passage, for steelhead, California tiger salamander, California red-legged frog, western spadefoot toad, western pond turtle, San Joaquin whipsnake, western burrowing owl, northern harrier, white-tailed kite, western red bat, and San Joaquin kit fox.

Although the setting is more urbanized than other reaches, the agrarian heritage of the region and historic character of Hollister are important features within Reach Three. Agricultural fields and orchards continue to exist beyond the urbanized areas. The City of Hollister also features two historic districts, the downtown Hollister District and Monterey Street District (see Section. 2.4)

While much of the river corridor within Reach Three is in private ownership, some of the land is owned by public agencies. These lands include Riverside Park, the City of Hollister Industrial Wastewater Treatment Plant, school district lands, and river crossing rights-of-way. A substantial area within the river corridor is owned by mining companies, much of which has been previously mined for sand and gravel. Other adjacent lands, featuring residences and agricultural lands, are in private ownership.

Despite private ownership, there is substantial evidence of use by off-road motorcycles, ATVs, hikers, joggers, equestrians, bicycles, and paintball players within the river corridor. In many instances, these activities are occurring on existing unpaved roads within the river corridor, some of which were associated with prior mining activities. An analysis of these uses, and other impacts such as unauthorized dumping, was conducted in 2012-2013 and is presented in a separate document prepared for San Benito County. The mining reclamation area analyzed extends from just north of Union Road to south of Hospital Road.

REACH THREE – CONCEPTS

While the relatively level terrain on both sides of the river within Reach Three is feasible for a multi-use trail corridor, the northeast side is recommended for the primary trail route because of its convenient proximity to neighborhoods, schools, and downtown Hollister. Secondary trail route segments could be developed on the western side if future opportunities arise. The relatively broad river corridor also offers potential opportunities

for natural surface trails on lower terraces, especially within the previously mined area designated for future reclamation.

Reach Three has been identified as an area of focus by San Benito County. A Conceptual Plan for this Reach, which includes more in-depth design, has been prepared as a separate document to the San Benito River Parkway Master Plan. The Conceptual Plan includes a depiction of the proposed multi-use trail alignment along the east side of the river, an open space area with nature trails, enhanced wildlife viewing at the Industrial Wastewater Treatment Plant ponds, natural surface trails within the river corridor, and staging areas. The Conceptual Plan also includes a proposed regional park, adjacent to San Benito High School.

Outdoor education opportunities within this reach include a wildlife viewing and refuge area featuring treatment ponds situated within the Hollister Industrial Wastewater Treatment Plant. These open water ponds attract many species of waterfowl, making this area one of the best bird watching destinations in San Benito County. If compatible with future treatment facility operations, enhancements could include bird watching overlook platforms, nature trails, and interpretive displays. Further upstream, a future open space area is proposed along the east side of the River on the terrace below the future regional park. This open space area would feature nature trails, overlooks, and interpretive displays. An outdoor education center is also proposed as part of the future regional park. The proximity to San Benito High School and other schools within the City of Hollister makes this Reach an ideal location for outdoor education.

Several staging areas are proposed for this reach, including primary staging areas near the City of Hollister Industrial Wastewater Treatment Plant, at the future regional park, and just to the north of Hospital Road. Existing Riverside Park could also serve as a staging area. Secondary staging areas may be developed on the west side of the river as opportunities arise. Primary staging areas with permanent facilities, such as restrooms, should be developed on the upper terrace lands less prone to flooding.

This reach features existing bridge crossings at Nash Road and Union Road, with a future bridge crossing planned for Hospital Road. The Nash Road bridge crossing was recently improved and now features a sidewalk on one side and bicycle lanes on both sides. The Union Road and Hospital Road bridges, scheduled for replacement, will both include a sidewalk on one side and bicycle lanes on both sides. A pedestrian/bicycle bridge is recommended at the northern end of the reach in the vicinity of the 4th Street bridge, with bridge access points at Riverside Park and the Industrial Wastewater Treatment Plant property. This will provide a safe, convenient connection between the existing park and proposed Parkway. Additional investigation and testing is required to determine the best location.

Although pedestrian and bicycle access across the San Benito River will be provided on roadway bridges and a possible future pedestrian/bicycle bridge, these crossings may not be suitable for equestrian use. Equestrian crossings of the low flow river channel may need to be designated within the river corridor. An analysis of the river channel conditions and land use constraints would be needed to identify specific locations for any trail crossings. Any crossing of the low flow river channel may also require seasonal restrictions due to potential flooding constraints. Without designated crossings, it is likely that future informal use would continue to result in disturbance of riparian vegetation and low flow channel habitat at numerous locations. Illegal off-highway vehicle access and use would need to be prevented.

A pedestrian and bicycle trail route along the eastern riverbank within this reach offers valuable opportunities to connect neighborhoods, schools, and parklands. Providing safe routes to schools is an important goal for the City of Hollister, which could be achieved in part by a continuous off-street bicycle/pedestrian trail along the San Benito River. Convenient pedestrian and bicycles routes connecting from the River Parkway to downtown Hollister, the historic districts, and other destinations within Hollister would benefit both residents and visitors.

Any future trails and River Parkway amenities would be the result of negotiations with interested property owners/willing sellers or as conditions of future development. Specific trail alignments and locations of parkway amenities/staging areas would be determined as future opportunities arise.

REACH THREE – PROGRAM

TRAILS

- Develop the primary multi-use trail system on the level river terrace lands along the north side of the San Benito River (see Trail Design Guidelines - Section 3.7).
- Develop any paved trails and other permanent improvements on the upper terraces. If trails are located on lower terraces, design the trails to withstand periodic flooding.
- Designate alternate routes along existing public roadways as needed to provide continuous pedestrian/bicycle access along the north side of the San Benito River. Public roadways to be considered for access improvements include Apricot Lane and Westside Boulevard.
- Develop a new pedestrian/bicycle bridge crossing of the San Benito River connecting Riverside Park to the City of Hollister Industrial Wastewater Treatment Plant.
- Provide equestrian use river crossings as needed.
- Develop nature trails within the proposed open space area to the south of the proposed future regional park.
- Designate natural surface trails on the lower terraces within the river corridor, primarily utilizing existing unpaved roadbeds and other existing natural surface pathways. Trails should be sited in areas which ensure protection of the sensitive habitats and minimize impacts to the low flow channel.
- As opportunities arise, consider secondary trail routes on the south side of the San Benito River on the river terrace.
- Provide a direct convenient pedestrian/bicycle connection from the multi-use trail to the future Regional park. This connection may require crossing a proposed future Westside Boulevard extension.
- Identify pedestrian and bicycle connections from schools, downtown Hollister, historic districts, parks and other destinations within the City of Hollister to the River Parkway.

OUTDOOR EDUCATION

- Develop a wildlife viewing and refuge area utilizing ponds situated within the City of Hollister Industrial Wastewater Treatment Plant, with a focus on bird watching activities.
- Provide nature viewing overlooks and interpretive displays within the proposed open space area.
- Provide interpretive displays along the primary multi-use trail route and nature trails on terrace lands highlighting natural resources, river stewardship, and the community heritage of the City of Hollister.

WSTAGING AREAS AND ACCESS

- Provide primary and secondary staging areas (see Staging Area and Amenity Guidelines - Section 3.8).
- Primary staging areas may include Riverside Park, the proposed regional park, and in the vicinity of the Hospital Road crossing.
- Develop secondary staging areas in the vicinity of the City of Hollister Industrial Wastewater Treatment Plant and the future Union Road bridge.
- Implement measures to prevent access to the river corridor by off-highway vehicles.

HABITAT PROTECTION AND ENHANCEMENT

- Protect and enhance the willow-cottonwood riparian woodland and mulefat scrub (see Habitat Protection and Enhancement Guidelines - Section 3.9).
- Retain existing stands of riparian woodland, particularly large mature native trees and snags.
- Encourage passive restoration of mulefat scrub and riparian woodland vegetation and implement actions to allow degraded areas to naturally recover. Implement active revegetation to close gaps in the riparian woodland.

3.5 RIVER PARKWAY REACH FOUR

Hospital Road to Southside Bridge (4-¼ MILES)

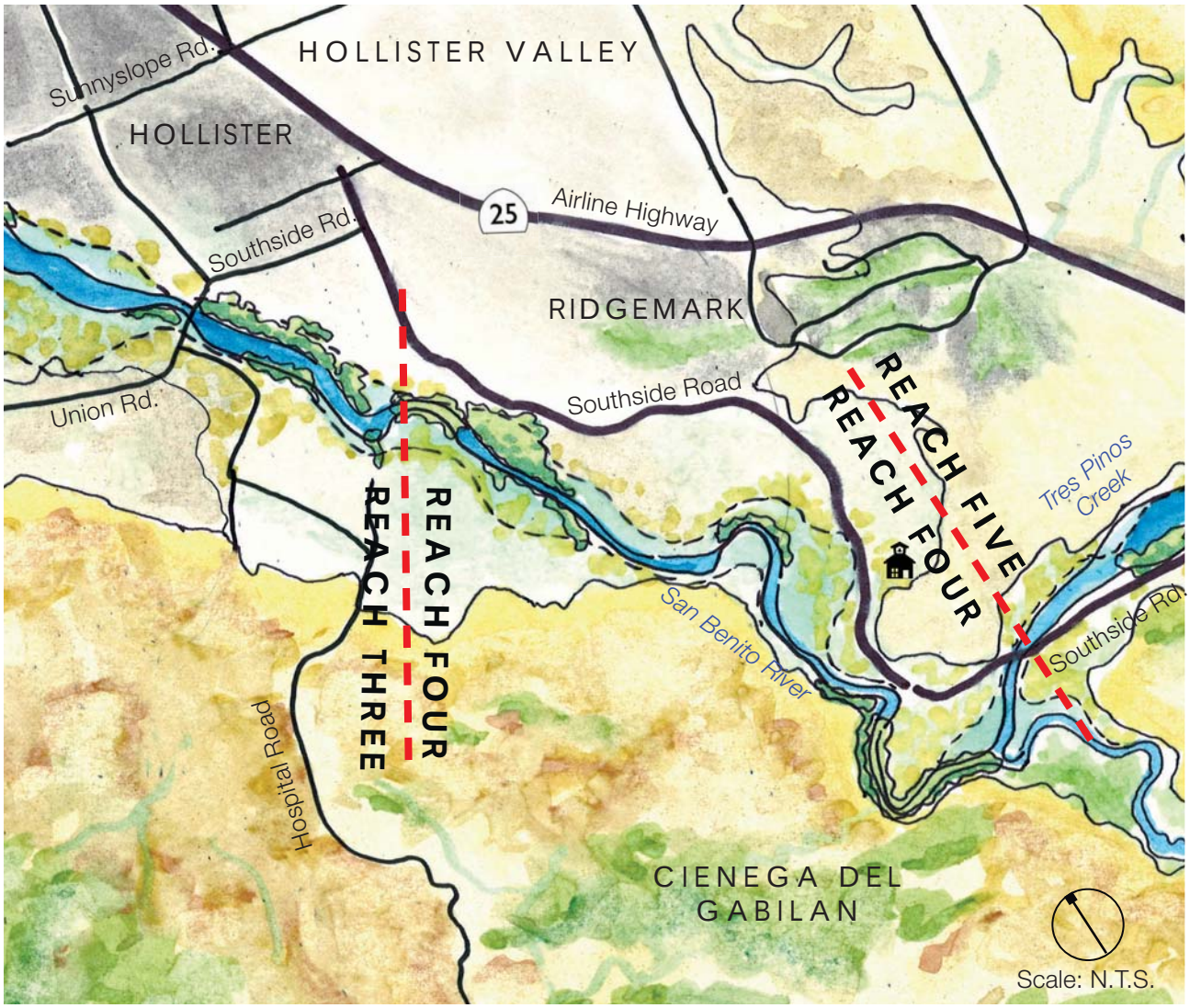

FIGURE 3-5 Parkway Reach Four

LONG TERM GUIDING VISION

The guiding vision for Reach Four is to provide trails and parkway amenities which reflect the rural setting along the San Benito River and Tres Pinos Creek. The primary multi-use trail system and staging areas are envisioned along the northeast side of the San Benito River corridor. An alternative trail route along the Southside Road corridor within some segments may provide a continuous trail route. Sensitively sited natural surface trails and overlooks on the lower river terraces, with closure and restoration of degraded areas, are also envisioned.

THEMES AND KEY FEATURES

- Reflect rural setting
- Cienega Hills and geologic faults
- Habitat enhancement and river corridor mining reclamation
- Connection to Hollister Hills SVRA trail system

REACH FOUR – SETTING AND CHARACTER

Reach Four extends approximately 4-½ miles along the San Benito River and Tres Pinos Creek. The reach begins at Hospital Road and extends along the San Benito River upstream (southward) to the confluence with Tres Pinos Creek. This reach also features a short segment of the Tres Pinos Creek corridor from the confluence to the Southside Bridge. Reach Four is bordered by rural landscapes of unincorporated San Benito County.

Within the northern portion of Reach Four, the San Benito River features a broad floodplain with generally level terrace lands along both sides of the river. The northernmost segment of this reach, just south of Hospital Road, was previously mined for sand and gravel. This mining reclamation area features former mining pits, levees, piles of spoils and unpaved mining roads. Further upstream (southward), the river corridor has been less disturbed.

Reach Four features more varied topography along the Parkway corridor in comparison to the other reaches. This reach also features geologic faults which transect the planning area. The northern portion of this reach features a broad river corridor. Further to the south, the San Benito River corridor narrows as the river flows along the steeply rising Cienaga foothills of the Gabilan Range, located to the west. Reach Four features the narrowest portion of the San Benito River within the parkway planning area.

Beyond the confluence with Tres Pinos Creek, the San Benito River continues as a narrow river corridor toward the southeast, which is not part of the River Parkway planning area. At the confluence, Reach Four follows along the Tres Pinos Creek corridor which extends upstream to the northeast. The Tres Pinos Creek corridor features a relatively broad floodplain within this segment as compared to the San Benito River just upstream.

The habitat within this reach is a mix of mulefat scrub and riparian woodland, with upland areas supporting grassland and patches of sagebrush and mixed scrub.

Oak woodland abuts the riparian woodland in the upstream (south) portion of the reach. Because of the rural nature in this area and the large extent of adjacent undeveloped habitats, Reach Four provides high quality wildlife habitat. Portions of Reach Four may provide marginal habitat, primarily as occasional foraging or as passage, for steelhead, California tiger salamander, California red-legged frog, western spadefoot toad, western pond turtle, San Joaquin whipsnake, western burrowing owl, northern harrier, white-tailed kite, western red bat, and San Joaquin kit fox. A patch of Indian Valley bush mallow, a special status plant species, was observed upstream of Hospital Road; additional occurrences of this species may be present in the scrub habitats in this reach.

Previously mined areas within the northernmost segment of the reach are naturally recolonizing with native riparian trees and shrubs; although some invasive, non-native plant species, such as tamarisk and giant reed, have also colonized the woodland area. Just to the south of Hospital Road, Reach Four features freshwater marsh habitat within former off-channel mining pits. Although these pits retain value for wildlife, they are currently seasonal, which moderates their value to many aquatic wildlife that need a longer inundation period for successful reproduction.

Land use along the northern portion of Reach Four features primarily agricultural fields and rural residences along both sides of the river. To the south of Blossom Lane, the landscape along the west side of the San Benito River transitions to undeveloped foothills and steep slopes. The setting along the east side of the river is characterized by rural residences and agricultural fields throughout the reach. The short segment of Tres Pinos Creek features rural residences, orchards, and agricultural fields along both sides of the creek corridor.

The lands within Reach Four are privately owned, with the exception of the rights-of-way for the Hospital Road and Southside Road crossings. Ownership varies between large landholdings and relatively smaller parcels. The northernmost segment of the river corridor is presently owned by the company which conducted prior gravel mining operations. Use of the mining reclamation area by off-road motorcycles, ATVs, hikers, joggers, equestrians, and bicyclists was analyzed in 2012-2013. A report was prepared for San Benito County as a separate document. Similar to Reach Three, many of these activities are occurring on existing unpaved roads within the river corridor, some of which were associated with prior mining activities.

REACH FOUR – CONCEPTS

Steep hillsides rising above the southwestern side of the San Benito River present constraints to developing the primary trail and staging areas. Although the northeastern side of the river also features rolling terrain in some segments, the northeastern side is a more feasible and sustainable location for the primary trail system and staging areas. The Southside Road corridor along the eastern side of the river also offers an opportunity for a future trail route if a trail adjacent to the river corridor is not feasible along all segments of this reach. A specific trail alignment within Parkway Reach Four has not been identified because the land is presently in private ownership. Any future specific trail alignment would be dependent on negotiations with interested landowners and/or willing sellers.

Within the northernmost segment of Reach Four, the mining reclamation area offers potential opportunities for a trail system within the broad floodplain utilizing existing unpaved roads and levees. Although this area is in private ownership and public access is not authorized, several of the unpaved roads and pathways

presently show evidence of moderate to high use by hikers, joggers, equestrians, and mountain bicyclists. Some of these previously disturbed routes may be appropriate for future designation as trails if the property was opened to public access in the future.

Existing levees and mining pits also provide potential opportunities for nature and wildlife viewing. Some of the levees provide potential sites for overlooks. The riparian woodland and less developed lands adjacent to the river corridor make this reach a potential bird watching destination.

A proposed primary staging area just north of the Hospital Road crossing within Reach Three would also provide a convenient staging area for Reach Four. A potential site for a staging area within Reach Four has not been identified given the private land ownership. If opportunities arise in the future, a secondary staging area toward the southern end of Reach Four could provide parkway amenities to serve parkway users since there are no communities in close proximity to the southern portion of this reach.

The Hospital Road crossing, discussed under Reach Three, forms the northern boundary of Reach Four. The Southside Road bridge over Tres Pinos Creek is the southern boundary of Reach Four. The Southside Road bridge presents constraints to a continuous multi-use trail route. Presently, the Southside Road bridge includes two vehicle travel lanes, and though not striped, has adequate clearance for a bike lane, but no designated pedestrian crossing. Pedestrian access would need to be designated either via a new pedestrian/bicycle footbridge or the current vehicular bridge should be widened to accommodate pedestrian/bicycle use. A designated river corridor crossing in the vicinity of the Southside Road bridge would be needed to provide continuous equestrian access between Reach Three and Reach Four.

The Hollister Hills State Vehicular Recreation Area (SVRA) is located approximately two miles to the southwest of the Hospital Road crossing of the San Benito River. The SVRA Non-Motorized Buffer Trails project will provide multi-use trails within the northern portion of the state property. The trails will be open to hikers, mountain bikers and equestrians. A future trail connection between the SVRA and the River Parkway would provide a unique opportunity to link both multi-use trail systems.

REACH FOUR – PROGRAM

Any future trails and River Parkway amenities would be the result of negotiations with interested property owners/willing sellers or as conditions of future development. Specific trail alignments and locations of parkway amenities/staging areas would be determined as future opportunities arise.

TRAILS

- Develop the primary multi-use trail system along the northeastern side of the San Benito River corridor (see Trail Design Guidelines - Section 3.7).
- Develop any paved trails and other permanent improvements on the upper terraces. If trails are located on lower terraces, design the trails to withstand periodic flooding.
- Designate alternate routes along public roadways as needed to provide continuous trail access. If a trail route is not feasible along some segments of the San Benito River and Tres Pinos Creek within this reach, the primary route may follow along the Southside Road corridor.
- Provide pedestrian/bicycle access across Tres Pinos Creek at the Southside Bridge crossing.
- Provide a designated equestrian crossing within the Tres Pinos Creek corridor in the vicinity of the Southside Bridge (Reach Four or Reach Five).
- Designate natural surface trails on the lower terraces within the river corridor, primarily utilizing existing unpaved roadbeds and other existing natural surface pathways. Trails should be sited in areas which ensure protection of the sensitive habitats and minimize impacts to the low flow channel.
- Explore future opportunities to provide a trail connection from the River Parkway to Hollister Hills SVRA trail system.

OUTDOOR EDUCATION

- Within the mining reclamation area in the northernmost segment of the reach, provide opportunities for nature and wildlife viewing overlooks.
- Provide interpretive displays along the primary multi-use trail route highlighting the geology of the region and river stewardship.

STAGING AREAS AND ACCESS

- Utilize the proposed staging area at the north side of the Hospital Road crossing within Reach Three as the primary staging area to Reach Four.
- Provide a secondary staging area further to the south within Reach Four if a future opportunity arises. (see Staging Area and Amenity Guidelines - Section 3.8).

HABITAT PROTECTION AND ENHANCEMENT

- Protect and enhance the willow-cottonwood riparian woodland, mulefat scrub (see Habitat Protection and Enhancement Guidelines - Section 3.9).
- Retain existing stands of riparian woodland, particularly large mature native trees and snags.
- Encourage passive restoration of mulefat scrub and riparian woodland vegetation and implement actions to allow degraded areas to naturally recover. Implement active revegetation to close gaps in the riparian woodland.

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3.6 RIVER PARKWAY REACH FIVE - *TRES PINOS CREEK*

Southside Bridge to County Historical Park (3 ½ MILES)

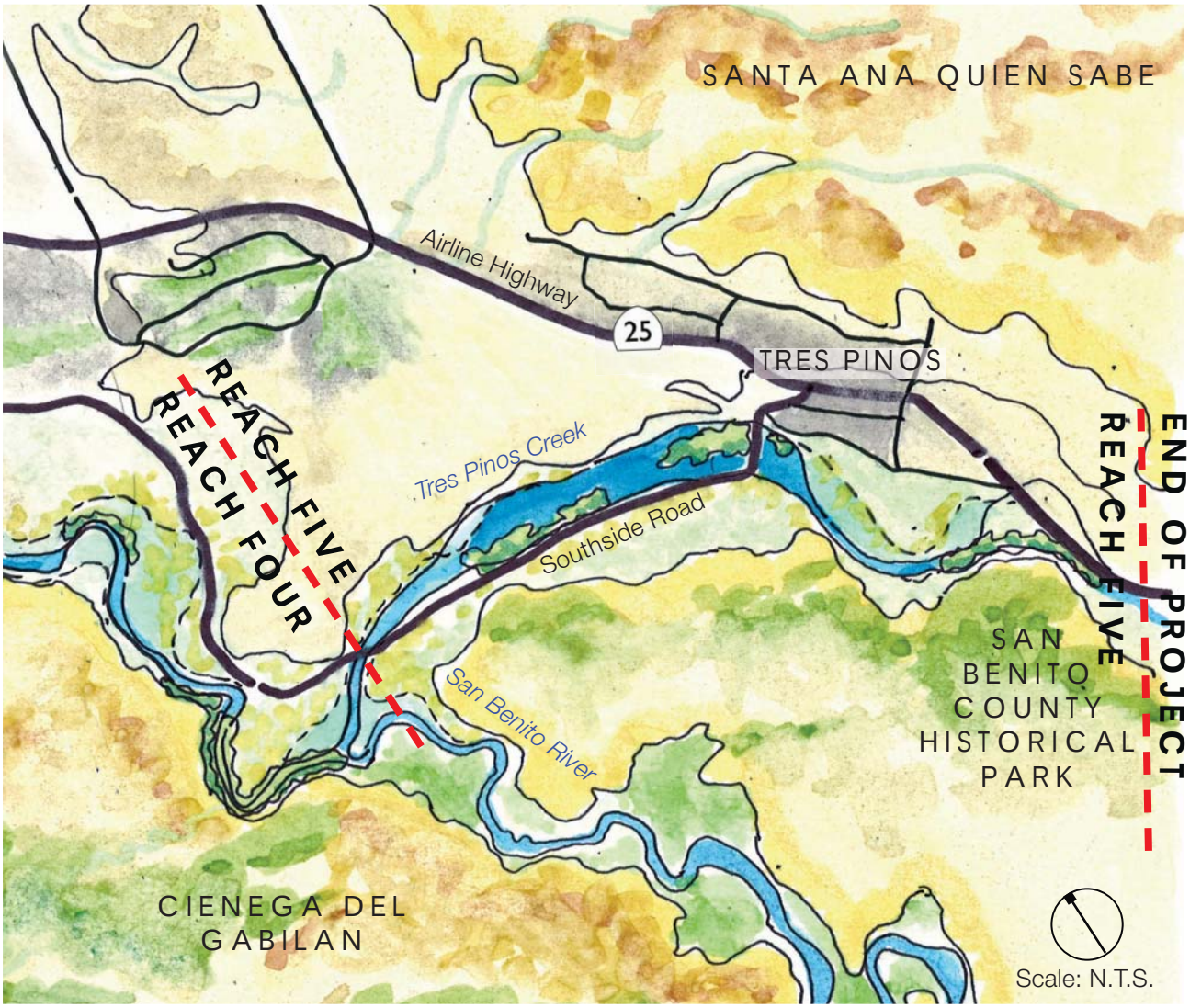


FIGURE 3-6 Parkway Reach Five

LONG TERM GUIDING VISION

The guiding vision for Reach Five is to provide trails and parkway amenities which reflect the rural agricultural setting and the cultural heritage of Tres Pinos. The primary multi-use trail system is envisioned primarily along the north side of the Tres Pinos Creek corridor, with a trail route also along the south side of the creek paralleling Southside Road between the bridge crossing and the at-grade road crossing. San Benito County Historical Park would serve as a primary staging area and outdoor education area. A secondary staging area in the vicinity of the Tres Pinos community is also envisioned.

THEMES AND KEY FEATURES

- San Benito County Historical Park
- Historic community of Tres Pinos
- Riparian woodland and mulefat scrub
- Sand and gravel mining operations

REACH FIVE – SETTING AND CHARACTER

Reach Five extends along Tres Pinos Creek from the Southside bridge 3-½ miles upstream to the San Benito County Historical Park. Located within unincorporated San Benito County, the creek corridor is bordered by rural landscapes. The community of Tres Pinos is situated to the north of the central segment of Reach Five.

This reach features a relatively broad floodplain between the Southside Road bridge eastward to the Southside Road at-grade creek crossing. Upstream of the at-grade road crossing, the creek corridor narrows and bends toward the southeast to the County Historical Park. The creek corridor features a narrow wooded channel in the segment bordered by the park and Highway 25.

The north side of Tres Pinos Creek is bordered by rolling hills and terrace lands. The south side is bordered by level terrace lands in the downstream portion, while further upstream the creek corridor is situated along the base of more steeply rising hillsides.

The habitat along this reach of Tres Pinos Creek is a mix of mulefat scrub and riparian woodland, with the riparian woodland providing the highest quality wildlife habitat. Habitat within portions of this reach, particularly in segments with a broader floodplain, has been degraded by off-highway vehicle use. In these areas, the scrub has been trampled and the habitat fragmented by a mosaic of user-created trails and otherwise disturbed areas. The upper edge of the mulefat scrub and riparian woodland may provide suitable habitat for two special status plant species: Pinnacles buckwheat and Indian Valley bush mallow. Portions of Reach Five may also provide marginal habitat, primarily as occasional foraging or as passage, for steelhead, California red-legged frog, western pond turtle, San Joaquin whipsnake, northern harrier, white-tailed kite, western Mastiff bat, western red bat, and San Joaquin kit fox.

Land use along Reach Five includes agricultural fields, orchards, rangeland, rural residences, sand and gravel

mining operations, and the County Historical Park. The large quarry operation is located along the north side of Tres Pinos Creek within the area between the Southside bridge and at-grade road crossing. The mining operation company also owns approximately 2 miles of the 3-½ mile creek corridor within this reach. The creek corridor in the southernmost end of the reach is publicly owned as part of the County Historical Park.

The historic community of Tres Pinos, located just to the northeast of the Reach Five, is briefly described in Section 2.4. The main street of the community is situated on Highway 25, a convenient stop for back road travelers and visitors to Pinnacles National Park. The Southside Road corridor provides a potential connection between the community of Tres Pinos and the River Parkway.

San Benito County Historical Park is located at the southern end of Reach Five. The park features a Historical Village, a large picnic area, a hillside trail, a play area, and parking. The Historical Village features historic homes, buildings, vehicles and agricultural equipment. The historic structures originated from throughout the County and have been relocated to the village for preservation.

REACH FIVE – CONCEPTS

Much of the terrain on both sides of Tres Pinos Creek between the Southside Bridge and the at-grade crossing would be feasible for developing the primary trail route. Most of this segment is owned by the company conducting mining operations. Constraints to developing the primary trail route on the north side of the creek within this segment include hillsides and residences just upstream of the Southside bridge. A primary trail route along the north side would likely require a creek channel trail crossing to provide a continuous route.

A potential primary trail route also exists along the south side of Tres Pinos Creek on the level terrace between the creek bank and Southside Road. Constraints to this route include private property and residences just upstream of the Southside bridge. The Southside Road right-of-way could be evaluated within this segment just upstream of the bridge to determine if a trail route could be accommodated on either side of the road. Much of the property between Southside Road and Tres Pinos Creek is undeveloped and owned by the company conducting mining operations.

Steeper hillsides along the southwest creek bank, upstream of the Southside Road at-grade crossing, present constraints to developing a primary trail route. A primary trail route along the northeast side of Tres Pinos Creek within this segment of the reach would be more feasible. An alternate trail route within this segment is the Bolado Road right-of-way. The southernmost end of this reach could be located on public property between the Tres Pinos Creek bank and Highway 25.

Natural surface trail routes within the creek corridor may be feasible within the segments of the reach which feature a broad floodplain. There is evidence of user-created trails, which appear to be used by off-highway vehicles, equestrians and pedestrians. Some of these user-created trails may be appropriate as designated trails. Existing user-created pathways resulting in disturbance to low flow channels and trampling of habitat would not be suitable for designated trails and should be closed and restored.

Nature and wildlife viewing opportunities within Reach Five include future mining reclamation areas and the San Benito County Historical Park. Overlook areas with views of riparian woodland would provide

bird watching opportunities. The Historical Park also offers potential opportunities for staging of outdoor education programs.

San Benito County Historical Park would serve as the primary staging area within Reach Five. The existing bridge at the park entrance could accommodate all types of trail users. A secondary staging area in the vicinity of the Southside Road at-grade road crossing could provide a convenient access location for residents and visitors to the community of Tres Pinos. A site for the secondary staging area has not been identified given private land ownership constraints.

Any future trails and River Parkway amenities would be the result of negotiations with interested property owners/willing sellers or as conditions of future development. Specific trail alignments and locations of parkway amenities/staging areas would be determined as future opportunities arise.

REACH FIVE – PROGRAM

TRAILS

- Develop the primary multi-use trail system along either the north or south side of Tres Pinos Creek from the Southside Road bridge to the at-grade creek crossing. Develop the primary multi-use trail system along the northeast side of Tres Pinos Creek between the Southside Road at-grade crossing and the San Benito County Historical Park (see Trail Design Guidelines - Section 3.7).
- Develop any paved trails and other permanent improvements on the upper terraces. If trails are located on lower terraces, design the trails to withstand periodic flooding.
- Designate alternate routes along public roadways as needed to provide continuous trail access. Public roadways to be considered for access improvements include Southside Road and Bolado Road.
- Designate trail route crossings of Tres Pinos Creek for various user groups in the vicinity of the Southside Bridge and the at-grade road crossing of Tres Pinos Creek.
- Designate natural surface trails on the lower terraces within the river corridor, primarily utilizing existing unpaved roadbeds and other existing natural surface pathways. Trails should be sited in areas which ensure protection of the sensitive habitats and minimize impacts to the low flow channel.
- Provide a trail route connection between the River Parkway and the historic community of Tres Pinos.

OUTDOOR EDUCATION

- Provide opportunities for outdoor education programs at San Benito County Historical Park.
- Provide nature viewing overlooks for bird watching in the vicinity of tree groves.
- Provide interpretive displays in the vicinity of staging and access nodes highlighting natural resources and the history of the Tres Pinos community.
- Provide educational displays in the vicinity of mining operations, focusing on sand and gravel resources, uses, operations, and reclamation.

STAGING AREAS AND ACCESS

- Utilize San Benito County Historical Park as a primary staging area.

- Provide a secondary staging area near the community of Tres Pinos (see Staging Area and Amenity Guidelines – Section 3.8).

HABITAT PROTECTION AND ENHANCEMENT

- Protect and enhance the willow-cottonwood riparian woodland, mulefat scrub (see Habitat Protection and Enhancement Guidelines - Section 3.9).
- Retain existing stands of riparian woodland, particularly large mature native trees and snags.
- Encourage passive restoration of mulefat scrub and riparian woodland vegetation and implement actions to allow degraded areas to naturally recover. Implement active revegetation to close gaps in the riparian woodland.

3.7 GENERAL TRAIL AND CORRIDOR DESIGN GUIDELINES

TRAIL TYPES

Different types of trail users often have different preferences and expectations about their trail experience.

TRAIL USERS	paved surface	compacted crusher fines	unpaved surface
baby carriages		#	
bicyclists (mountain bikes)		*	*
bicyclists (road bikes)		#	
equestrians	** ##	*#	*
hikers	**		
inline skaters			
joggers	**		
runners	**		
walkers			
wheelchair users		##	##

LEGEND	
GOOD	
OK WITH EXCEPTION	
AVOID	

* *May or may not be permitted depending on the site, design, and management plan for the specific trail*

** *Best on adjacent soft surface trail*

\# *Usage may or may not be suitable depending on the site, design, and management plan for the specific trail*

Indicates a possible but not optimized usage. Site, structural and management elements of the specific trail determine, create, or improve access

The key goal of the River Parkway, as identified by the Advisory Committee and community input, is to provide a continuous multi-use trail system along the 20-mile parkway. This trail system is envisioned to provide a variety of trail experiences for all types of users. Potential users may include walkers, hikers, joggers, trail runners, birdwatchers, equestrians, mountain bicyclists, road bicyclists, people with disabilities, commuters, and others. The trail system should provide ADA trails to the maximum extent feasible.

FIGURE 3-7 TRAIL USERS AND SURFACE TYPES

Walkers, families with small children and strollers, joggers, bicyclists, and trail users with limited abilities or disabilities may prefer paved surfaces, such as concrete or asphalt. Hikers, trail runners, mountain bikers, and equestrians generally prefer natural surface, crusher fines or other unpaved surfaces. Hikers seeking solitude and equestrians may also prefer trails in a less developed setting, situated further from motor vehicle traffic and urbanized land uses.

The selection of trail surfacing should be determined based on the type of user, trail location, and trail construction and maintenance budget. Figure 3-7 indicates the most appropriate trail surface for different user types. There are three trail surface categories and recommended surface materials for the River Parkway trails 1) Paved, 2) Crusher Fines and 3) Unpaved.

PAVED SURFACE

A smooth paved, ADA compliant trail surface should aim to serve as the primary artery of the parkway trail where feasible. It should connect activity centers such as other parks or schools and link a variety of destinations. A paved trail width of 10 feet is preferred to accommodate multiple uses and users, with 8 feet being the minimum width.

Trail layout and design - Paved trails should be laid out to provide varying experiences capturing view corridors and passing through different ecosystems as much as feasible; however, they should also provide a more direct route to and from destinations and serve both commuters for transportation and park users for recreation. A paved trail should have an adjacent unpaved buffer/shoulder for joggers or hikers wherever possible, in addition to any separated parallel unpaved trail. Sightlines and curves are important design elements to a paved trail as the speed of users will tend to be faster and the frequency of users may be heavier than those on a crushed fines or unpaved trail. Below is an example from the Pitkin County Open Space and Trails Program -Trail Design and Management Planning Handbook:

SIGHTLINE DISTANCES

In general, use the 20mph figures

Speed	Sight Distance
20 mph	130’-200’
15mph	85’-130’
10mph	35’-60’

MINIMUM CURVE RADII

User type	Travelling	Turning
Bicycle	35’ (@ 15 mph)	8’
Equestrian	12’	

Recommended materials for a paved surface trail are:

Concrete - Minimum 4 inches poured-in-place (3,000 psi) concrete over 4-6 inches of compacted Class II base rock. Reinforcement and increased concrete thickness requirements will vary based on site conditions and if motorized vehicles (authorized patrol/maintenance) will be driving/crossing it. Generally concrete is more costly up front than asphalt but typically requires less maintenance. Maintenance includes the following: sweep clean surface as needed and remove and replace cracked sections that are greater than 1/2" in size or settled sections with more than 1/2" grade differential, to eliminate tripping hazards.

Asphalt - Minimum 2 inches bituminous concrete over 4-6 inches of compacted Class II base rock and geotextile. Additional thickness may be required where motorized vehicles (authorized patrol/maintenance) will be using the trail. Asphalt is typically less expensive up front than concrete but requires more maintenance than concrete. Maintenance includes the following: sweep clean surface as needed and repair cracks or settled sections.

A geotechnical report is required for material thickness and compaction recommendations prior to construction regardless of the material. Either surface will only be as good as the construction. Quality detailing, subgrade preparation and material installation will ensure a quality, long lasting product.

COMPACTED CRUSHER FINES

This type of surface is an accessible trail made of compacted, stabilized crushed rock. Crusher fines provide a more natural appearance and rustic character to the trail experience as compared to concrete or asphalt. Compacted crusher fines allow access in all seasons.

Crusher fines should not be confused with gravel, base rock or other rock products. Crusher fines are small particles of crushed rock and should have a range of particles from fine dust up to a specified maximum particle size. An example of crusher fines that is common to the Northern California region is decomposed granite, which when a stabilizer is added to it, is considered ADA accessible and impermeable. Since it does not contain silt, like base rock does, it does not become slippery when wet.

It should be noted that crusher fines are more susceptible to washouts from running water compared to a paved surface and as such drainage features and their design adjacent or along the trail is critical to ensure a quality trail.

Crusher Fines - Minimum thickness and construction of trails with this material depends on the type of use. Construction methods will vary based on site conditions, slopes, and site drainage. The path surface should be 1/2" to 1" higher than ground level, and have a maximum cross slope of 2%. A geotechnical report with recommendations is required prior to construction. Maintenance should be minimal if constructed properly, but will be more frequent as compared to a paved surface. Continual inspection of the surface and immediate repair of washouts should be part of the trail maintenance program. Rake surface yearly and supplement and compact surface material yearly.

UNPAVED SURFACE

An unpaved, natural trail surface should be minimum width of 4 feet and a maximum of 10 feet. Unpaved trails are more susceptible to natural forces such as erosion, compaction and displacement. The width of the trail should be limited to minimize adverse affects on the landscape, control dust and provide a feeling of being closer to nature. Natural surface conditions will vary in dry or wet conditions.

Trail layout and design - Unpaved trails should be laid out as a natural shape and follow the lay of the land. These trails should not be straight or simple curves but instead mimic shapes found in nature such as a river's edge. They should pass through varying landscapes and offer a harmonious feeling with the site. The user's experience on an unpaved trail will tend to feel more natural as they wind along the trail and feel closer to nature than that of a wider paved trail.

Recommended materials for an unpaved surface trail are:

Natural Soil - Maintain a minimum trail tread width of 4 feet. Compacted earth trails should not exceed 5% slope or cross slope. Soil surface may vary from compacted earth to loose sandy soils. Maintenance includes: vegetation brushing and repair to drainage features (rolling drainage dips) as needed.

Loose Gravel/Uncompacted Crusher Fines - Minimum 3 inches of gravel over a layer of compacted earth or subgrade. Geotextile fabric may be necessary based on geotechnical engineers recommendation and site conditions.

Wood Chip (not preferred) - Minimum 4" thick layer of natural, undyed woodchip surface. Edges of trail may need to be extended or lined with stones, logs or a similar natural material to maintain coverage in the area of use. Wood chip trails should not exceed 4% slope or cross slope.

TRAIL CORRIDOR SETTINGS

The River Parkway corridor should be as wide as possible to provide a variety of trails (paved and unpaved) and experiences while preserving as much scenic, natural, historical and geological features as possible. While there are many successful examples of multi-use trails serving pedestrians, bicyclists and equestrians, there can be perceived and actual conflicts between users. A wider corridor will help to reduce these conflicts and create a more appealing open space. When a wider corridor may not be feasible due to restricted land acquisition or existing development, a minimum corridor width may be maintained in order to allow at least a multi-use trail to continue on until the corridor can widen again and allow for more trail options.

Where feasible and space is not confined, separation of users such as equestrians and bicyclists is recommended, particularly in areas near trail heads and heavily used sections of trails. As the distance from the trail head increases and trail use levels decrease, shared multi-use trails can be more cost-effective for management and maintenance. The trail design guidelines that follow include options for separated trails and shared multi-use trails within varying width trail corridors. Figure 3-8 provides a matrix of different trail corridors and possible trail types within them.

The River Parkway passes through a range of settings, from more urbanized communities to rural agricultural lands. Site conditions also vary, featuring upper river terraces, lower river terraces, broad floodplains, and rolling terrain. Depending on the setting and site conditions, different trail design guidelines are appropriate. Trail coridor settings include:

- Agricultural/Rural Setting
- Urban/Park Setting
- Confined Corridor in Urban Setting
- Floodplain Setting
- Roadway Trail Corridor Setting

For each setting, several design options are provided. Options include providing a pedestrian/bicycle trail and equestrian trail within the same trail corridor, or separating the trail types. For example, the trail corridor on the upper terrace may only feature a paved bicycle/pedestrian trail, while equestrian access would be provided on a natural surface trail within the lower terrace/river floodplain. A range of trail widths is also provided for each trail corridor. In general, wider trails are appropriate for urbanized areas and trails segments closer to staging areas which have a higher level of use. Narrower width trails may be appropriate in rural/agricultural and lower terrace/river floodplain trail corridors which have lower levels of trail use. Trail widths may also vary due to specific site constraints.

For all of these settings, the trails should be designed to fit with the landscape and be compatible with the surrounding site conditions. Trail design should emphasize sustainability and minimize future maintenance needs and costs.

TRAIL CORRIDOR DEFINITIONS

Agricultural/Rural Setting. Trail guidelines are appropriate for Reaches One, Two, Four and Five. Within these Reaches, the trail corridor may be situated in the vicinity of agricultural fields, orchards, rural properties, grazing lands, and undeveloped rural areas.

Urban/Park Setting. Includes Reach Three, the eastern portion of Reach Two, and northernmost segment of Reach Four. This category also includes existing and any future parkland within all reaches.

River Floodplain Setting. Occurs within all Reaches of the River Parkway. Where the river or creek channel and floodplain is very narrow, trails are not recommended within this type of setting.

Roadway Trail Corridor Setting. Applies to all Reaches where a trail segment is situated immediately adjacent to a roadway.

Upper Terrace. Refers to upper terrace lands along the San Benito River and Tres Pinos Creek which are higher in elevation than lower terraces and floodplain.

Lower Terrace. Refers to lower geological terraces which are lower in elevation than the upper terraces and often within the 100-year floodplain.

Multi-use. Refers to a trail which includes pedestrian, mountain bike and equestrian use on the same trail tread.

Corridor Setting	A AGRICULTURAL/ RURAL			B URBAN/PARK		C CONFINED CORRIDOR		D FLOODPLAIN		E ROADWAY		
Trail/User Type	*Pedestrian, Bike & Separated Equestrian*	*Pedestrian & Bike*	*Pedestrian, Mountain Bike & Equestrian*	*Pedestrian, Bike & Equestrian*	*Pedestrian & Bike*	*Pedestrian, Bike & Equestrian*	*Pedestrian & Bike*	*Pedestrian, Mountain Bike & Equestrian*	*Pedestrian, Mountain Bike & Equestrian*	*Pedestrian, Bike & Equestrian*	*Pedestrian & Bike*	*Pedestrian & Separated Bike*
Setting ID	A1	A2	A3	B1	B2	C1	C2	D1	D2	E1	E2	E3
Trail Corridor	18’-35’	10’-15’	10’-15’	18’-35’	10’-15’	18’-35’	10’-15’	4’-10’	4’-10’	12’-15’	20’-40’	10’-15’
Paved Trail Width	8’-10’	8’-10’	8’-10’	8’-10’	8’-10’	8’-10’	8’-10’	-	-	8’-10’	8’-10’	8’-10’
Unpaved Trail Width	4’-10’	-	4’-10’	4’-10’	-	4’-10’	-	4’- 10’	4’- 10’	4’-10’	4’-10’	-
Trail Separation	10’ or 4’ (w/ fence)	-	-	10’ or 4’ (w/ fence)	-	10’ or 4’ (w/ fence)	-	-	-	10’ or 4’ (w/ fence)	10’ or 4’ (w/ fence)	10’ or 4’ (w/ fence)
Buffer Width	2’-5’	2’-5’	2’-5’	2’-5’	2’-5’	2’-5’	2’-5’	-	-	2’-5’	2’-5’	2’-5’
Vertical Clearance General	8’	8’	-	8’	8’	8’	8’	12’	12’	8’	8’	8’
Vertical Clearance Equestrian	12’	-	12’	12’	-	12’	-	-	-	12’	12’	-

FIGURE 3-8 TRAIL CORRIDOR SETTINGS

Overlook Of Floodplain

Lower Terrace And Primary Low Flow Channel

Lower And Upper Terrace

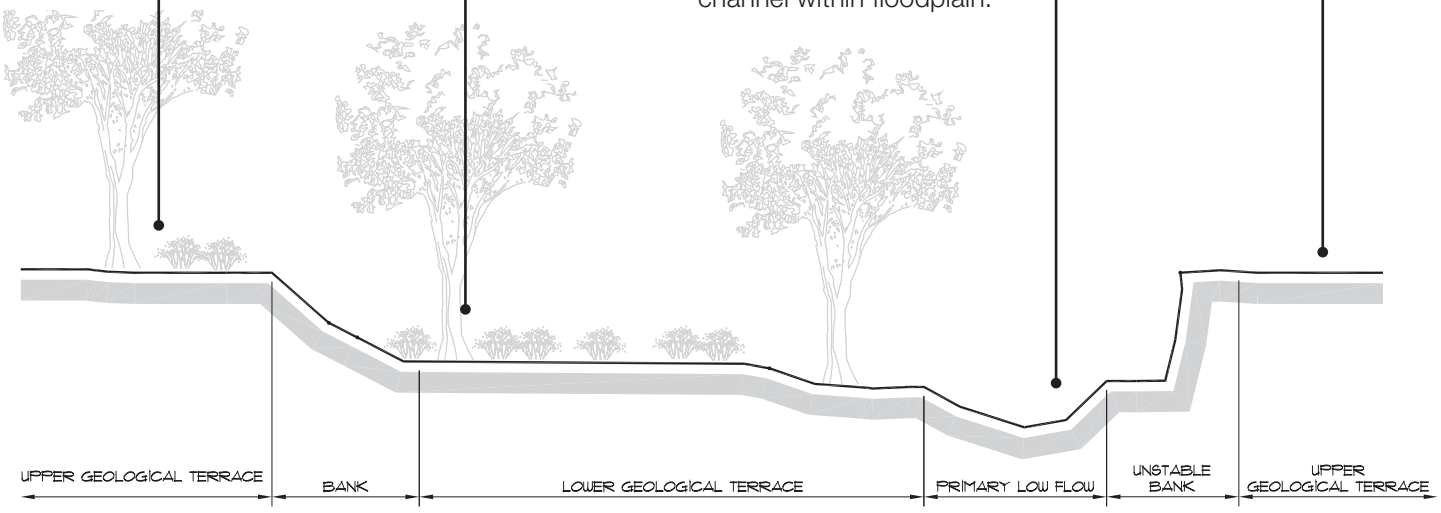
GENERAL CORRIDOR/TRAIL GUIDELINES

- Develop primary trail route on upper river terrace lands where feasible. If the paved surface trail is located on lower terrace lands, design trail to withstand periodic flooding and recognize that trail washouts may periodically occur requiring trail repair.

- Avoid or minimize impacts to mature native trees, riparian woodland, and mulefat scrub.
- Installation of fencing on lower terraces within floodplain should be avoided.
- No lighting should be installed on lower terraces within floodplain.

- Provide stability setback from unstable and steep river bank slopes. A minimum setback width of 25 feet should be provided as necessary, however, the width of the setback should be based on site specific conditions.

- Do not install fencing within the river floodway/primary low flow channel.
- Provide vegetated buffer between trail and low flow channel within floodplain.



A AGRICULTURAL/RURAL SETTING

	A1	A2	A3
Trail Corridor	18’-35’	10’-15’	10’-15’
Paved Trail	8’-10’	8’-10’	8’-10’
Unpaved Trail	4’-10’	-	4’-10’
Trail Separation	10’ or 4’ (w/fence)	-	-
Buffer	2’-5’	2’-5’	2’-5’
Vertical Clearance General	8’	8’	-
Vertical Clearance Equestrian	12’	-	12’

A1 PEDESTRIAN, BICYCLE & EQUESTRIAN

This trail corridor includes separated (parallel) paved and unpaved trails on the upper terrace. Use A1 when site conditions allow for a wider trail corridor and equestrian use is compatible with adjacent land uses.

A2 PEDESTRIAN & BICYCLE

This narrow trail corridor includes a paved trail only on the upper terrace. Use A2 when a wider corridor is not feasible and/or equestrian use is not compatible with adjacent land uses. Where suitable, also provide an equestrian trail per Trail Setting D1.

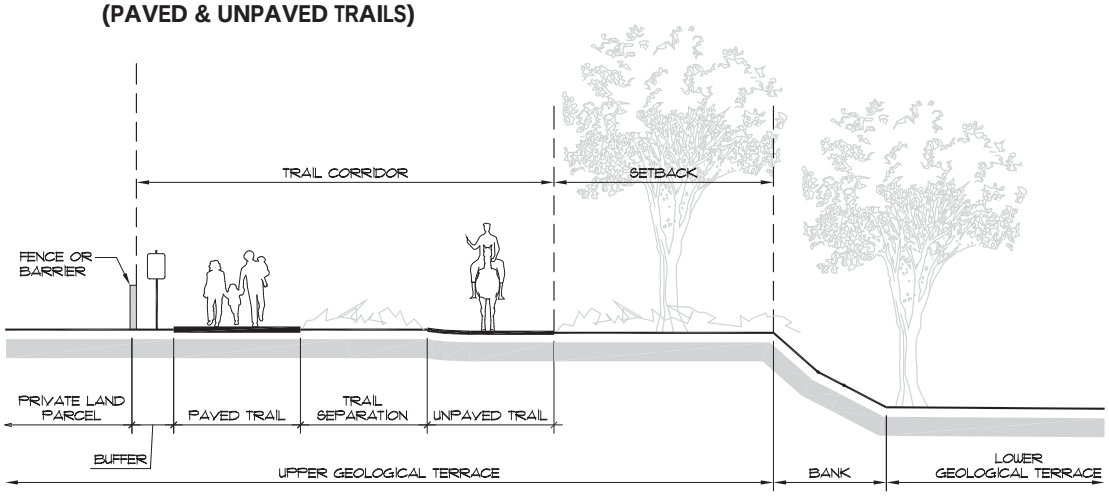
A3 PEDESTRIAN, MOUNTAIN BIKE & EQUESTRIAN

This narrow trail corridor includes an unpaved trail only on the upper terrace. Use A3 when equestrian use is highly desirable and there is not sufficient width to provide both paved and unpaved trails on the upper terrace, nor is it feasible to provide an equestrian trail within the floodplain. This option may also be appropriate for segments where construction funding is limited. Provide an alternate route for road bicycles on a nearby roadway.

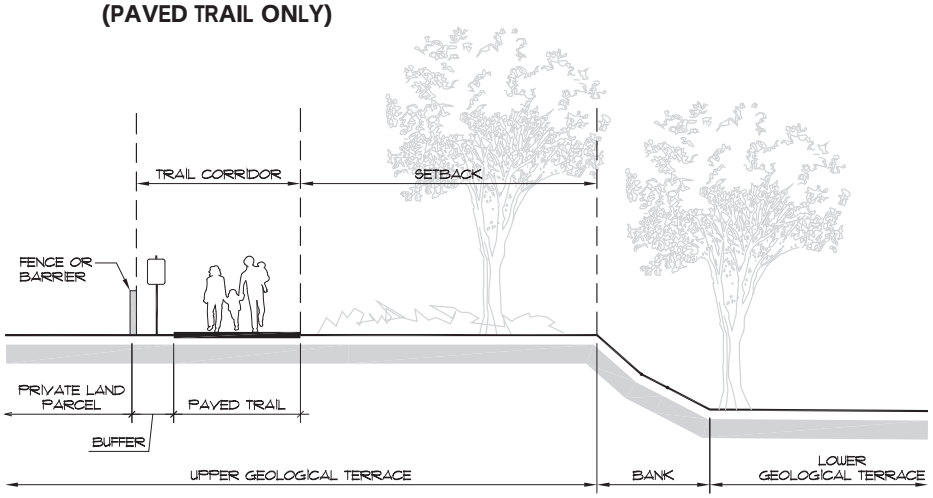
GUIDELINES

- Provide fencing as a buffer between trails and agricultural fields as needed and in coordination with adjacent agricultural operations. Fencing should blend with rural agricultural setting. Planting may be used as a buffer in lieu of fencing, and coordinated with adjacent landowner.
- In general, limit trail use to daylight hours only. Trail lighting to be installed based on further investigation and analysis of site conditions and trail design. Consider security purposes and property owners/adjacent land use. If installed, shield along trails and bridges to prevent light spillage into riparian and stream corridors. Limit lighting to low bollard-style security-type lighting.
- Provide benches and other amenities in vicinity of staging areas and access nodes.
- Provide signage listing trail regulations, including trail use designations. Provide wayfinding and directional signage, as needed. Provide signage prohibiting trespassing and disturbance of agricultural fields and equipment.
- Avoid landscaping which requires permanent installation of irrigation or use of plant species that may attract insect pests to the adjacent agricultural operations.

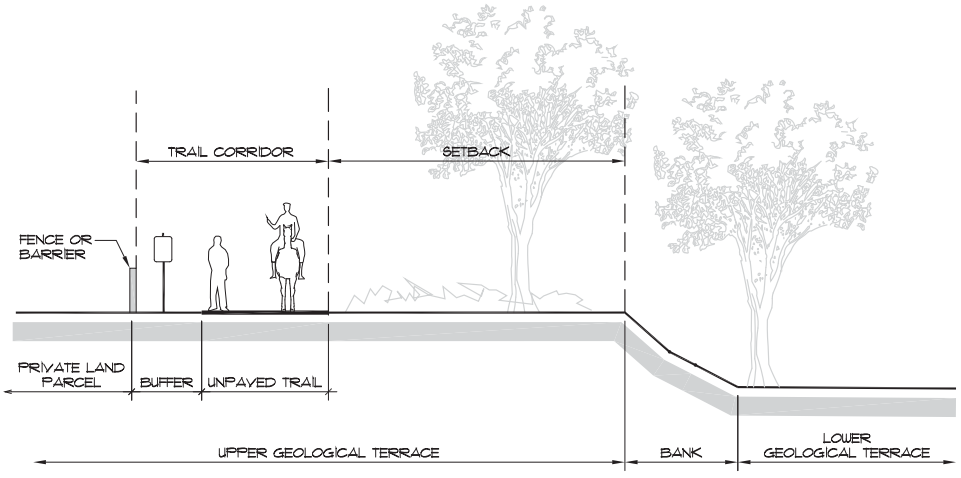
A1 PEDESTRIAN, BICYCLE, & SEPARATED EQUESTRIAN
(PAVED & UNPAVED TRAILS)



A2 PEDESTRIAN & BICYCLE
(PAVED TRAIL ONLY)



A3 PEDESTRIAN, MOUNTAIN BIKE & EQUESTRIAN
(UNPAVED TRAIL ONLY)



B URBAN/PARK SETTING

B1 PEDESTRIAN, BICYCLE & EQUESTRIAN

This trail corridor includes separated (parallel) paved and unpaved trails on the upper terrace. Use B1 when site conditions allow for a wider trail corridor on the upper terrace and equestrian use is compatible with adjacent land uses.

B2 PEDESTRIAN & BICYCLE

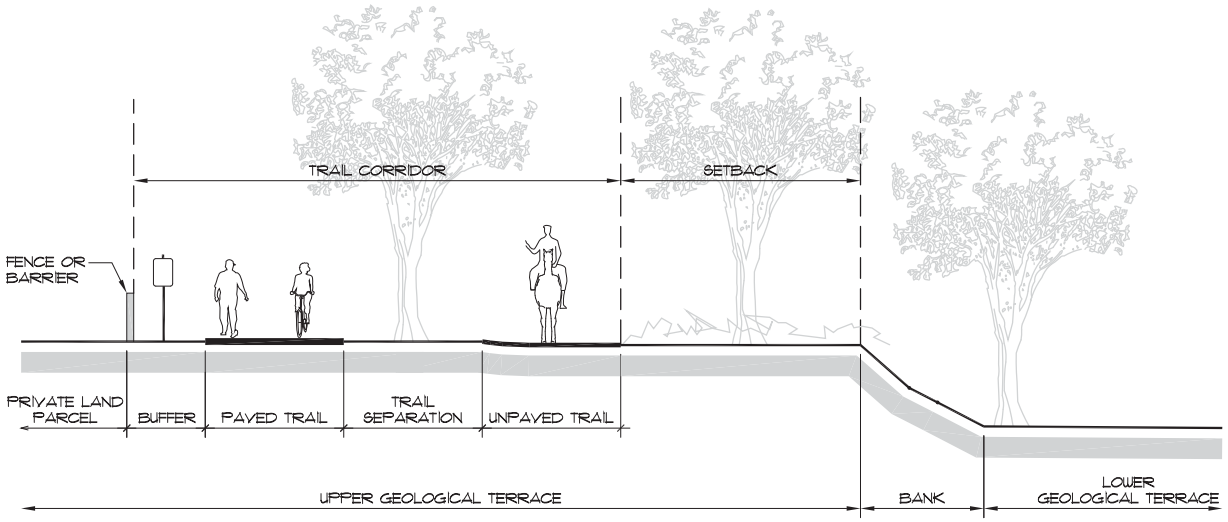
This narrow trail corridor includes a paved trail only on the upper terrace. Use B2 when a wider trail corridor on the upper terrace is not feasible and/or equestrian use is not compatible with adjacent land uses. Where suitable, also provide an equestrian trail per Trail Setting D1.

	B1	B2
Trail Corridor	18'-35'	10'-15'
Paved Trail	8'-10'	8'-10'
Unpaved Trail	4'-10'	-
Trail Separation	10' or 4' (w/fence)	-
Buffer	2'-5'	2'-5'
Vertical Clearance General	8'	8'
Vertical Clearance Equestrian	12'	-

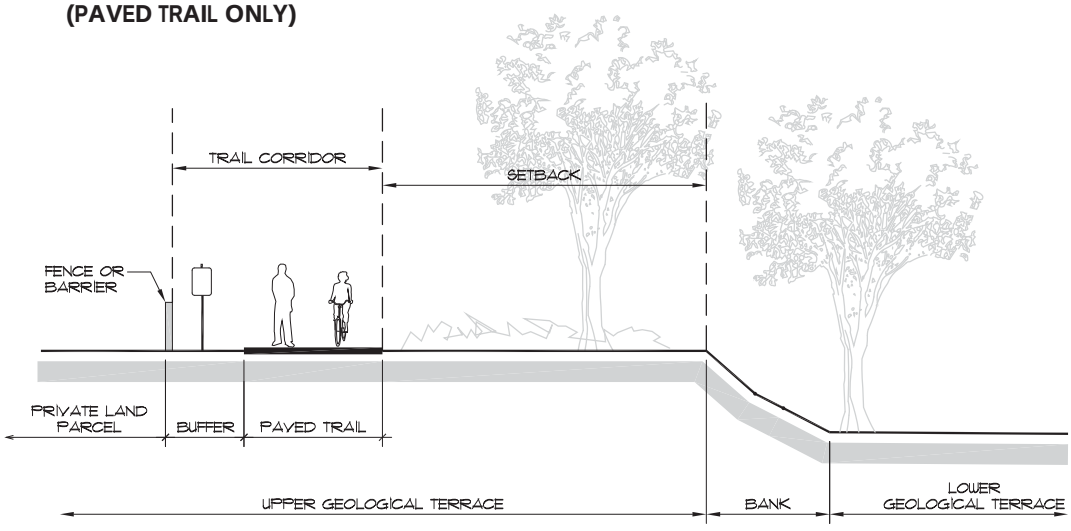
GUIDELINES

- Provide fencing only as needed, such as areas along steep and unstable river bank slopes and areas adjacent to sensitive wildlife areas.
- In general, limit trail use to daylight hours only. Trail lighting to be installed based on further investigation and analysis of site conditions and trail design. Consider security purposes and property owners/ adjacent land use. If installed, shield along trails and bridges to prevent light spillage into riparian and stream corridors. Limit lighting to low bollard-style security-type lighting.
- Provide signage listing trail regulations, including trail use designations. Provide wayfinding and directional signage as needed.
- Provide benches and other amenities.
- Provide landscaping as needed for buffers and revegetation. Where landscaped trails are located adjacent to native habitat areas, use native trees and shrubs for landscaping.

B1 PEDESTRIAN, BICYCLE & EQUESTRIAN
(PAVED & UNPAVED TRAILS)



B2 PEDESTRIAN & BICYCLE
(PAVED TRAIL ONLY)



C CONFINED CORRIDOR SETTING

C1 PEDESTRIAN, BICYCLE & EQUESTRIAN

This trail corridor includes separated (parallel) paved and unpaved trails on the upper terrace. Use C1 when site conditions allow for a wider trail corridor on the upper terrace and it is not feasible to provide an equestrian trail within the floodplain further away from urbanized land uses.

C2 PEDESTRIAN & BICYCLE

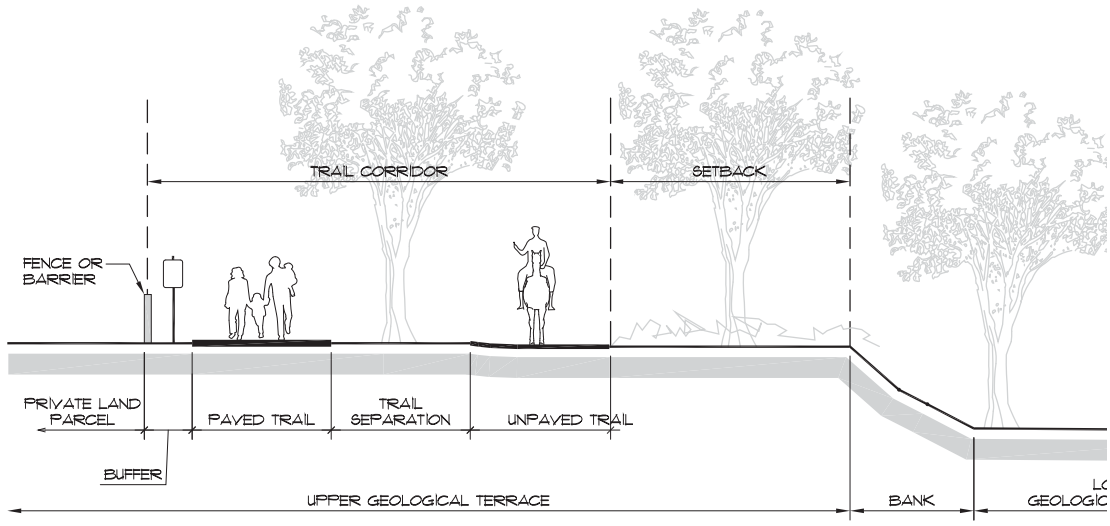
This narrow trail corridor includes a paved trail only on the upper terrace. Use C2 when a wider trail corridor on the upper terrace is not feasible and/or equestrian use is not compatible with adjacent land uses. Where suitable, also provide an equestrian trail per Trail Setting D1.

	C1	C2
Trail Corridor	18’-35’	10’-15’
Paved Trail	8’-10’	8’-10’
Unpaved Trail	4’-10’	-
Trail Separation	10’ or 4’ (w/fence)	-
Buffer	2’-5’	2’-5’
Vertical Clearance General	8’	8’
Vertical Clearance Equestrian	12’	-

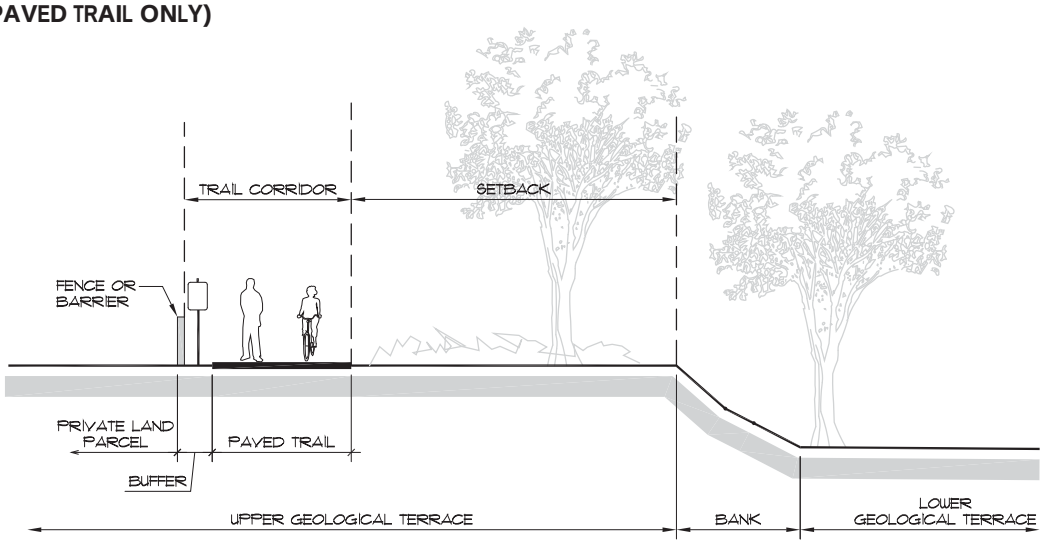
GUIDELINES

- Provide fencing as needed to provide separation/ buffer between trails, along steep banks and areas adjacent to sensitive wildlife areas, and adjacent land uses.
- In general, limit trail use to daylight hours only. Trail lighting to be installed based on further investigation and analysis of site conditions and trail design. Consider security purposes and property owners/ adjacent land use. If installed, shield along trails and bridges to prevent light spillage into riparian and stream corridors. Limit lighting to low bollard-style security-type lighting.
- Provide signage listing trail regulations, including trail use designations. Provide wayfinding and directional signage as needed.
- Minimize benches and other amenities in confined corridor, so as not to impede safe flow of trail use.
- Provide landscaping as needed for buffers and revegetation. Avoid difficult to maintain narrow planting strips and installation of irrigation along eroding river banks. Temporary establishment period irrigation is acceptable.

C1 PEDESTRIAN, BICYCLE & EQUESTRIAN
(PAVED & UNPAVED TRAILS)



C2 PEDESTRIAN & BICYCLE
(PAVED TRAIL ONLY)



D FLOODPLAIN SETTING

D1 PEDESTRIAN & EQUESTRIAN (& MOUNTAIN BIKE WHERE SUITABLE)

This narrow trail corridor includes an unpaved trail only within the floodplain. Use D1 when trail use is compatible with adjacent habitat areas and avoids impacts to the low flow channel. Use an existing trail, unpaved road, or other previously disturbed area as the designated trail route. Where soil conditions are suitable, designate trail for mountain bike use also.

D2 PEDESTRIAN & MOUNTAIN BIKE (& EQUESTRIAN WHERE SUITABLE)

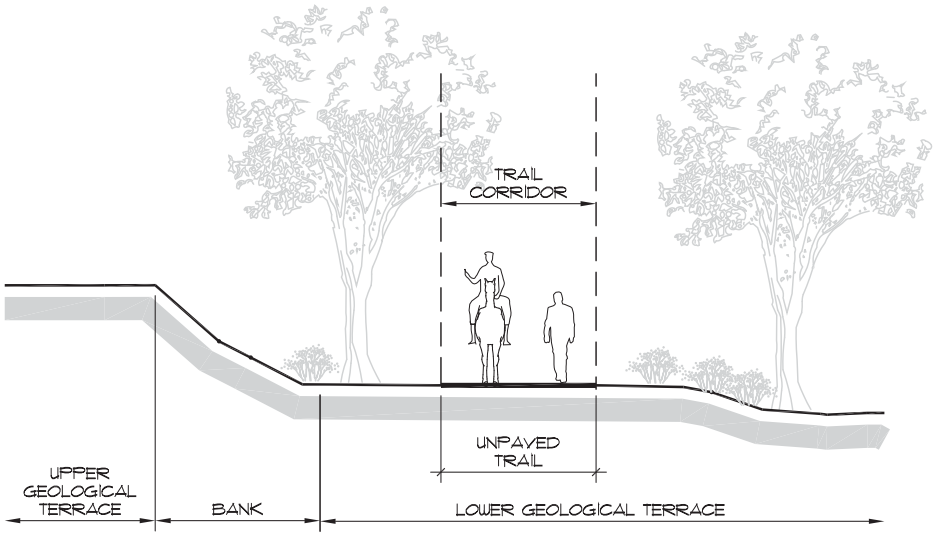
This narrow trail corridor includes an unpaved trail only on an existing berm or levee, created as a result of prior mining operations. Use D2 when an existing berm or levee is of sufficient width and stability to allow trail use. Where the berm/levee width and side slopes are suitable, designate trail for equestrian use also.

	D1	D2
Trail Corridor	4'-10'	4'-10'
Paved Trail	-	-
Unpaved Trail	4'- 10'	4'- 10'
Trail Separation	-	-
Buffer	-	-
Vertical Clearance General	-	-
Vertical Clearance Equestrian	12'	12'

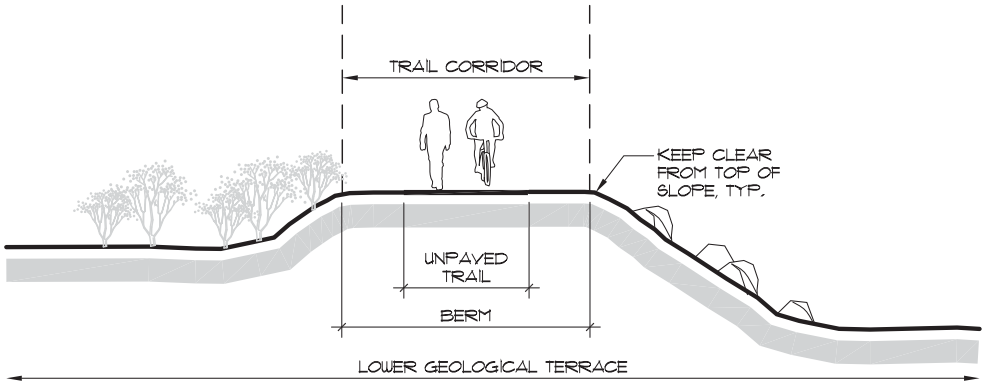
GUIDELINES

- Trails identified for mountain bike use should avoid areas of loose sandy soils.
- Utilize existing unpaved roadways/pathways/berms/ levees and previously disturbed areas for trail alignments to maximum extent feasible.
- Design trail alignments to follow natural contours.
- Avoid trail gradients greater than 10% slope on natural surface trails to minimize erosion.
- Provide vegetated buffer between the trail and low flow channel(s).
- Provide signage listing trail regulations, including trail use designations, at trail entrances. Provide wayfinding and directional signage as needed on markers at trail intersections.
- Re-vegetate disturbed or degraded areas as needed with native species only.
- Install vehicular barriers to prevent off-highway vehicle access at trail entrances and/or trail intersections.

D1 PEDESTRIAN & EQUESTRIAN (MOUNTAIN BIKE WHERE SUITABLE CONDITIONS)
(UNPAVED TRAIL ONLY)



D2 EXISTING BERM
PEDESTRIAN & MOUNTAIN BIKE (EQUESTRIAN WHERE SUITABLE CONDITIONS)
(UNPAVED TRAIL ONLY)



E ROADWAY SETTING

E1 PEDESTRIAN, BICYCLE & EQUESTRIAN (BOTH SIDES OF ROADWAY)

This trail corridor includes a paved trail on one side of the roadway and an unpaved trail on the other side of the roadway. Use E1 when the right-of-way is limited and equestrian use is compatible with the adjacent land uses on at least one side of the roadway.

E2 PEDESTRIAN, BICYCLE & EQUESTRIAN

This trail corridor includes separated (parallel) paved and unpaved trails along the roadway on the same side of the road. Use E2 when the right-of-way is sufficiently wide and equestrian use is compatible with the adjacent land uses.

E3 PEDESTRIAN & BICYCLE

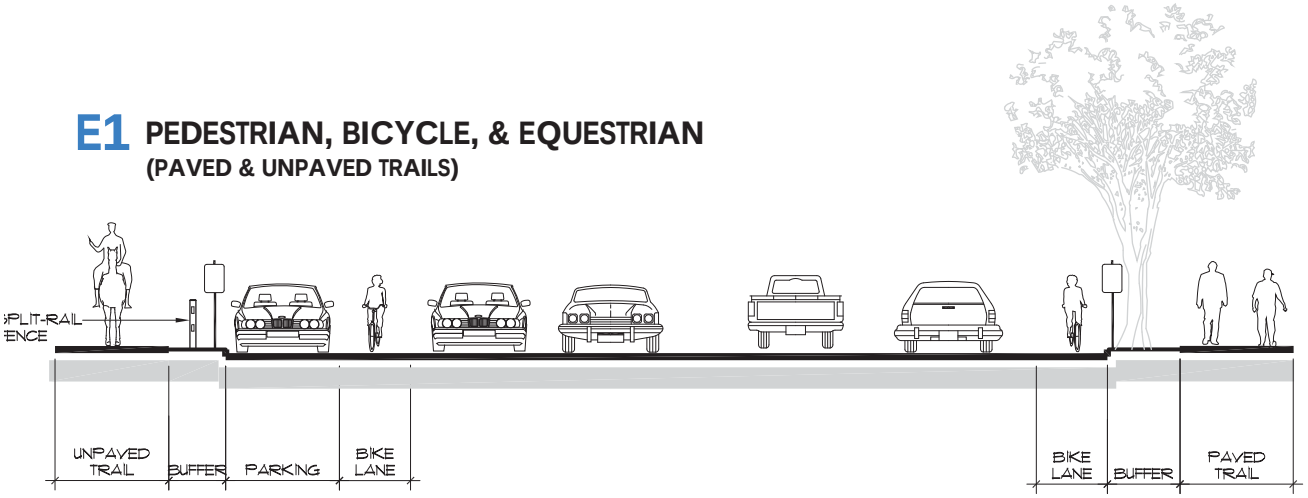
This trail corridor includes a paved trail only along the roadway. Use E3 when the right-of-way is limited in width and/or equestrian use is not compatible with the adjacent land uses. Where suitable, also provide an equestrian trail per Trail Setting D1.

	E1	E2	E3
Trail Corridor	12’-15’	20’-40’	10’-15’
Paved Trail	8’-10’	8’-10’	8’-10’
Unpaved Trail	4’-10’	4’-10’	-
Trail Separation	10’ or 4’ (w/fence)	10’ or 4’ (w/fence)	-
Buffer	2’-5’	2’-5’	2’-5’
Vertical Clearance General	8’	8’	8’
Vertical Clearance Equestrian	12’	12’	-

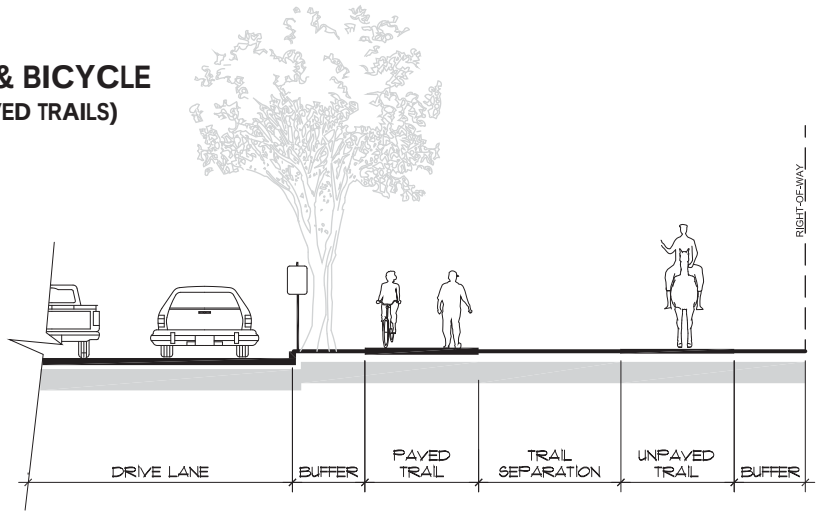
GUIDELINES

- Locate paved trail closest to roadway.
- Provide fencing only as needed for a separation/ buffer between trails and along roadways and adjacent land uses.
- Provide fencing at intersections to guide users to designated road crossing.
- Provide lighting as needed.
- Provide signage listing trail regulations, including trail use designations. Provide wayfinding and directional signage as needed.
- Provide benches and other amenities near staging areas and access nodes.
- Provide landscaping as appropriate.
- Install bollards to prevent unauthorized motor vehicle access at intersections.

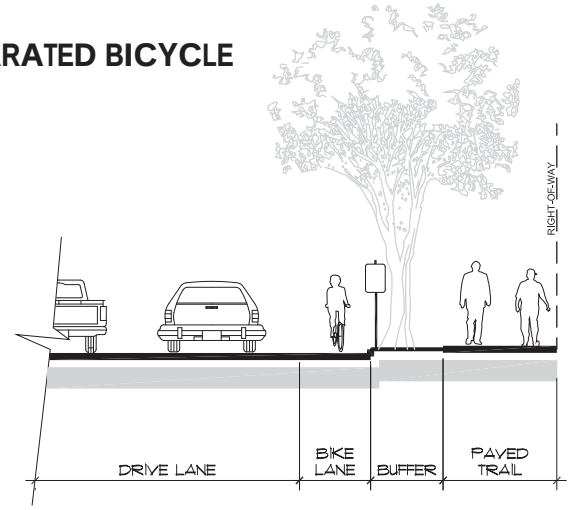
E1 PEDESTRIAN, BICYCLE, & EQUESTRIAN
(PAVED & UNPAVED TRAILS)



E2 PEDESTRIAN & BICYCLE
(PAVED & UNPAVED TRAILS)



E3 PEDESTRIAN & SEPARATED BICYCLE
(PAVED TRAIL ONLY)



3.8 STAGING AREA AND AMENITY GUIDELINES

The vision of the River Parkway includes a multi-use trail system, staging areas, overlooks and nature viewing, site furnishings, and other visitor amenities. Highlighting natural and cultural resources and reflecting San Benito County's rural and agricultural heritage are key design themes. Incorporating sustainable design measures and ensuring staging areas and amenities are low maintenance are also important design themes. This section of the Master Plan provides general design concepts and guidelines for the following staging areas and amenities:

- Primary staging areas
- Secondary staging areas
- Access nodes
- Overlooks and nature viewing
- Parkway signage
- Trail entrances
- Site Furnishings
- Lighting
- Fencing

PRIMARY STAGING AREAS

Primary staging areas are intended to serve trails users who live within the community and visitors from outside of the San Benito County region. These staging areas may be new facilities developed as part of the River Parkway or existing parks, which can also serve as staging areas. Concepts and design guidelines include:

- Parking areas should be a minimum of 20 parking spaces, including ADA parking.
- Provide equestrian staging where feasible. Equestrian staging should be designated as separate from passenger vehicle parking with ample room for trailers. Each parking space shall be a min. of 28'x78' with a 15' aisle between spaces. Parking shall be oriented so vehicles face the exit for an easy departure. Area shall be a non-paved surface (gravel, crusher fines, or other equestrian suitable surfacing) with a slope not to exceed 4%. Staging areas shall also have one hitching rail 10' in length, potable water, and one metal water trough 2' in height with an automatic fill device and protective screen material.
- Install a gated entrance, with gate secured during parkway closure hours.
- Provide permanent ADA restroom facilities. Consider vault toilets if water service is not available at the staging area site.
- If water service is available, provide a drinking fountain for trail users and a water spigot for equestrians.
- Create a gathering area, with picnic tables or group bench seating, which can be also used for outdoor education.
- Install interpretive signs focusing on the natural and cultural resources within the Parkway Reach and trail map.
- Plant trees and/or construct a shade structure at gathering areas and/or trail entrances.

- Use non-invasive and low maintenance plant species in any landscaping.
- Clearly designate and sign trail entrances.
- Install welcome and regulatory signage.
- Provide waste receptacles and dog waste bag dispensers.

SECONDARY STAGING AREAS

Secondary staging areas are intended to be smaller than primary staging areas and are to serve trail users who live within the community, though visitors may also use secondary staging areas. These staging areas would be developed as new facilities and part of the River Parkway. Concepts and design guidelines include:

- Parking areas should be a minimum of 10 parking spaces, including ADA parking.
- Provide equestrian staging where feasible. Equestrian staging should be designated as separate from passenger vehicle parking with ample room for trailers. Each parking space shall be a min. of 28'x78' with a 15' aisle between spaces. Parking shall be oriented so vehicles face the exit for an easy departure. Area shall be a non-paved surface (gravel, crusher fines, or other equestrian suitable surfacing) with a slope not to exceed 4%.
- Install a gated entrance, with gate secured during park closure hours.
- Provide permanent ADA restroom facilities or portable toilet (with visual screening). Consider vault toilets if water service is not available at the staging area site.
- If water service is available, provide a drinking fountain for trail users and a water spigot for equestrians.
- Provide a small picnic area or benches.
- Install interpretive signs focusing on the natural and cultural resources within the Parkway Reach.
- Plant trees and/or construct a shade structure.
- Use non-invasive and low maintenance plant species in any landscaping.
- Clearly designate and sign trail entrances.
- Install welcome and regulatory signage.
- Provide waste receptacles and dog waste bag dispensers.

ACCESS NODES

Access nodes are intended to serve trails users who live within the community. Access nodes would be developed as new facilities as part of the River Parkway. Concepts and design guidelines include:

- Parking areas should be a minimum of 5 parking spaces, including ADA parking. If ample on-street parking is available, a parking lot may not be needed.
- If a parking lot is developed, install a gated entrance, with gate secured during park closure hours.
- Option to provide an ADA portable toilet (with visual screening) if no other public restroom is conveniently available.
- If water service is available, provide a drinking fountain for trail users and a water spigot for equestrians.
- Provide a picnic table or benches.
- Install interpretive signs focusing on the natural and cultural resources within the Parkway Reach.
- Plant trees and use non-invasive and low maintenance plant species in any landscaping.
- Clearly designate and sign trail entrances.

- Provide overlooks and nature viewing platforms along the primary trail routes. Provide accessible overlooks and associated amenities where feasible.
- Design overlooks such that visitors enjoying the overlook do not impede trail users.
- Avoid developing overlooks on lower terraces.
- Design options may include compacted crusher fines with low rock base/wall and railing, wood decking and railing, or paved surface with wood railing.
- Install low-profile bilingual interpretive displays highlighting wildlife, habitat, and other natural resources.
- Provide area along the railing for bird watching if overlook is located near a tree canopy.
- If benches are installed, set benches back from railing to allow users to gather and observe views.
- Incorporate interactive learning applications as feasible.

PARKWAY SIGNAGE

A coordinated River Parkway trail signage program should be designed which is consistent in theme, regulations, and wayfinding information. Signage should be bilingual, attractive, and designed not to detract from the natural setting. The character of the signage is to reflect that of San Benito County. Signs, trail head and other path features are to be designed to create an aesthetic appropriate to the natural setting. Signs should maintain a 2' minimum horizontal clearance from the trail, and be located to provide a 4' clearance from the ground surface, for visibility. Minimize installation of trail signage within lower terraces and river floodplain.

The following categories are provided for the signage program:

Informational **-** Signs within this category include, but are not limited to, ones that orient users to their position on the trail, overall parkway maps, descriptions and distances to destinations, in distance and time to reach destinations, and distance markers along the paved multi-use trail.

An important consideration is a street address system for a trail. Assigning a milepost, block number or some other community identification system which enables police, fire and medical personnel to respond immediately to incidents on the trail. These signs should be located at roadway and trail intersections and at key access nodes and /or staging areas.

- Provide "Welcome to the River Parkway" type signage at staging areas and access nodes.
- Provide smaller River Parkway placards at trail entrances.
- Use a repeating logo for the parkway.
- Provide River Parkway brochures with trail maps at staging areas, access nodes, and through websites and applications.

Directional - Signs within this category provide direction to users and traffic regarding their route of travel and bearing. Directional signs may include arrows pointing a certain way, trail markers at intersections, or “keep right” or “yield to other users”, etc.

- Provide mileage markers along trail route, as appropriate.
- For multi-use (pedestrian, bicycle and equestrian) trails, install trail etiquette signs in vicinity of trail entrances (Pedestrians yield to horses/bicycles yield to pedestrians and horses).
- Install flexible trail markers and posts with directional arrows.

Regulatory - Signs within this category describe laws and regulations that apply within the Parkway and on trails. These signs should be uniform in terms of size, location and information. Consult the bicycle and pedestrian facility design section of the U.S. Department of Transportation’s Manual on Uniform Traffic Control Devices (MUTCD) or the San Benito County’s Public Works Department for County Standards.

- Provide regulatory signage at staging areas, access nodes, and trail entrance (hours of use, prohibited activities, and other parkway regulations).
- Use educational regulatory signage to discourage activities that may disrupt or harm wildlife and habitat areas.

Warning - Signs in this category are used to warn users of hazards, such as steep banks/cliffs, or potential flooding. All warning signs should be uniform in size and shape, located a minimum 50 feet in advance of a hazard, and labeled with black lettering on a reflective yellow background.

Educational - Signs within this category are seen as interpretive signs and describe unique qualities or significance of natural or cultural features along a trail. These signs should be designed with creative, engaging artistry, and include images unique to San Benito County and the River Parkway. These signs should be fabricated out of durable, scratch and UV resistant material.

- Provide interpretive displays along the primary trail route highlighting natural and cultural resources. Install interpretive displays off of trail so as not to impede trail users.

TRAIL ENTRANCES

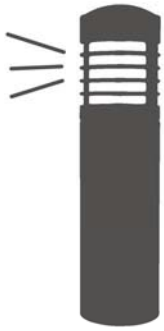
Trail entrances should be clearly designated and marked with signage and gateway fencing. Install measures to prevent access by unauthorized motor vehicles and off-highway vehicles (OHVs).

- Install a River Parkway sign placard on post or fence at trail head, if entrance is not located at a staging area or access node.
- Minimize signage to that which identifies allowable trail uses and critical regulations.
- Avoid signage clutter at trail entrances such that signage detracts from the natural setting and important information is confusing or disregarded.
- Install a chicane, removable bollards, gate, or boulders as appropriate for each trail entrance to prevent access by unauthorized motor vehicles and OHVs. If emergency, patrol, or maintenance vehicle access is needed, use removable bollards or a gate with trail chicane.

SITE FURNISHINGS

River Parkway site furnishings will likely include benches, picnic tables, shade structures, drinking fountains, bike racks, horse hitching posts and water troughs, trash receptacles, and dog waste bag receptacles. Site furnishings will vary depending on the River Parkway segment, but should be durable, low maintenance, and complement the natural setting. A themed approach to site furnishings is recommended to provide continuity and compatibility throughout the River Parkway. Employ a donor policy to offset the cost of site furnishings.

- Install benches at convenient intervals along primary trail routes, points of interest and viewing areas. Group benches where possible to provide seating for families and small groups. Setback 2 - 3 feet off edge trail and install trail surface underneath to adjoin trail. Material to match adjacent trail.
- Locate benches and picnic tables in the vicinity of shade trees, while avoiding impacts to tree roots.
- Provide a shade structure at bench and picnic table sites when minimal shade along the trail route exists. Shade structures may be custom trellis' (wood or metal) or prefabricated shelters from a manufacturer.
- Trash receptacles should be 22-gallon or 32-gallon containers and be located at staging areas, access nodes, and as needed coupled with a bench/seating area. Consideration should be given to solar operated compactor receptacles to minimize maintenance requirements.
- Install site furnishings off of trail route so that use of site furnishing does not impede trail users. Avoid installing benches, picnic tables and other site furnishings on lower terraces.
- Do not install site furnishings within river floodway.
- All site furnishings shall be accessible to both users and maintenance vehicles.



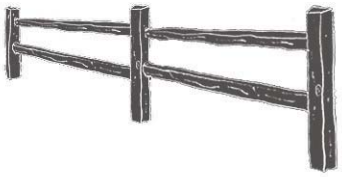
LIGHTING

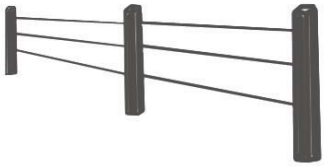
Lighting along the San Benito River and Tres Pinos Creek should be minimized to avoid impacts to sensitive wildlife habitats along the water courses. Trail lighting to be installed based on further investigation and analysis of site conditions and trail design.

- Lighting may be required for security and safety purposes, particularly within staging areas.
- Lighting along some heavily used multi-use trails is preferred by the community; however, electrical service along the corridor may be challenging in remote locations. The use of lighting along the multi-use trail should be considered on a case-by case basis with cost, surrounding environment and maintenance included in the equation. Avoid lighting within rural and agricultural areas except as needed for public safety/security. Where lighting is installed, prevent light spillage into riparian and stream corridor, with shielding.
- Provide lighting along trail routes within urbanized and park settings as appropriate. Where lighting is installed, to prevent light spillage into the riparian and stream corridor, shield any night lighting along trails and bridges.
- Consideration should be given to solar operated lights in remote locations.
- Limit lighting to low bollard-style security type lighting, if feasible.
- Lighting shall meet “Dark Sky’ requirements by not shining light up into the sky.

FENCING

Fencing may be needed within the River Parkway along steep or unstable river banks, along areas adjacent to sensitive habitat areas, as a barrier along agricultural areas or other land uses, as a protective buffer between bicycle/pedestrian and equestrian trails, and to guide trail users at entrances and intersections.





- To minimize cost and maintenance needs and to maintain an open space feeling within the River Parkway corridor, provide fencing in those areas where needed for specific site conditions.
- Avoid installation of fencing on lower terraces and within floodplain.
- Do not install fencing within floodway.
- Fence height should be 42” tall.
- Chainlink fence is prohibited within the Parkway unless absolutely necessary for security purposes.

Recommended fencing types include:

- ***Wood split rail*** (molded concrete or natural wood material). Hog wire may be installed in combination with the split rail fence in situations where dogs must be kept out, such as next to riparian areas or certain agricultural fields.
- ***Wood/metal post and wire***. Use straight wire rather than barbed wired unless required for grazing operations.

3.9 HABITAT PROTECTION AND ENHANCEMENT GUIDELINES

The River Parkway planning area offers numerous opportunities for habitat protection and enhancement concurrent with trail use and development. Trail placement should minimize removal of native riparian woodland and mulefat scrub, as these are biologically valuable and are considered sensitive habitat by regulatory agencies. In-stream resources, such as the low-flow channel and in-stream ponds and freshwater marsh are also considered sensitive habitat, as they provide important habitat areas for wildlife and should be protected from impacts of recreational uses. Mature trees, including snags and trees with cavities, should be preserved to support cavity-nesting birds and other wildlife. Areas degraded from both previous and current land use activities can be rehabilitated by controlling access, discouraging dumping of debris, and allowing areas to naturally re-vegetate with native species. Presently, the extent of invasive, non-native plant species which degrade the value of native habitats is low; efforts to remove and control these species would benefit the river parkway environment.

PROTECTION OF RIPARIAN AND WETLAND HABITATS

- Provide controlled public access to the river channel, limiting recreational activities to passive recreational uses, such as trails and nature viewing, to protect in-channel resources.
- Retain existing stands of riparian woodland.
- Minimize the number of low-flow water crossings, reducing impacts to open water habitat.
- Provide pedestrian/bicycle bridges at crossings. To minimize impacts to mature riparian woodland, locate any bridge crossings in areas that lack mature vegetation, if possible.
- Locate crossings in areas that have been previously impacted and/or are devoid of vegetation. Provide signage to encourage use of designated crossings.
- Avoid or minimize removal of mature native trees, riparian woodland, mulefat scrub, and in-channel wetlands.
- Install low fencing (where outside the floodway) or low-growing vegetation between the trail and native habitats, to reduce off-trail use and minimize indirect effects of increased public use on riparian and wetland habitat/species.

- Shield any night lighting along trails and bridges to prevent light spillage into riparian and stream corridors. Limit lighting to low bollard-style security-type lighting. No lighting should occur within the river channel/floodway.

SPECIAL STATUS SPECIES AND HABITAT

- Conduct appropriate presence/absence surveys where trail construction or other improvements are proposed within riparian woodland, mulefat scrub, upland scrub, or grassland and implement habitat avoidance measures, if special status species are found.
- Locate staging areas within locations outside of sensitive habitat areas.
- Conduct focused presence-absence surveys, if trail construction is proposed to occur within a habitat deemed to have the potential to support special status species, unless habitat avoidance measures are implemented.
- Avoid and/or minimize trail construction through the habitat where special status species occur. Confer with applicable regulatory agencies where necessary.
- Avoid affecting nesting raptors, by eliminating construction during the nesting season within 200 feet of trees supporting nesting raptors.
- Avoid affecting nesting birds by performing vegetation removal and trail construction outside the bird breeding and nesting season. If that schedule is not feasible, conduct pre-construction surveys for feeding birds to ensure no birds will be adversely affected by trail construction activities.

HABITAT MANAGEMENT AND ENHANCEMENT

- Remove/control occurrences of invasive, non-native plant species where they are encountered along or adjacent to trails and other improvements to minimize their spread into natural areas.
- Plant native grasses and groundcovers wherever feasible for erosion control.
- Plant native trees and shrubs for landscaping where the trails and staging areas are located within or adjacent to native habitats.
- Encourage passive restoration of riparian vegetation along the low-flow channel to allow degraded areas to recover and to enhance the value of the low-flow channel environment for wildlife.
- Encourage landowners to install wildlife habitat enhancement features, such as bird perches and nest boxes, to enhance areas for wildlife.

4 IMPLEMENTATION

Successful implementation of the River Parkway Master Plan will require a thoughtful, long-term process, involving cooperation with willing landowners and collaboration with an array of partners. Implementation will also require a phased process based on opportunities as they arise. This final section of the Master Plan provides an overview of the implementation approach, opportunities for partnerships and collaboration, parkway and trail development strategies, and River Parkway phasing.

As of 2013, most of the River Parkway planning area is in private ownership, with numerous landowners owning parcels within or adjacent to the San Benito River and Tres Pinos Creek corridors. Implementation will depend on the involvement of public and quasi-public agencies, and cooperation with interested landowners and willing sellers. As stated in the San Benito County Parks & Recreation Facilities Master Plan, "Trail development should rely on existing public owned lands and easements, and future acquisition from willing sellers. There is no intent to use eminent domain for trails."

While workshops and public meetings have revealed community interest and enthusiasm for public access and recreation opportunities along the San Benito River and Tres Pinos Creek, landowners may have concerns about potential effects on their property and land uses. Acknowledgement of landowner concerns and respect for private property rights is paramount to development of a River Parkway in San Benito County.

San Benito County is the lead agency in this planning effort, however, it is not feasible for the County alone to fully implement and manage the River Parkway, given funding and staffing constraints. A multi-pronged approach to implementation, which involves coordination with public/quasi-public agencies and non-profit organizations, will be critical to the success of the River Parkway. This approach is described in more detail in Section 4.1.

Public/private partnerships provide creative and cost-effective approaches to fulfilling community goals. Within San Benito County there are existing examples and potential future opportunities for partnerships between the County and various organizations and businesses. Future partnerships could include a broad range of interests, including recreation, health and fitness, education, cultural/historic, environmental, and economic development. Partnerships and collaboration are discussed in Section 4.2.

A combination of strategies will be needed to acquire land for the River Parkway, establish trail routes, and develop River Parkway amenities. Possible strategies include agreements with public/quasi-public agencies, development proposals, mining reclamation areas/landholdings, land acquisition, easements, and mitigation/conservation banking. These strategies are described in Section 4.3.

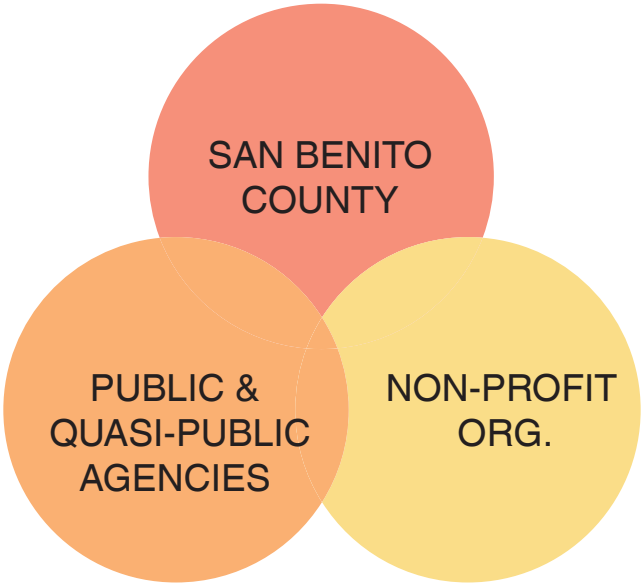
Funding for land acquisition and River Parkway development will also require a combination of options. Possible funding options include grants, park development fees, and donations. Section 4.4 includes an overview of these potential funding sources.

Implementation of the River Parkway will also require a flexible phased approach. Ultimately the goal is a continuous trail route and parkway, though this will take many years to achieve and the Parkway will need to be developed in segments. Section 4.5 includes preliminary phasing priorities. As with any long-term implementation process, phasing priorities will likely be adjusted as new opportunities arise.

In summary, the following guiding principles will aid the successful implementation of the River Parkway Master Plan:

- Recognize implementation will be a long-term process
- Focus on cooperative efforts with willing landowners
- Respect private property rights and ensure compatibility with existing and future land uses
- Pursue a multi-pronged implementation approach, involving San Benito County, other public and quasi-public agencies, and non-profit organizations
- Explore and nurture public/private partnerships
- Maintain flexibility in phasing and trail development opportunities
- Development will not occur until a maintenance plan and funding are established.

4.1 COOPERATIVE MULTI-PRONGED APPROACH



SAN BENITO COUNTY

San Benito County will serve as the lead agency for the River Parkway Master Plan and the environmental review of the Master Plan. The County currently does not have sufficient staffing or resources to fully implement a 20-mile River Parkway. Successful implementation will require a cooperative approach involving San Benito County, other public/quasi-public agencies, and non-profit organizations. Long-term management and maintenance will also benefit from a multi-pronged approach.

Potential roles for San Benito County are outlined below:

- Seek funding for land acquisition and parkway improvements
- Incorporate trail and staging area improvements into County public works projects
- Coordinate with public/quasi-public agencies regarding potential trail routes and improvements

- Review development proposals for River Parkway trail alignments and staging area opportunities
- Coordinate with mining companies regarding future land acquisition and trail routes within mining reclamation areas
- Coordinate with willing sellers regarding land acquisition
- Coordinate with land owners regarding trail easements
- Review potential future conservation/mitigation banking areas for incorporation into the River Parkway and possible trail alignments
- For newly acquired lands or land within public ownership where funding for improvements is not readily available, designate interim trails
- Oversee trail and facility management and maintenance within County owned lands and easements
- Designate interim trail access where appropriate

PUBLIC AND QUASI-PUBLIC AGENCIES

Public and quasi-public agencies which own facilities, land or easements within the River Parkway corridor should be involved in the River Parkway planning and implementation process. These agencies include water and wastewater treatment agencies and utility companies who may have easements or own property for facilities, underground gas lines, or overhead power lines. The City of Hollister is an example of a public agency partner. In this example, plans have previously been prepared for a trail segment along the City's Industrial Wastewater Treatment Plant, located to the south of the 4th Street bridge.

Other public agencies which may have an interest in participating in the River Parkway implementation and future programs include school districts and school facilities. An example of such cooperation is the land acquisition negotiation for San Benito County to acquire school district lands for a segment of the River Parkway within Reach Three. There is also an effort to coordinate River Parkway planning and design with future plans for the San Benito High School campus. The San Benito High School Outdoor Club has also been active in San Benito River clean-up activities. Schools may also have an interest in cooperative efforts to develop future outdoor education facilities within the River Parkway, as well as establishing and conducting outdoor education programs and youth stewardship programs.

Potential roles for public and quasi-public agencies are outlined below:

- Seek funding for River Parkway improvements on lands/easements owned by respective agency
- Develop trails and parkway amenities using River Parkway Master Plan guidelines
- Designate interim trails as appropriate
- Coordinate with San Benito County and non-profit organizations regarding management and maintenance
- Designate interim trail access where appropriate

NON-PROFIT ORGANIZATIONS

Non-profit organizations can also play a key role in supporting implementation, management and maintenance of the River Parkway. Several river parkway efforts throughout California involve conservancies, trusts, or foundations. Examples include the San Joaquin River Parkway and Conservation Trust, the San Dieguito River Valley Conservancy, and the American River Parkway Foundation. San Benito County recognizes the value of non-profit organization participation in parks and recreation. In 2013, REACH San Benito, a non-profit organization was created to help support County parks and recreation endeavors.

Potential roles for non-profit organizations are outlined below:

- Establish non-profit organization(s) to promote and support creation of parks and recreation facilities, River Parkway, and a multi-use trail system
- For areas not identified as County priority projects or owned/managed by other public/quasi-public agencies, identify opportunities for potential public trail access/easements with private landowners
- Coordinate volunteers to assist with trail maintenance
- Establish and coordinate volunteer trail patrols
- Organize and conduct river clean-ups and assist with restoration efforts
- Organize and conduct outdoor education programs

4.2 PARTNERSHIPS AND COLLABORATION

The River Parkway will provide many potential benefits, including recreational, economic development, health, educational, environmental, and cultural/historic benefits to residents and communities within San Benito County. These potential benefits can inspire enthusiasm and cooperation with a broad range of partners, including recreational organizations, health and wellness facilities and organizations, educational institutions, environmental organizations, cultural/historic organizations, economic development organizations, and local businesses. Opportunities for collaboration with various organizations and entities can include a wide range of options, such as the following:

- Fundraising
- Trail construction
- Amenity improvements
- Joint-use of facilities
- Habitat enhancement and restoration
- On-going maintenance (Adopt-a-Trail Programs)
- Clean up activities
- Volunteer docents
- Volunteer patrols
- Special events
- Tourism and promotional activities

Opportunities for various types of organizations to participate in these types of activities are described in the following paragraphs.

A River Parkway which provides recreation opportunities for a broad range of user groups, of varying abilities and ages, can encourage partnerships with various recreation organizations. For trail projects throughout California, bicycling and equestrian organizations have often been active in supporting trail planning efforts and getting involved in subsequent programs to construct, maintain, and patrol trails. Special events may also be organized to help to raise funds for future trail improvements. Trail-related organizations may have members with experience in trail design, construction, and repairs. These organizations may partner to organize volunteer days to assist land managers with trail construction and maintenance. Trail running and cross-country clubs/teams may also have an interest in partnerships to develop and maintain trails. If an Adopt-a-Trail program is established in the future, it is likely that recreational organizations would have an interest in participating in the program. There are also various examples of volunteer equestrian and bicycle patrol which assist agencies with trail management throughout communities in California and other states.

The River Parkway also provides opportunities to promote tourism and local economic development. Economic development organizations often recognize the potential economic benefits of trails and enhanced recreational opportunities. Visitor bureaus, Chambers of Commerce, and other economic development organizations may be interested in promoting trails within their communities and partnering for special events. Existing and potential future businesses along the trail route and businesses serving equestrians, bicyclists, etc. may also be interested in collaborating on efforts to develop trail routes, organize special events, and participate in efforts to maintain trails.

Health and fitness benefits of trails and convenient walking/bicycling routes are increasingly being recognized and promoted at local, state, and federal levels. An example of a program focusing on youth is the federal Safe Routes to School Program. San Benito County currently partners with the YMCA, The Healthy Youth Partnership, whose mission is to ensure healthy lifestyles are available and convenient for children in San Benito County. The health benefits from walking to seniors are also increasingly being promoted with some medical professionals writing prescriptions for walking.

The importance of trails to health and fitness suggests a broad range of partnership possibilities. These could include cooperative efforts to create trail connections to heath care facilities, senior living, and schools. Health care organizations and facilities may also be interested in participating in Adopt-A-Trail programs. Special events and activities focusing on health and fitness within the River Parkway could be sponsored by health-related facilities, organizations, and professionals.

Conservation and enhancement of habitat areas along the San Benito River and Tres Pinos Creek would also provide opportunities for partnerships focusing on outdoor education, nature viewing, and habitat and wildlife conservation. Potential partners may include schools, outdoor education clubs, bird watching groups, and environmental organizations. Partnerships with schools may include development of joint use outdoor education facilities and nature observation areas. Organizations with an interest in the environment and wildlife may be interested in organizing volunteer clean-up and habitat enhancement activities in partnership with habitat land managers. Community members with an interest in bird watching or general natural history may also be interested in developing a volunteer docent program for the River Parkway.

Historic and cultural resources along the River Parkway provide further opportunities for partnerships. The Juan Bautista de Anza National Historic Trail intersects within Reach One of the River Parkway. To the south, the County Historical Park is a historic attraction within Reach 5. Possible connections to historic and cultural sites within San Juan Bautista, Hollister and Tres Pinos are also opportunities for collaboration. There are also opportunities to share the cultural heritage of the Native Americans of the region. Organizations and agencies with an interest in cultural resources and historic preservation may be interested in partnerships to extend historic routes and connections to historic/cultural sites, develop interpretive displays, participate in a volunteer docent program, and organize special events.

4.3 RIVER PARKWAY AND TRAIL DEVELOPMENT STRATEGIES

Similar to the need for cooperative involvement of an array of agencies and organizations, implementation will require a mix of strategies to develop the River Parkway and trail system. Since most of the parkway corridor is in private ownership, providing future public access will be the greatest challenge. It also is not feasible for San Benito County to have sufficient funding to acquire all land needed to establish a continuous trail and parkway. Implementation must include other strategies, such as dedications from future development and public access agreements from public/quasi-public agencies, and other strategies. The parkway and trail development strategies described in this subsection include:

- Agreements with Public/Quasi-Public Agencies
- Development Proposals
- Sand and Gravel Reclamation/Mining Company Landholdings
- Land Acquisition – Willing Sellers
- Public Access/Trail Easements
- Mitigation Land Banking and Enhancements

AGREEMENTS WITH PUBLIC/QUASI-PUBLIC AGENCIES

Several public/quasi-public agencies presently own and manage lands within, or in the vicinity of, the River Parkway planning area. These agencies include municipal wastewater agencies, water agencies, and school districts. While trails and recreational use may not be a primary responsibility of these agencies, these types of public/quasi-public agencies may be supportive of cooperative agreements to develop trails within their existing and/or future landholdings and easements.

As an example, a trail alignment plan was previously prepared for a segment along the City of Hollister Industrial Wastewater Treatment Plant, located along the northeast side of the San Benito River within the City of Hollister. This plan included relocation of perimeter facility fencing to accommodate a multi-use paved trail along the San Benito River. The City of Hollister Domestic Water Reclamation Facility, located on the south side of the San Benito River to the east of Highway 156, may also offer potential future opportunities for cooperation.

There may also be future opportunities with water agencies. Throughout California, there are many examples of water agencies providing public trail access. Water agencies in the vicinity of the River Parkway include the City of Hollister Water Department and the San Benito County Water District. In the future, extension of municipal water lines, recycled water lines, and brine lines could potentially provide opportunities for public trail access in some locations. Future land acquisition for groundwater recharge, stormwater retention, and other uses may also offer cooperative opportunities.

Cooperative efforts and agreements with school districts can also offer opportunities for the River Parkway. The proposed regional park, adjacent to San Benito High School, is an example of a cooperative effort already underway. The proximity of the River Parkway and school properties offers especially valuable opportunities for potential joint use of facilities, such as outdoor education areas. The proximity of a trail system to school facilities would also expand opportunities for athletic programs, such as cross-country track and other fitness programs.

DEVELOPMENT PROPOSALS

Future development proposals for properties within the River Parkway planning area may provide opportunities for land acquisition, development, or public trail easements. Residential and commercial development proposed along the River Parkway should be pro-actively reviewed for consistency with the San Benito County Parks and Recreation Facilities Master Plan, including goals for the River Parkway. For some development proposals, a portion of the property may have limited development potential due to flood zone/floodplain constraints, sensitive habitat, or other issues. In these instances, the developer may be willing to negotiate transfer of undevelopable land within the River Parkway as part of a development agreement.

SAND AND GRAVEL MINING RECLAMATION/MINING COMPANY LANDHOLDINGS

The San Benito River and Tres Pinos Creek channels and floodplains feature sand and gravel deposits which are considered valuable mining resources. Mining companies currently own several large properties within the River Parkway planning area. With cooperation from mining companies, these lands may offer future potential opportunities for trails, restored habitat areas, and other River Parkway amenities.

After the sand and gravel deposits have been mined from an area, reclamation must be conducted. The State of California Surface Mining and Reclamation Act includes policies for reclamation of mineral lands. A specific reclamation plan, consistent with the State requirements, must be submitted to San Benito County for review for those mining lands located within the unincorporated area of San Benito County. Reclamation typically includes restoration of habitat areas and removal of hazards, such as over steepened slopes. After completion of mining and reclamation, the mining company may no longer have interest in the landholding and may be a willing seller. A mining company may also be willing to cooperate with San Benito County to incorporate elements of the River Parkway, such as a trail corridor, in the Reclamation Plan.

Active mining operations can pose more issues and concerns regarding compatibility of the mining operation and public access. If sufficient land is available and mining operations will be phased, opportunities may exist to negotiate temporary public trail access which does not conflict with the mining operations or pose hazards to public safety. In other instances, a mining company may own land which is not likely to be mined and is not needed for access purposes for future mining operations. The mining company may be willing to subdivide a parcel and negotiate sale of the unneeded property, or negotiate a public trail easement.

LAND ACQUISITION – WILLING SELLERS

Purchase of property from willing sellers will likely be needed in the future to fully implement the River Parkway Master Plan. This may include acquisition of an entire parcel or a portion of an existing parcel, which would require subdivision of the existing parcel. Where private property is located within the 100-year floodplain, and particularly within the flood zone, the future development potential of the property may be limited. In these instances, it may be beneficial for some private landowners to consider negotiating the sale of a portion of the property.

Within some communities in California, non-profit organizations and land trusts/conservancies assist with open space acquisition by acquiring property in the interim for later transfer to the open space land manager. This can be especially helpful if the open space manager does not have sufficient funding available when the property is initially for sale. Land trusts/conservancies may be appropriate to assist with land acquisition for the River Parkway.

PUBLIC ACCESS/TRAIL EASEMENTS

If a private landowner has no interest in selling their property, another option is a public trail easement. This involves a legal agreement between the landowner and the County to preserve a corridor through the privately owned property and allow public recreational use. The legal agreement may be between a private organization, such as a land trusts/conservancies, or a government agency. This type of agreement removes the development rights from the trail easement, though the trail corridor remains the property of the landowner. The property can be sold or transferred, though the trail easement remains in perpetuity.

A trail easement also often gives the holder of the easement the right to construct and maintain the trail. The easement agreement also describes specifically what can and cannot be done within the trail corridor. The California Recreational User Statute (Civil Code Section 846) addresses liability issues for landowners who allow access to the public for recreational purposes.

MITIGATION AND CONSERVATION BANKING

Mitigation and conservation banking involves habitat protection and restoration of ecosystems at identified "mitigation bank or habitat conservation" sites. Mitigation banking offers an alternative to conventional mitigation measures which are undertaken at the development site or within smaller patches of conservation sites. The mitigation bank sites are typically designed to consolidate the acquisition of mitigation land and mitigation credits from various projects into larger, high priority, biologically important sites.

The San Benito River and Tres Pinos Creek corridors feature riparian and wetland habitat. Within some reaches there are also known and potential habitat areas for sensitive wildlife species. If mitigation or conservation banking strategies are considered along the River Parkway in the future, such strategies could also provide opportunities for nature viewing, outdoor education, and trails. Public access would need to be compatible with the resource conservation goals of the mitigation or conservation banking site.

4.4 FUNDING OPTIONS

Implementation of the River Parkway Master Plan will be dependent on the availability of funding to acquire land and public trail easements, prepare detailed designs and engineering, develop the trail and parkway amenities, and identify funding for ongoing maintenance. Cost estimates are not included in this Master Plan. Specific cost estimates will be prepared in the future as detailed designs are completed.

Several funding sources, in addition to the implementation concepts discussed previously, will likely be utilized to implement the River Parkway over the long-term. Funding sources may include grant funding, park development fees, and possibly donations. In the future, San Benito County may also consider funding establishment of a community services district and supporting revenue measure. If a district were approved, the River Parkway could potentially be one of the projects to receive funding.

State and federal grant programs may provide funding opportunities for land acquisition, trail improvements, river parkway amenities, and habitat enhancement. As of 2013, potential grant programs include the federal Surface Transportation Authorization, Safe Routes to School, California Proposition 84-Nature Education Facilities Program, California Habitat Conservation Program, Off-Highway Vehicle Program, etc. Over time,

state and federal grant programs will change and new areas of focus may emerge. Grant programs are also offered by corporations, non-profit organizations, and the bike industry, though they are typically smaller grant amounts. Nonetheless, these private grant programs may provide a sufficient boost to a specific project within the River Parkway.

Opportunities for land donations, particularly lands with limited development potential due to flooding constraints or sensitive habitat areas, should also be explored. Family legacy donations may provide individual tax benefits to donors in some instances. California's Natural Heritage Preservation Tax Credit Program aims to protect wildlife habitat, parks, open space, etc. by providing state tax credits for donations of qualified land (fee title or conservation easement). This tax credit program may offer beneficial opportunities for some landowners.

Most of these funding concepts provide funding for property acquisition, planning/design, and construction of new trails and amenities. Maintenance and management costs are typically not permitted, particularly under grant programs. To address long-term management and maintenance costs, trails and amenities should be designed to be sustainable. Wherever possible, a trail should be designed based on the natural topography, thus minimizing engineering design and construction costs. Trail surfacing and trail amenity options should also consider both initial construction costs as well as long term maintenance needs.

4.5 PHASED APPROACH

Full implementation of the approximately 20-mile River Parkway will require a phased approach. Flexibility to respond to new funding opportunities and potential collaborative partnerships is important for successful implementation. This section outlines recommendations for phasing priorities. Phase I is the first phase of the process, focusing on specific projects which have previously been initiated. Phase II includes recommendations to ensure all communities along the Parkway have convenient access to trail segments. Phase III includes segments which presently have greater constraints and situated further from communities. These priorities should be updated and revised over time in response to new opportunities and unforeseen constraints.

It must be recognized that a 20-mile Parkway and continuous trail system will be implemented segment by segment. Those segments implemented in the first phase will have the least constraints and focus on providing convenient public access to the Parkway to the greatest number of users. Within each reach, there are some segments which pose considerable constraints and are less conveniently located to communities. These segments will likely be the last to be implemented and most likely to require consideration of alternate routes. Even for those segments in Phase I, it may be necessary to provide interim trail access until full improvements can be funded, designed, and constructed.

INTERIM TRAILS

Given present funding constraints and fundraising challenges, interim trails should be considered as a means to provide public trail access until full funding for trail improvements and amenities can be obtained. Interim trails could be located on lands owned by public or quasi-public agencies, or through access granted by agreements or easements with private property owners. To minimize costs associated with opening and maintaining interim trails, and to avoid or minimize environmental impacts, the following guidelines should be followed:

- Ensure there is a suitable exiting access node for the interim trail which does not result in neighborhood or adjacent property owner conflicts.
- Designate an interim trail primarily using an existing unpaved roadbed or existing natural surface user-created trail.
- Coordinate with a botanist to ensure there is an adequate buffer from the low flow channel and minimize impacts to riparian vegetation.
- Coordinate with a wildlife biologist to determine if presence/absence wildlife survey are required, and any other measures to avoid impacts to wildlife and habitat areas.
- Avoid low flow channel crossings for an interim trail unless critical to continuity. Utilize an existing unpaved road or other previously disturbed area for a crossing.
- Install interim signage/regulations (i.e. plastic markers along trail routes, regulatory signage at trail entrances only).
- Close and rehabilitate other informal trails to guide trail users to designated trail routes.

PHASE I

Phase I includes the highest priority segments to be implemented. These projects have previously been identified as focus projects. Phase I priorities include the following trail segments and associated staging areas/amenities.

- Reach Three – Trail segment and open space area adjacent to future regional park
- Reach Three – Trail corridor along future riverside development
- Reach Three/Reach Four – Natural surface trails within the mining reclamation area
- Reach Three – Trail segment along City of Hollister Industrial Wastewater Treatment Plant

PHASE II

Phase II includes segments which are located near communities. Phase II priorities include the following segments and associated staging areas/amenities.

- Reach One – Trail segment in vicinity of Anzar High School
- Reach Two – Trail segment along the City of Hollister Water Reclamation Facility
- Reach Four – Trail segment in vicinity of Tres Pinos
- Reach Five – Trail segment and overlooks at San Benito County Historical Park

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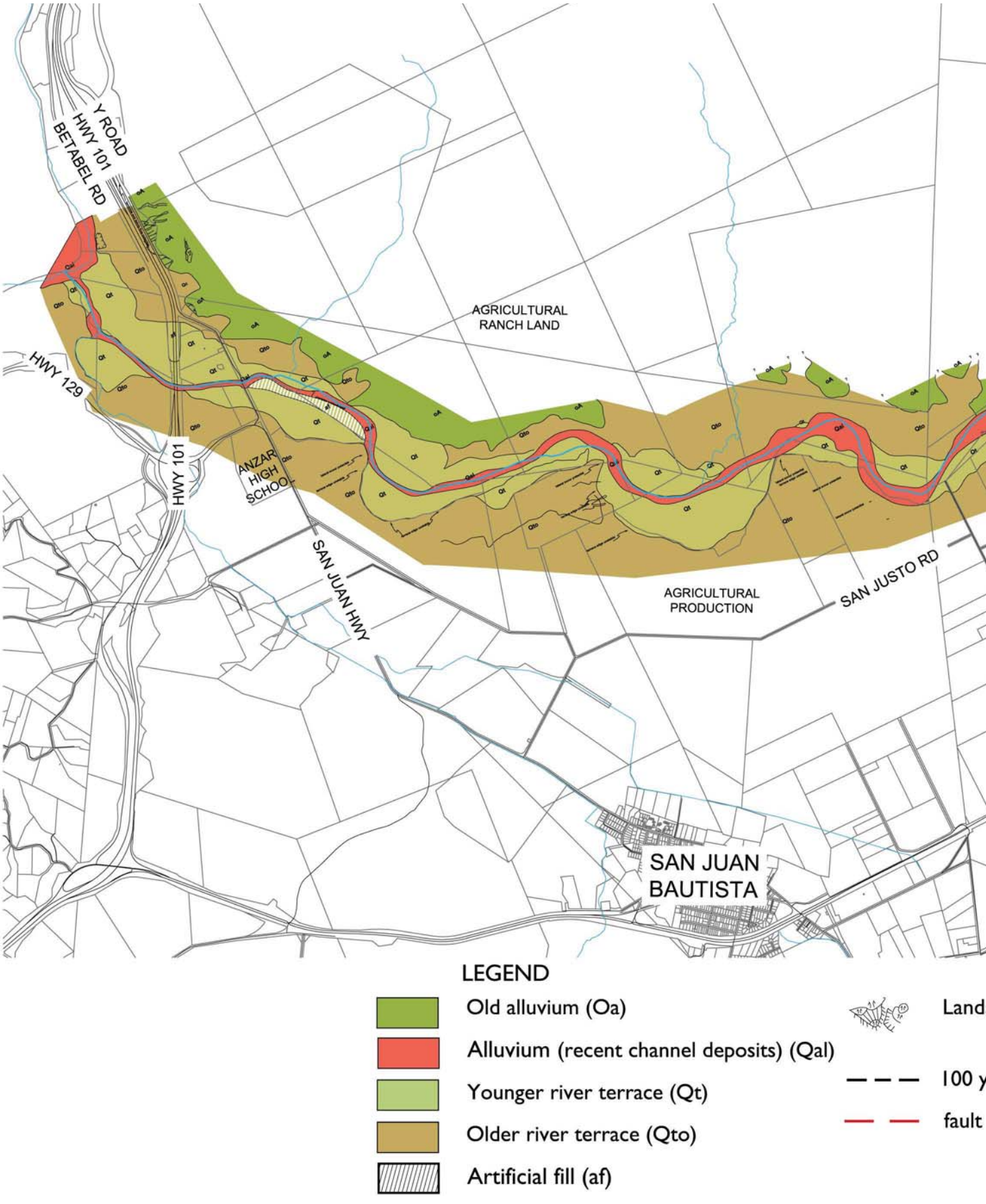
APPENDIX A

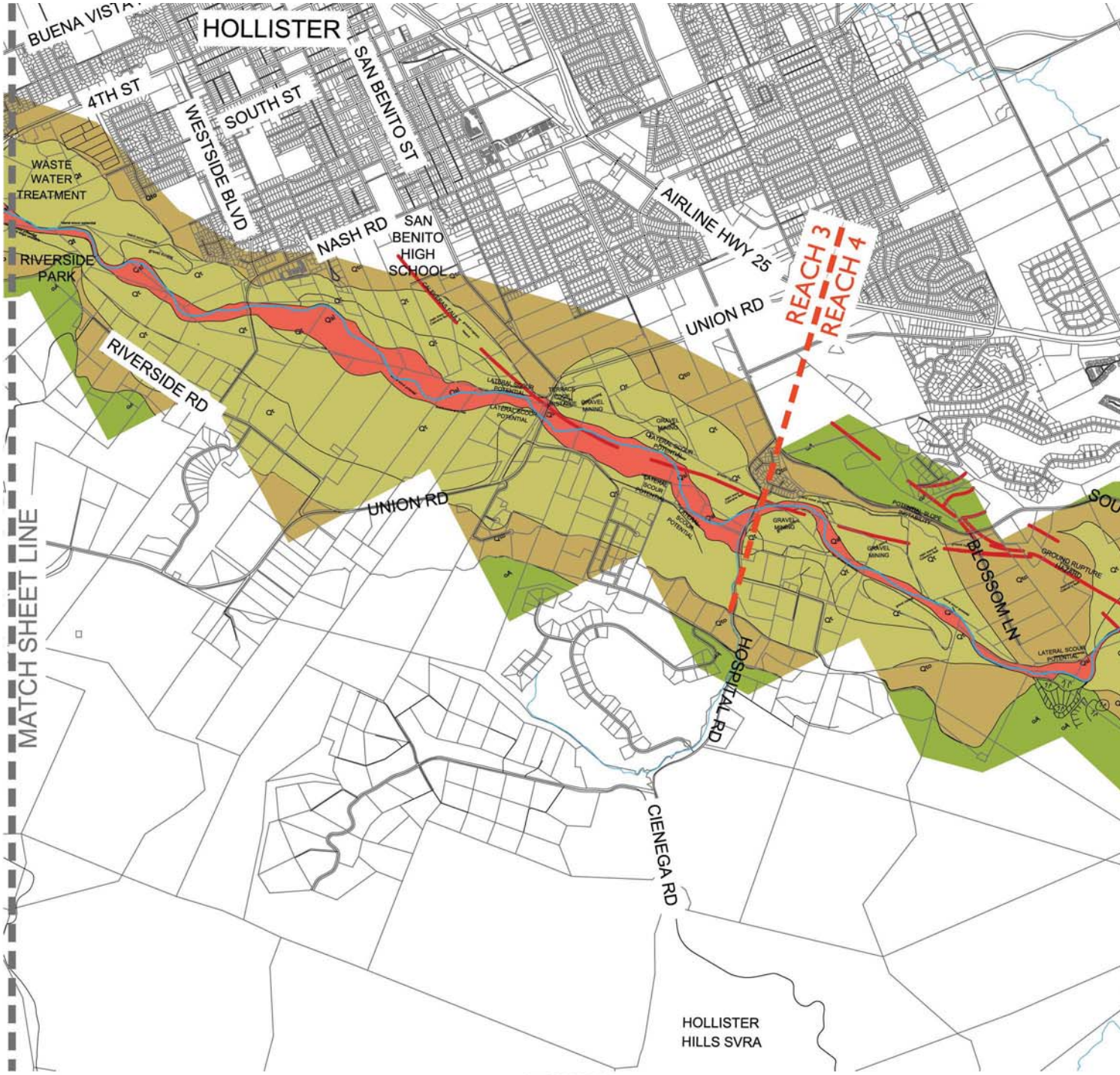
EXISTING GEOLOGY

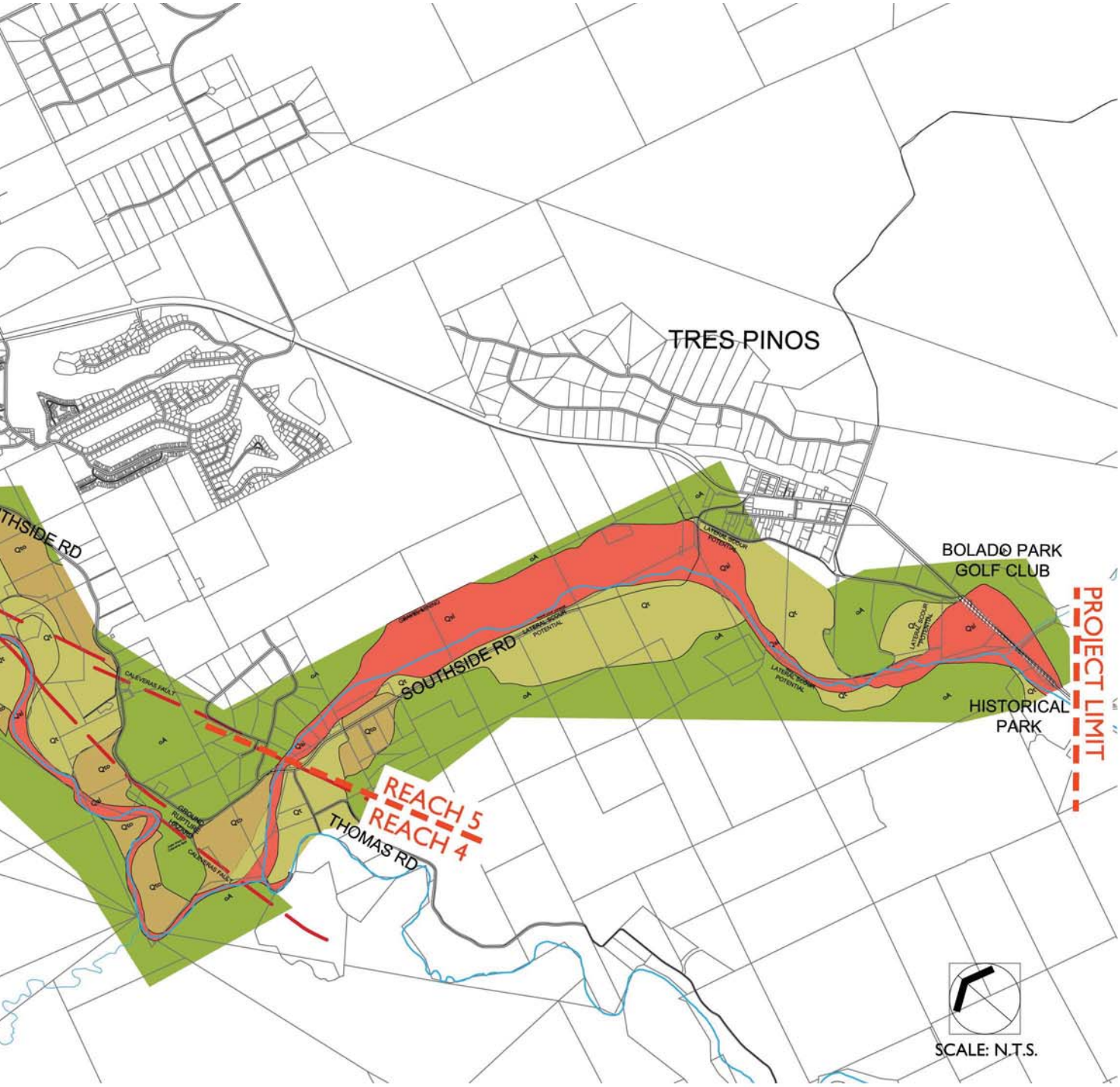


slide scar and deposit

ear flood line

EXISTING GEOLOGY





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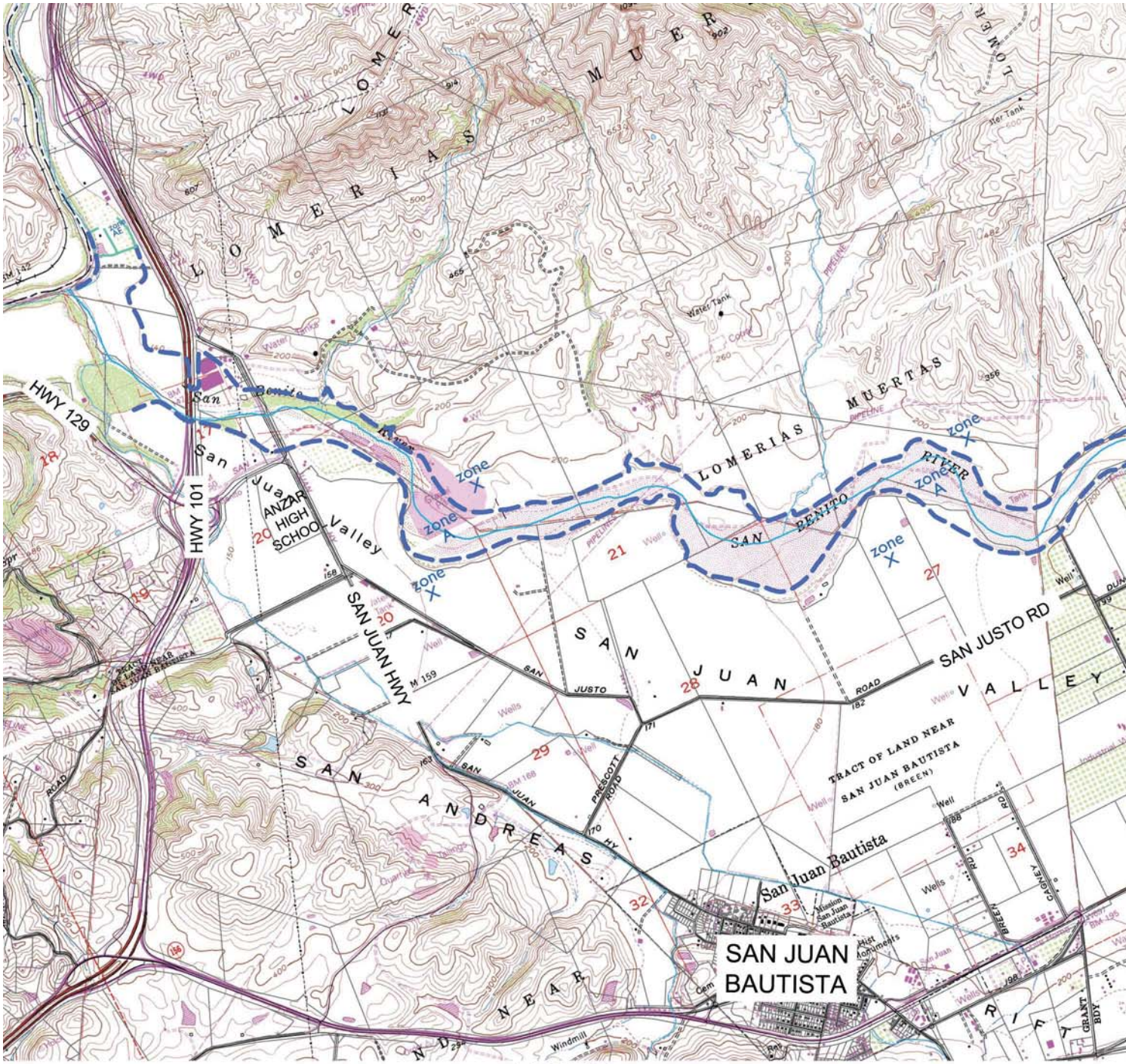


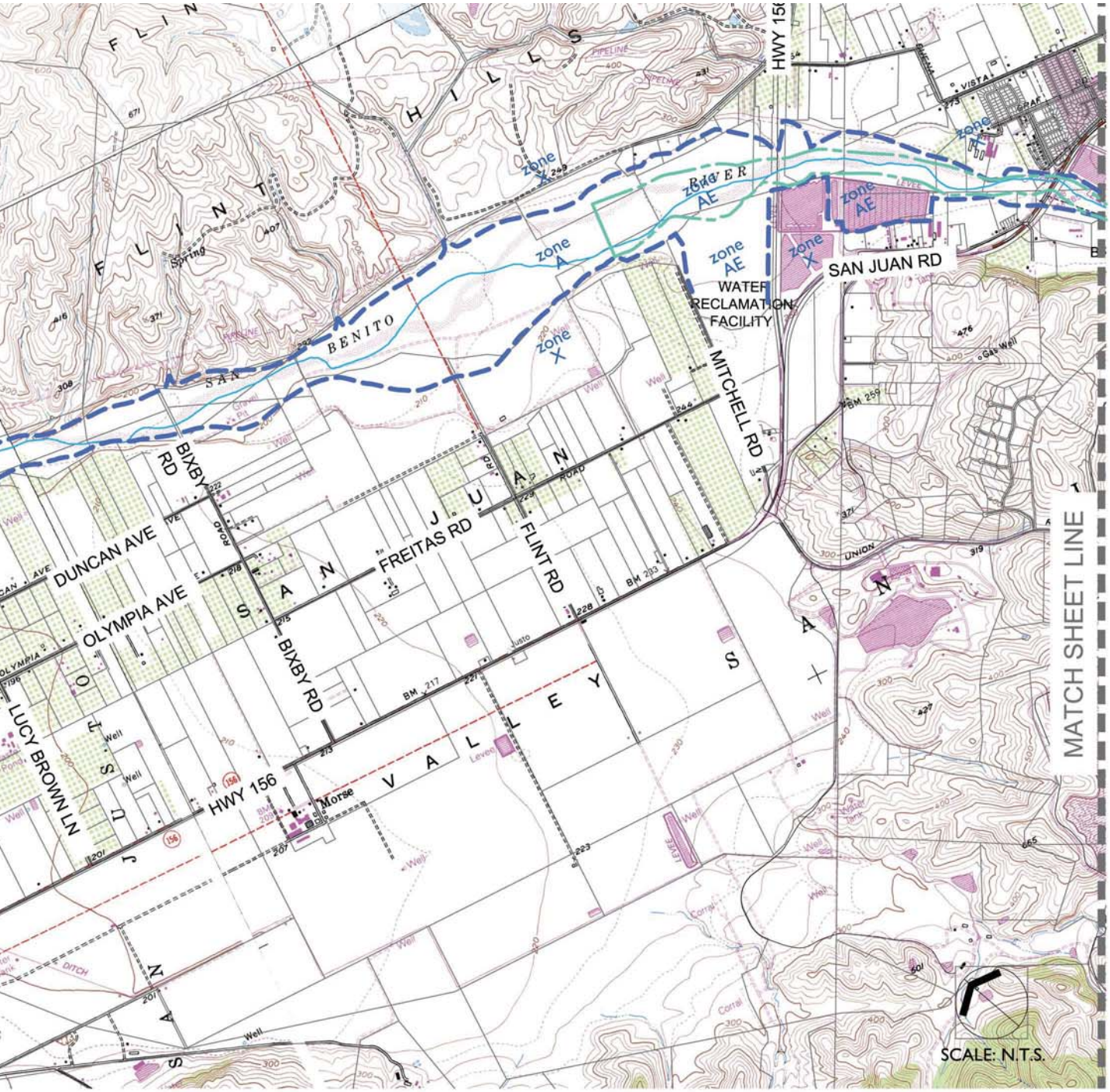
LEGEND

zone A — Area subject to 1% annual chance flood(100 year flood)

zone AE — Area subject to 1% annual chance flood, flood elevations calculated

zone X — Area outside .02% annual chance flood

Ap



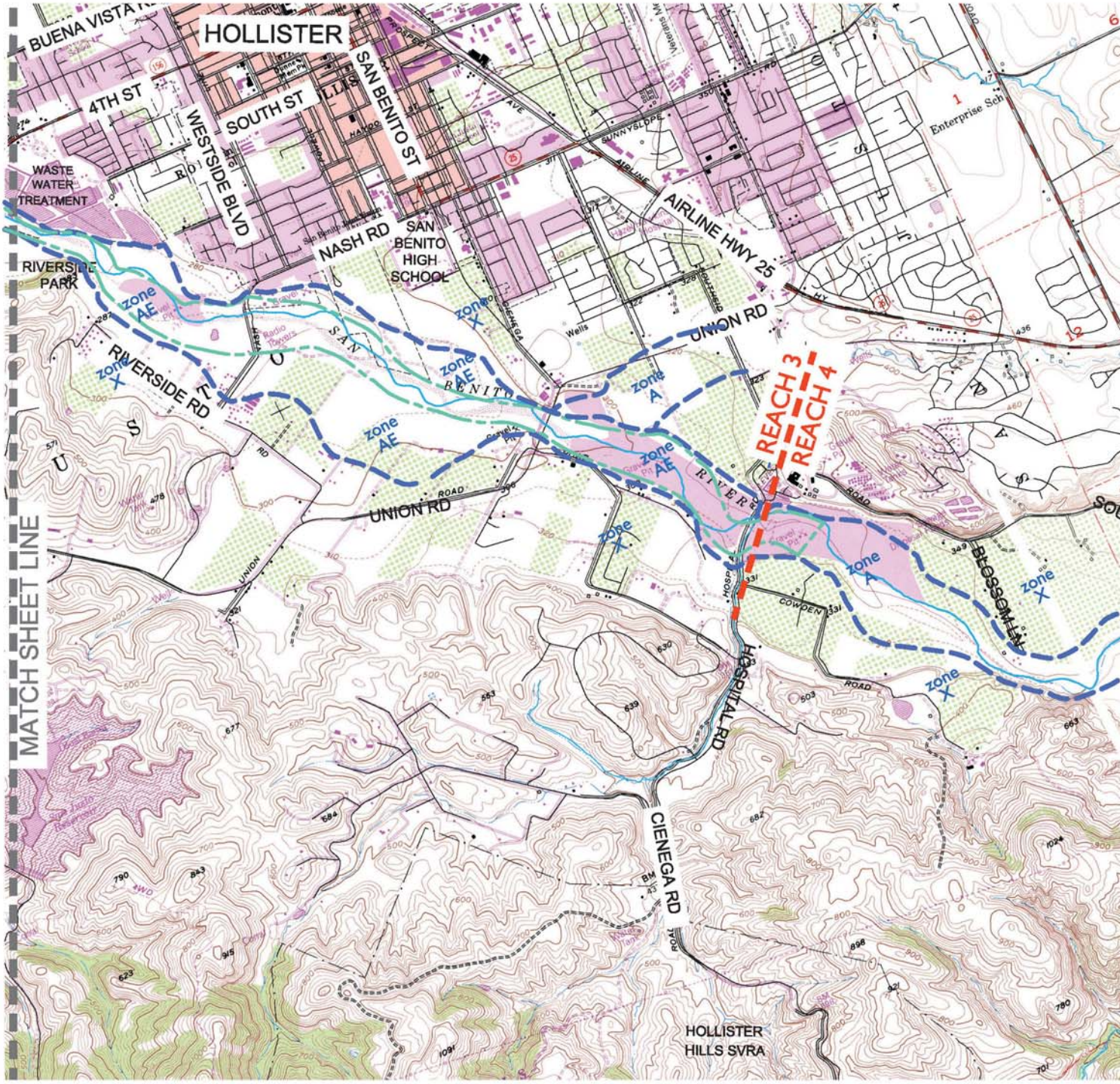
proximate water course location

NOTES:

1. Flood zones are based on Department of Homeland Security Federal Emergency Management Agency mapping dated April 16, 2009.

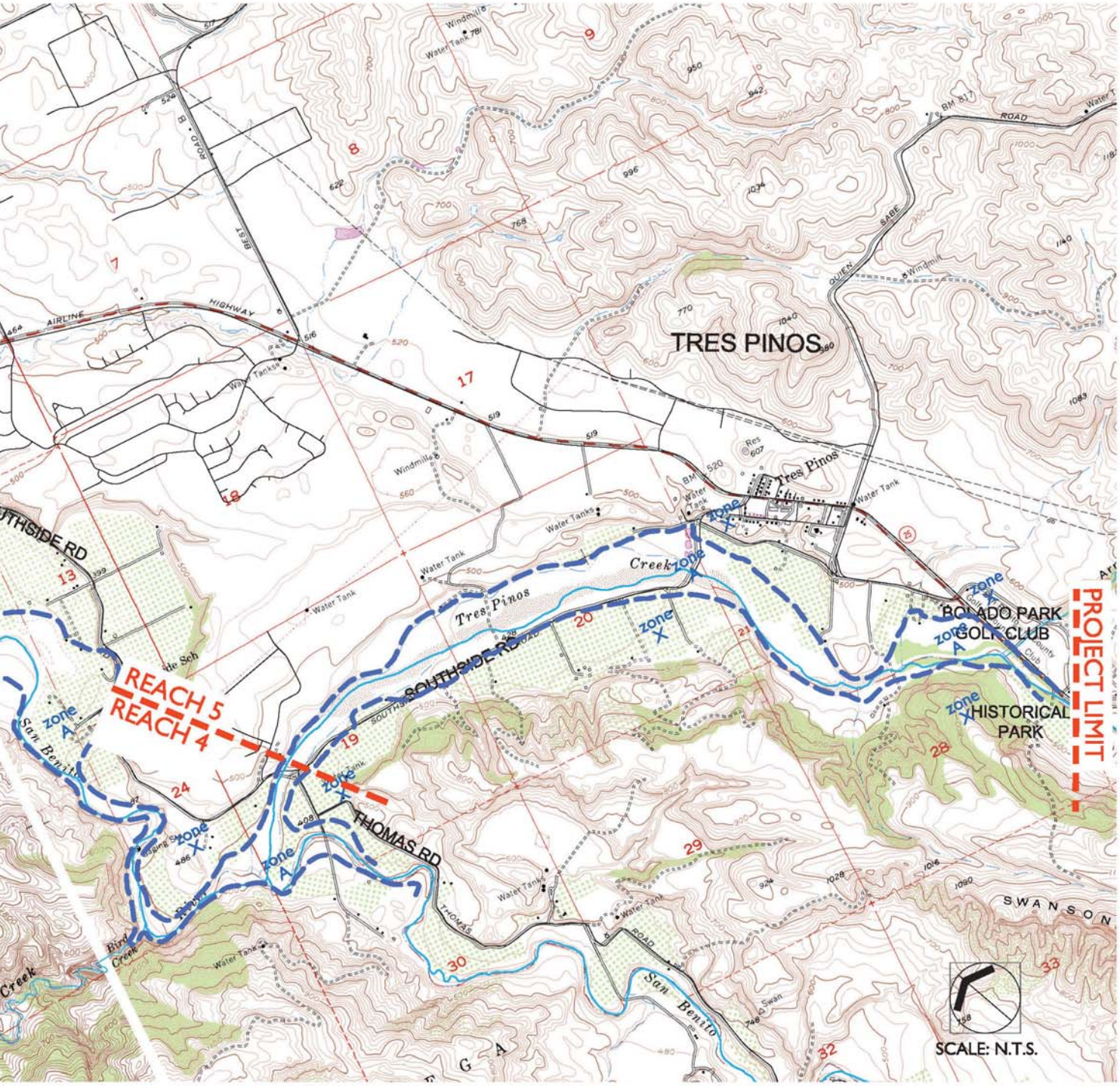
2. Background map is the u.s.geological survey (usgs) dated 1971

EXISTING FEMA/HYDROLOGY



LEGEND

- zone A — Area subject to 1% annual chance flood(100 year flood)
- zone AE — Area subject to 1% annual chance flood, flood elevations calculated
- zone X — Area outside .02% annual chance flood



Approximate water course location

NOTES:

1. Flood zones are based on Department of Homeland Security Federal Emergency Management Agency mapping dated April 16, 2009.
2. Background map is the u.s.geological survey (usgs) dated 1971

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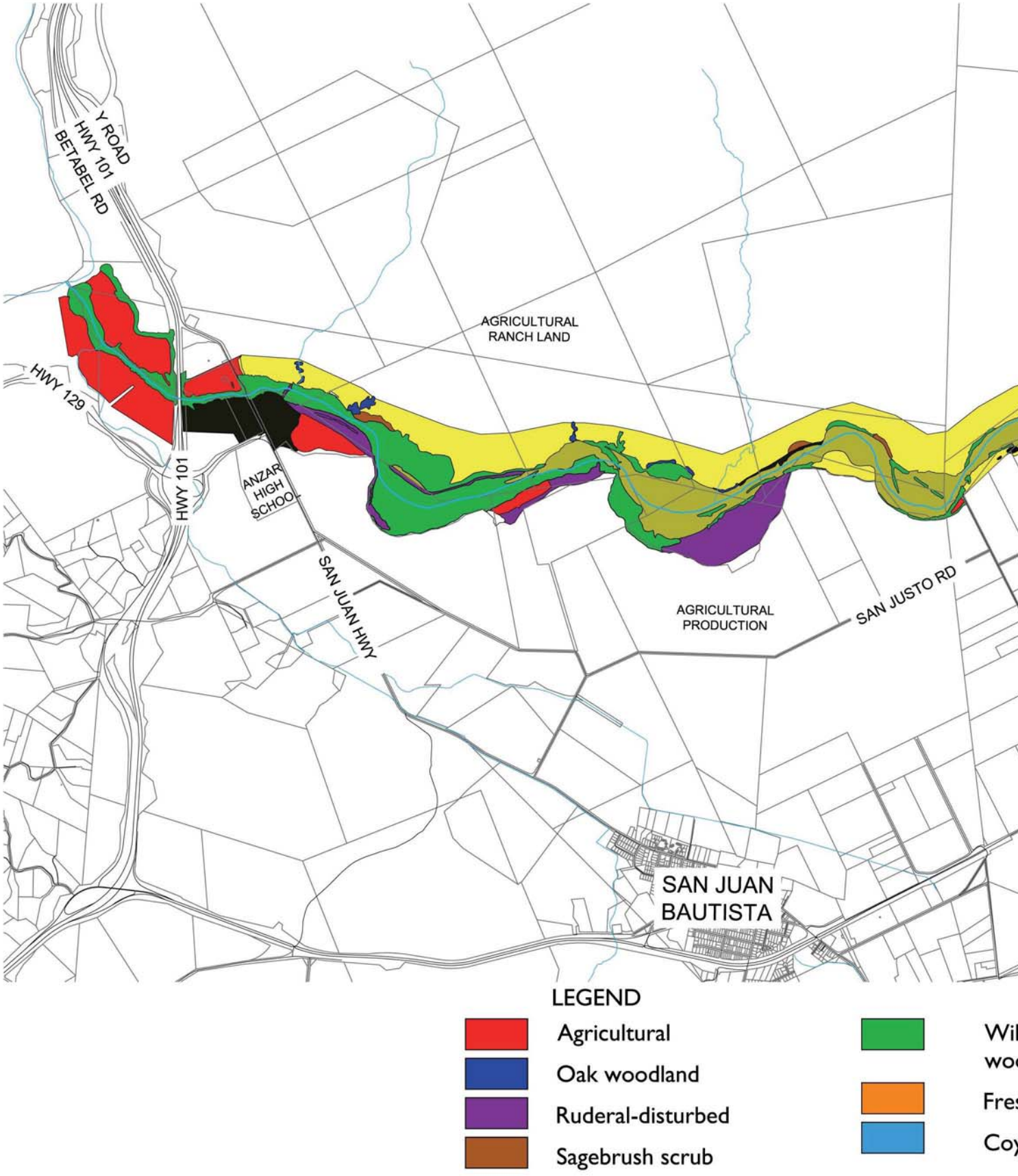
APPENDIX B

EXISTING VEGETATION TYPES



low-cottonwood riparian
odland

shwater marsh

vote brush scrub

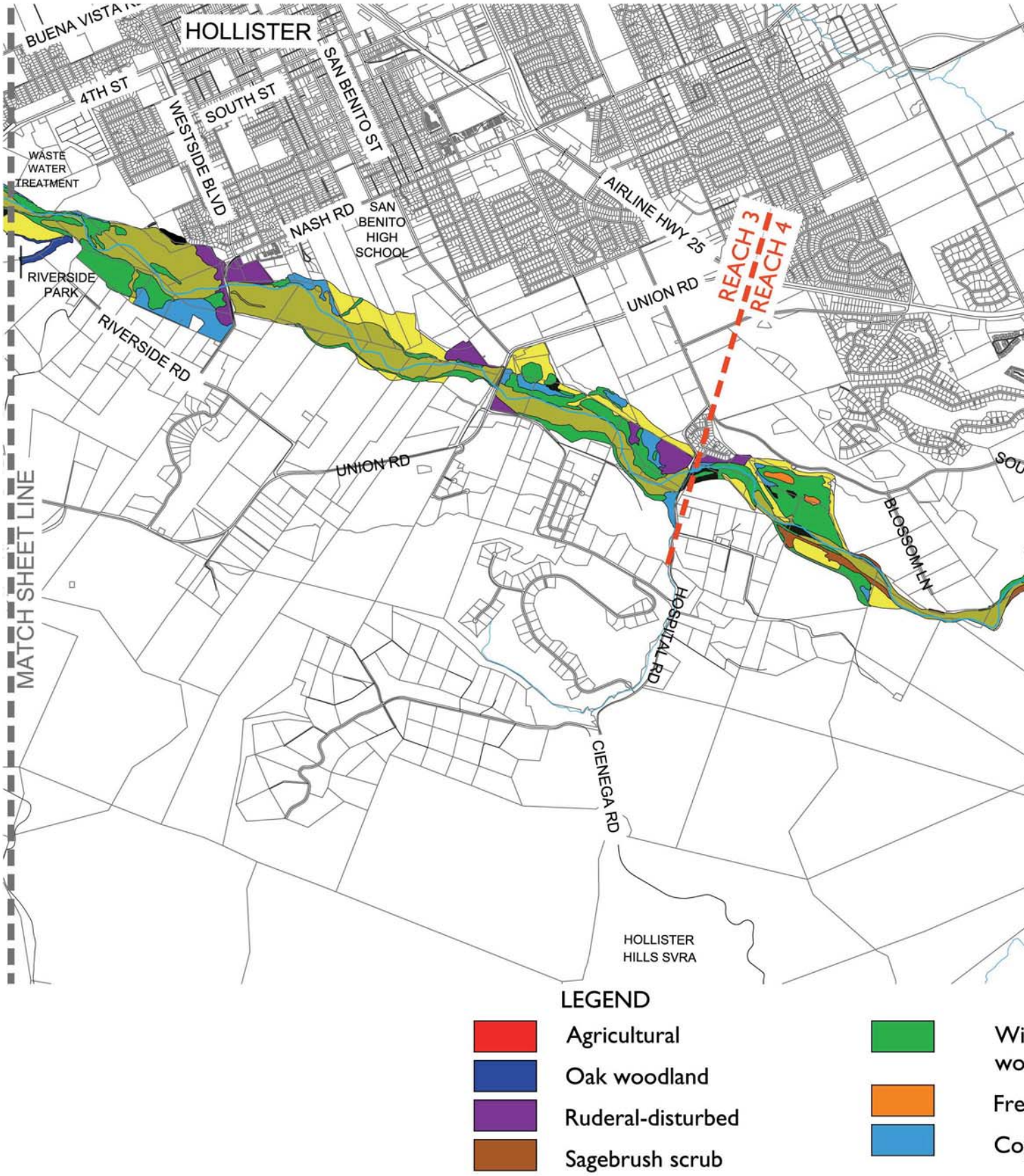
Mulefat scrub

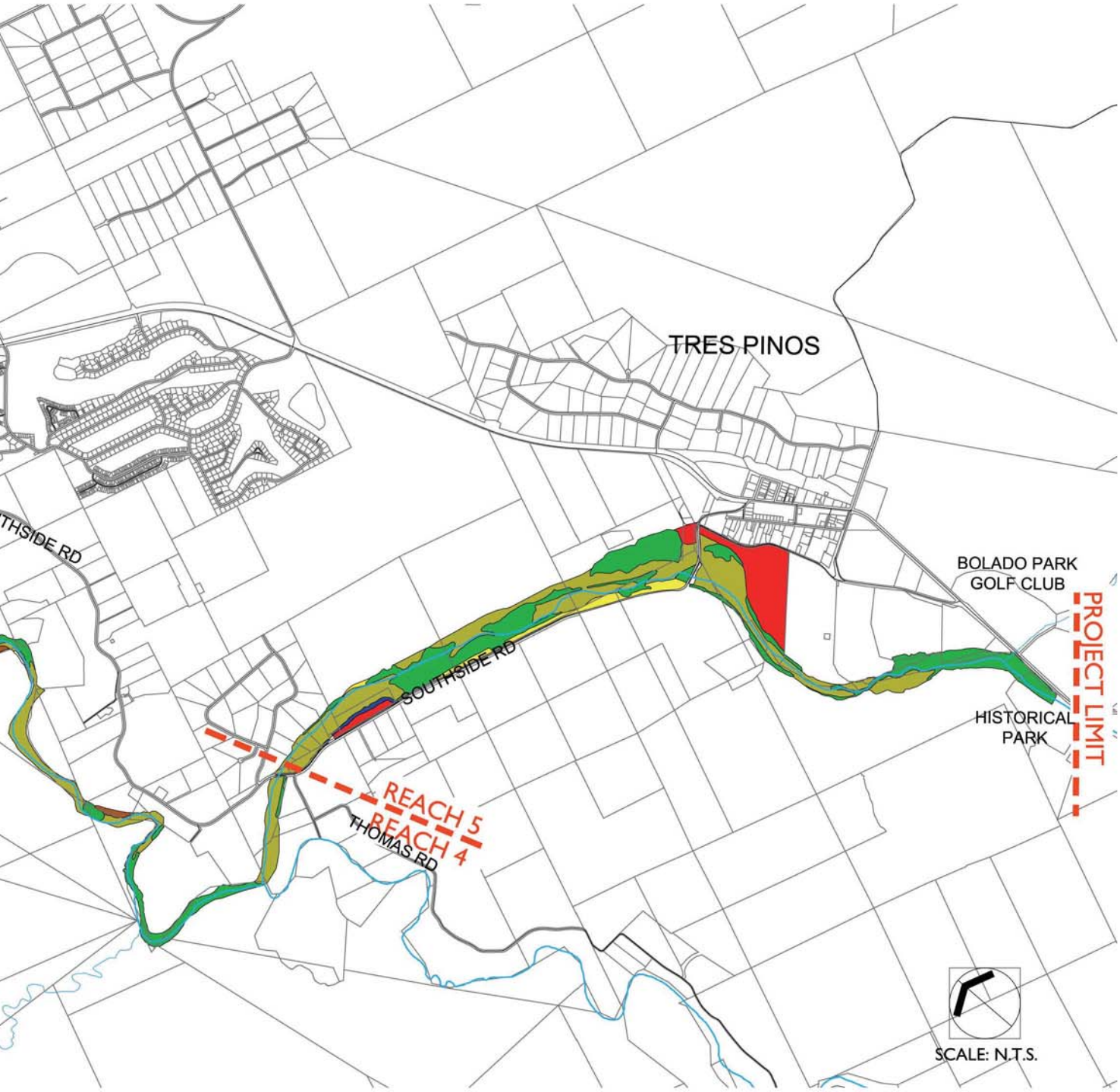
Bare

Grassland

Non-native trees/ tree groves

EXISTING VEGETATION TYPES





llow-cottonwood riparian
odland

shwater marsh

yote brush scrub

Mulefat scrub

Bare

Grassland

Non-native trees/ tree groves

WILDLIFE

Species	Willow-Cottonwood Riparian Woodland	Mulefat Scrub	Sagebrush, Coyote Brush Scrub, and Mixed Scrub	Grassland and Successional Scrub	Non-native Tree Groves	Oak Woodland and Non-native Tree Groves	River Channel Open Water Ponds
WILDLIFE							
Steelhead							✓ **Passage**
California Tiger Salamander				✓ **Upland**[1]			[2]
Western Spadefoot Toad				✓ **Upland**[1]			✓ **Breeding**
California Red-legged Frog	✓ **Foraging**						✓ **Foraging**[2]
San Joaquin Whipsnake		✓	✓				
Western Pond Turtle				✓ **Nesting**			✓ **Foraging**
Western Burrowing Owl				✓ **Breeding and/or Winter Use**[1]			
Northern Harrier	✓ **Roosting**			✓ **Foraging**	✓ **Roosting**	✓ **Roosting**	
White-tailed Kite	✓ **Nesting**			✓ **Foraging**	✓ **Nesting**	✓ **Nesting**	
Western Mastiff Bat				✓ **Foraging**			✓ **Foraging**
Western Red Bat	✓ **Roosting**			✓ **Foraging**		✓ **Roosting**	✓ **Foraging**
San Joaquin Kit Fox		✓ **Foraging**	✓ **Foraging**	✓ **Foraging**			
				✓ **Denning**			

Notes:

1 Occurs in grassland where suitable burrows are present.

2 No off-channel ponds with still water or man-made ponds were observed within the study area that have a sufficient length of inundation to allow breeding by CTS or CRLF (e.g., at least 5-6 months inundation required)

WILDLIFE SPECIAL STATUS SPECIES DESCRIPTIONS

STEELHEAD

Steelhead (*Oncorhynchus mykiss irideus*) is federally listed as threatened, are anadromous fish that migrate from the ocean up freshwater creeks and rivers to spawn. Young steelhead typically remain in freshwater for 2 years before migrating to the ocean or bay. They typically spend 2 to 3 years in marine waters before returning to their natal stream to spawn. Steelhead often spawn more than once before they die, and spawning usually occurs between December and June. Eggs are laid in gravels of streams, and take 1.5 to 4 months to hatch. The hatchlings are called alevins and remain in the gravels until their yolk sac is absorbed, at which time they emerge from the gravels as "fry" and begin actively feeding. After 1 to 4 years, steelhead migrate to the ocean as "smolts."

The San Benito River within this River Parkway biotic study area does not have perennial flows, and thus does not currently provide spawning habitat for steelhead. However, the National Marine Fisheries Service still considers the San Benito River as possible passage for steelhead from the Pajaro River to upstream tributary creeks that do have perennial flows.

CALIFORNIA TIGER SALAMANDER

The California tiger salamander (Ambystoma californiense) is State and Federally listed as a threatened species. This tiger salamander is a permanent resident of annual grasslands, foothill-valley woodlands, and is occasionally found along streams with off-channel ponds. Adults spend most of the year underground in mammal burrows, coming out at night to forage. The first heavy rains of winter initiate the migration of adults to permanent and temporary ponds, where breeding takes place from December to February. Agricultural and urban development has reduced much of the former habitat of this species. Introduction of non-native fish which prey on the salamander larvae has also significantly decreased populations.

The San Benito River and Tres Pinos Creek within the River Parkway Master Plan area do not have off-channel ponds with sufficiently long inundation to provide suitable breeding habitat for California tiger salamander. The old mining pits with freshwater marsh, south of Hospital Road, have some potential to provide breeding habitat, but currently appear to dry up too early in normal rainfall years and salamanders would have to cross the river channel to get to the ponds which would be difficult during their winter breeding period. However, there are numerous occurrences of

tiger salamander breeding within one mile of the River Parkway corridor, and thus some portions of the River Parkway Master Plan area may provide upland habitat for this species. The grassland areas on the upper river terrace on the north side of San Benito River within The reaches of the San Benito River to the west of Hollister provide the best potential upland habitat for California tiger salamander because it is contiguous with large expanses of grazed grassland with numerous stock ponds in the Flint Hills. It is unlikely that tiger salamanders would find suitable burrows within the active river channel, but other areas (e.g. near west side of Hospital Road) at the top of bank may provide suitable habitat where burrows are present.

CALIFORNIA RED-LEGGED FROG

The California red-legged frog (Rana aurora draytonii) is Federally listed as threatened and is also listed as a California species of special concern. It is the largest native frog in California and spends most of its life within aquatic and riparian habitats. The California red-legged frog breeds from December to April in still waters of estuaries, off-channel ponds in creeks, and ponds. Female frogs attach a large roundish egg mass to vegetation, and it takes up to six months for the tadpoles to metamorphose. Red-legged frogs have been radio-tracked moving distances up to two miles between ponds. Introduction of non-native fish and loss of aquatic habitats have greatly reduced the former range of this frog.

One red-legged frog was observed within the study area in a small ponded area created by a culvert outfall just downstream of the Old San Juan Highway bridge. The San Benito River and Tres Pinos Creek within the River Parkway Plan area do not have suitable breeding habitat for red-legged frogs because they lack still water in off-channel ponds with sufficient depth and duration of inundation sufficient to allow metamorphosis of tadpoles. The old mining pits south of Hospital Road with freshwater marsh also appear to not hold water long enough for breeding by this species. However, several areas of the rivers provide seasonal forage, cover and movement corridors for red-legged frogs. The best areas are the riparian habitats near Highway 101 and near the southern study area along Tres Pinos Creek. Because California red-legged frogs are relatively wide-ranging animals, capable of moving over quite long distances, they may on occasion seasonally occur throughout the study area, in particular areas near ponds on adjacent uplands, including wastewater treatment ponds.

WESTERN SPADEFOOT TOAD

This Western spadefoot toad (Spea hammondii) is a California species of special concern. Spadefoot toads spend the majority of their life in underground burrows, either of mammals or ones they dig themselves. The toads emerge during late winter rains and migrate to temporary pools and

ponds with still water. Tadpoles of spadefoot toad metamorphose into juveniles rapidly, able to complete the cycle from egg to metamorphose in as few as 5 to 11 weeks. Thus spadefoot toads are able to utilize more ephemeral pools than California tiger salamanders. Development of suitable habitat has reduced the former habitat of this species. Like the tiger salamander, the best potential upland habitat for spadefoot toads within the River Parkway Master Plan area is the grassland area on the upper river terrace on the north side of the San Benito River within the reaches to the west of Hollister. The River Parkway Master Plan area does not have suitable breeding habitat for spadefoot toad.

WESTERN POND TURTLE

The western pond turtle (Actinenmys marmorata) is a California species of special concern. This aquatic turtle inhabits ponds, lakes, streams, marshes, and other permanent waters located in woodland, grassland, and open forests. Pond turtles can often be seen basking in the sun on partially submerged logs, rocks, mats of floating vegetation or mud banks. Females dig soil nests in or near stream banks, and can travel some distance from streams to seek suitable nesting habitat. Suitable nesting habitat is bare soil or sparsely vegetated grasslands with a south or southwestern exposure. Although loss of aquatic habitat and habitat fragmentation is a factor for this turtle, they have proved able to adapt to man-made ponds such as stock ponds, irrigation ponds, and sewage ponds.

No western pond turtles have been recorded within the River Parkway Master Plan area. However, they may occasionally utilize portions of the river for foraging, in particular areas near the wastewater treatment ponds. Pond turtles are highly aquatic and usually only leave their creek or pond areas to breed or disperse to new areas. Their occasional use of the San Benito River would most likely occur during winter months when water is present. Potential breeding habitat may occur in the grasslands along the San Benito River within the reaches to the west of Hollister.

SAN JOAQUIN WHIPSNAKE

San Joaquin whipsnake (Masticophis flagellum ruddocki) is a California species of special concern. This snake lives in open, dry habitats with little or no tree cover, such as grassland. This aggressive snake can move across the ground at speeds up to 8 mph, and occasionally climbs bushes and trees to seek refuge or hunt prey. Little data exists on nest sites, but this snake is known to hibernate in soil or sand about one foot below the surface and one nest was found in such a situation. It is thought that burrows of small mammals are probably an important component of this snake's habitat requirements for refuge and oviposition sites. Threats to whipsnake habitat include conversion of habitat to agriculture and urban development. Although there is only one record of San Joaquin whipsnake within the River

Parkway Master Plan area, the mulefat scrub throughout the Plan area provides suitable habitat for this snake.

WHITE-TAILED KITE

The white-tailed kite (Elanus leucurus) does not have any special status, but is listed as a fully protected species by the CDFG. This bird usually nests in trees along riparian areas, including eucalyptus, willows and live oaks. They prefer nest trees with adjacent open fields for hunting. The male does all the hunting while the female kite incubates the eggs and broods the nestlings. One white-tailed kite was observed in the River Parkway Master Plan area south of Union Road, perching in a tree and hunting. Most of the riparian habitat within the study area provides potential nesting habitat for this species.

NORTHERN HARRIER

The northern harrier (Circus cyaneus) is a California species of special concern. This bird is an uncommon permanent resident in open grasslands, marshy areas, and edges of estuaries. They build nests of sticks and grass on the ground hidden by tall grass or reeds. Primary threats to this species include loss of habitat, egg predation by non-native red fox, and poisoning by rodenticides and pesticides. The grasslands, agricultural, and ruderal lands within the River Parkway Master Plan area provide suitable foraging habitat for harriers, however, no suitable nesting habitat is present.

GOLDEN EAGLE

The golden eagle (Aquila chrysaetos) is a fully protected species in California. Golden eagles require large expanses of habitat as territory for feeding and nesting. Grasslands and open wooded habitats are needed for hunting. Nests are built at sites with a good view of the surrounding area, and are usually placed on cliffs, in trees, or occasionally on transmission towers. Golden eagles are very sensitive to human disturbance at nest sites. Agricultural and urban development of grasslands, as well as human persecution, has led to this species' decline in California.

The River Parkway Master Plan area does not contain nesting habitat for golden eagles, however, the grasslands and more open mulefat scrub provide foraging habitat, particularly where they abut undeveloped areas. One adult and one juvenile golden eagle were observed just north of the grassland along the San Benito River in the Flint Hills, and may be nesting in trees there. A juvenile golden eagle was also observed a short distance west of Tres Pinos Creek.

WESTERN BURROWING OWL

The western burrowing owl (Athene cunicularia hypugea) is a California species of special concern. Burrowing owls use open grassland habitats with low-growing vegetation. They prefer areas interspersed with bare ground and raised areas used as rest/perch sites. Abandoned burrows, especially of ground squirrels, are used as roost and nest sites. A pair of burrowing owls requires at least six acres of foraging habitat to meet their needs. Agricultural, industrial, and urban development have resulted in a significant decline of suitable habitat for this species throughout California. Programs to control burrowing mammals with poison and burrow destruction have also reduced owl populations.

Wintering burrowing owls have been observed in the grassland on the north side of the San Benito River in the westernmost reach of the river (to the east of San Juan Highway). The grasslands along the Flint Hills provide the best nesting and wintering habitat for burrowing owls within the River Parkway planning area. The relatively large extent of grassland near San Benito High School north of Union Road in the City of Hollister has numerous suitable burrows and sufficient size to support burrowing owls.

LOGGERHEAD SHRIKE

This loggerhead shrike (Lanius ludovicianus) is a California species of special concern. Common residents of lowlands and foothills, this species prefers open habitats with scattered shrubs, trees, fences, or other lookout posts. Loggerhead shrikes occur only rarely in heavily urbanized areas. Eggs are laid in shrubs and trees with dense vegetation for concealment. No records of loggerhead shrike were found for the River Parkway Master Plan area, however, several areas provide suitable nesting habitat including understory shrubs and small trees in riparian and oak habitats, and coyote brush scrub. The open habitats of grasslands and mulefat provide excellent potential foraging opportunities for loggerhead shrike. This species is most likely to nest in the more rural and undeveloped areas along the San Benito River and Tres Pinos Creek.

BANK SWALLOW

The bank swallow (Riparia riparia) is State listed as a threatened species. Bank swallows, as their name implies, nest in colonies within inland areas along dirt banks of creeks and rivers. Bank swallows dig their own nest burrows, 20 to 40 inches long. Threats to bank swallows include hardening of river banks for erosion control and bank stabilization.

The only records of bank swallow in the general vicinity of the River Parkway Master Plan are north and south of the area and are from the 1920s and 1930s. Most of the study area does not have suitable nesting habitat for bank swallows. Although the area has not been surveyed, steep banks typical of bank swallow colonies were observed along the San Benito River on a western portion along Southside Road, in the Cienega Hills.

TRICOLORED BLACKBIRD

The tricolored blackbird (Agelaius tricolor) is a California species of special concern. This bird is an uncommon local permanent resident in central California. Tricolor blackbirds inhabit freshwater marshes, stock ponds, and willow thickets. These blackbirds prefer dense cattails, tules and rushes where they build deep cup nests. During fall and winter, tricolored blackbirds are nomadic and may be observed in pastures, grasslands, cattle pens and marshes throughout the San Benito County. Extensive alteration of the river floodplain and drainage of marshes for agriculture and urban development are the main threats to this species.

Tricolored blackbirds likely forage occasionally during the non-nesting season in the grasslands and agricultural lands within River Parkway Master Plan area. There is no suitable breeding habitat for this species. The freshwater marsh south of Hospital Road currently does not hold water long enough into the nesting season for this species.

PALLID BAT

The pallid bat (Antrozous pallidus) is a California species of special concern. Pallid bats are found in a variety of habitats. This species moves about locally on a seasonal basis, but is not considered to be migratory. During the day pallid bats roost in buildings, crevices, caves, mines, and hollow trees. Maternity roosts are colonial, while males and feeding bats roost singly. This species is very sensitive to disturbances at roost sites. The River Parkway Master Plan area does not support suitable roosting habitat for pallid bats, though most of the area does provide potential foraging habitat for this species.

WESTERN MASTIFF BAT

The western mastiff bat (Eumops perotis) is a California species of special concern. These bats are found in a variety of habitats including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, urban areas, etc. Western mastiff bats emerge late in the evening, forage on a variety of insects, and call continuously while hunting. They are strong fliers, foraging for periods as long as 7 hours per night and covering distances up to 15 miles. They roost in cliff faces, high buildings, trees and tunnels; nursery roosts are rock crevices or crevices in buildings. Unlike other bats, the males and females remain together throughout the year.

The River Parkway Master Plan area does not support suitable roosting habitat for mastiff bats, though the steep cliffs of the Cienega Hills adjacent to the San Benito River west of Southside Road may have suitable crevices for roosting by mastiff bats. Most of the Master Plan area provides potential foraging habitat for this wide-ranging bat species.

WESTERN RED BAT

The western red bat (Lasiurus blossevillii) is a California species of special concern. This is a foliage roosting bat that prefers trees on the edge of open foraging habitats such as creeks, fields and urban areas. Preferred roost sites are those that have closed canopy above and open below. There are no known records of western red bat within the River Parkway Master Plan area, though the denser areas of riparian habitat provide potential roost sites for this bat species.

AMERICAN BADGER

The American badger (Taxidea taxus) is a California species of special concern. Badgers live primarily in grassland habitat and occur throughout California. Badgers dig burrows in friable soils for dens where they take cover usually during the day. Their pups are born in their dens. Trapping and poison have reduced badger numbers. There are no known records of badgers within the River Parkway Master Plan area. The only area likely suitable for this species is the grassland on the northern upper river terrace along the San Benito River adjacent to the Flint Hills (to the west of Hollister).

SAN JOAQUIN KIT FOX

The San Joaquin kit fox (Vulpes macrotis mutica) is State listed as threatened and Federally listed as endangered. This kit fox inhabits grasslands, saltbush scrub, and in some areas, orchards and dryland farmed agricultural lands. The San Joaquin kit fox is a small nocturnal predator that uses dens for cover and pupping. The most limiting factor for kit fox habitat is the availability of suitable dens; the dens must be large enough for adult kit fox, but small enough to preclude predators such as coyote. Kit fox need friable soils for digging their dens or burrows of other animals such as ground squirrels, and most dens are found in areas of flat topography to slopes less than 25%.

There are no current records (not for 20 years) of San Joaquin kit fox for this portion of San Benito County; however, the San Benito River corridor may still provide suitable passage for this species and occasional forage if they still occupy the more remote undeveloped adjacent areas (e.g., Flint Hills, Cienega Hills).

PLANTS

PLANT SPECIAL STATUS SPECIES DESCRIPTIONS

Species	Willow-Cottonwood Riparian Woodland	Mulefat Scrub	Sagebrush, Coyote Brush Scrub, and Mixed Scrub	Grassland and Successional Scrub	Non-native Tree Groves	Oak Woodland and Non-native Tree Groves	River Channel Open Water Ponds
Alkali Milk-vetch		✓					
San Joaquin Spearscale		✓					
Pinnacles Buckwheat			✓				
Indian Valley Bush-mallow			✓ (Observed in Reach 4)				

Notes:
1 Occurs in grassland where suitable burrows are present.
2 No off-channel ponds with still water or man-made ponds were observed within the study area that have a sufficient length of inundation to allow breeding by CTS or CRLF (e.g., at least 5-6 months inundation required)

ALKALI MILK-VETCH

Alkali milk-vetch (Astragalus tener var. tener) is a 2- to 16-inch tall herbaceous annual plant in the pea family (Fabaceae). The species is characterized by its leaves that are 1 to 3 inches long, with seven to 17 pinnately compound, well-separated leaflets. Three to 12 pink-purple, pealike flowers comprise a dense inflorescence. Alkali milk-vetch was widely distributed around the San Francisco Bay region and in the Sacramento and northern San Joaquin Valleys 100 years ago, but by 1989, only a few populations remained. The plant is restricted to alkaline soils in areas that are, or were historically, subject to flooding and overland flows and can grow on the floodplains above the upper margins of vernal pools and swales (CNDDB, 2012). There is potential for the species to occur in the mulefat scrub. There is an historic record (1897) from Hollister (CNDDB, 2012).

SAN JOAQUIN SPEARSCALE

San Joaquin spearscale (Atriplex joaquinana) is an annual herb between 1 and 3 feet tall; the plant typically blooms from April to October. This spearscale is found in alkali grasslands and alkali meadows, or on the margins of alkali scrub. It occurs on clay soils, often in areas of high alkalinity. The range for this species is from western side of the Great Valley from Glenn County to Merced County and in the small valleys of the inner Coast Ranges where it occurs in the broad flood basins of the valley floor and on alluvial fans associated with the major streams draining from the inner Coast Ranges foothills. It is generally found at low elevations, but has been collected up to 1,055 feet above sea level. There is potential for the species to occur in the mulefat scrub. There is an historic record from Bird Creek, south of Hollister and north of Cienega Road and Bird Creek (1995) (CNDDB, 2012).

PINNACLES BUCKWHEAT

This buckwheat (Eriogonum nortonii) is a small annual herb growing between 2 and 8 inches in height, with a thread-thin branched stem which is often red in color. Most of the leaves are one half inch long, rounded, fuzzy underneath and wavy-edged. Tiny clusters of very light to deep pink flowers grow on minute erect stalks. Pinnacles buckwheat is endemic to Monterey and San Benito Counties. This plant has potential to occur within the upland scrub habitats in the parkway project area. Occurrences have been recorded from Bird Creek, south of Hollister, the west slope of Fremont Peak and at Hollister OHV Park (CNDDB, 2012).

INDIAN VALLEY BUSH-MALLOW

Indian valley bush-mallow (Malacothamnus aboriginum) is a deciduous shrub that grows 6 to 10 feet in height. It is characterized by its gray-green lobed leaves than are less than 2-1/2 inches long and the plants overall dense hairs and stout branches. The flowers are densely clustered on a spike; the flowers have rose pink flowered petals, subtended by bracts and 3 bractlets, blooming April to October. This bush mallow is endemic to California. This plant has potential to occur within the upland scrub habitats in the parkway project area and a patch of 1-5 individuals was observed in mixed scrub habitat upstream of Hospital Road. Occurrences have been recorded from Cienega Road, north of Cienega School (CNDDB, 2012).

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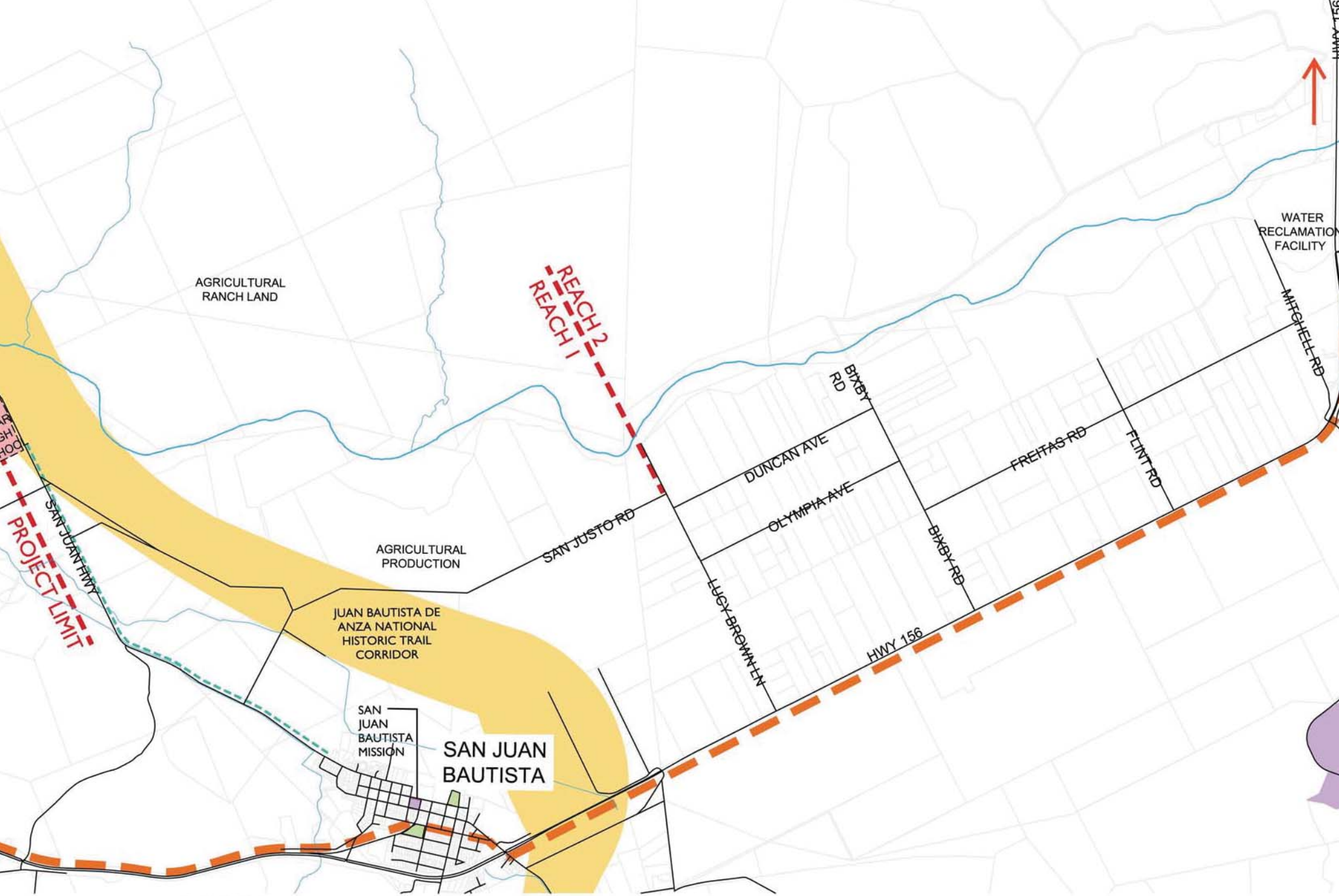
APPENDIX C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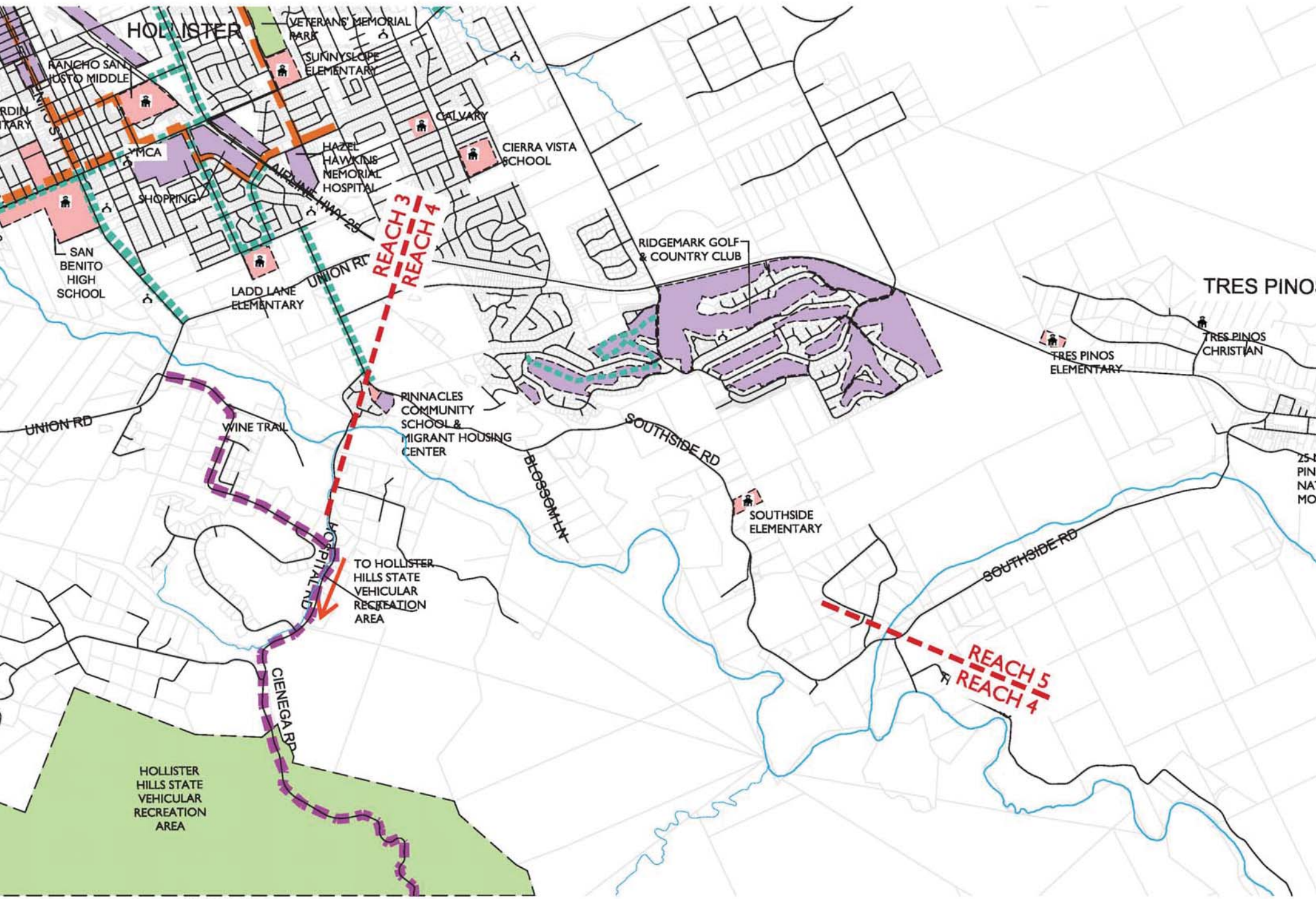
FLINT RD
BIXBY RD
LUCY BROWN LN
HWY 156
SAN JUSTO RD
AGRICULTURAL PRODUCTION
SAN JUAN HWY
PROJECT LIMIT
JUAN BAUTISTA DE ANZA NATIONAL HISTORIC TRAIL CORRIDOR
SAN JUAN BAUTISTA MISSION
SAN JUAN BAUTISTA
LEGEND
Schools
Public Parks
Private institutions
Church
Bike route
Bus route


HOLLISTER
VETERANS' MEMORIAL PARK
SUNNYSLOPE ELEMENTARY
RANCHO SAN JUSTO MIDDLE
CALVARY
YMCA
HAZEL HAWKINS MEMORIAL HOSPITAL
CIERRA VISTA SCHOOL
AIRLINE HWY 25
SHOPPING
SAN BENITO HIGH SCHOOL
LADD LANE ELEMENTARY
UNION RD
REACH 3
REACH 4
RIDGEMARK GOLF & COUNTRY CLUB
TRES PINOS
TRES PINOS ELEMENTARY
TRES PINOS CHRISTIAN
PINNACLES COMMUNITY SCHOOL & MIGRANT HOUSING CENTER
WINE TRAIL
SOUTHSIDE RD
BLOSSOM LN
SOUTHSIDE ELEMENTARY
HOSPITAL RD
TO HOLLISTER HILLS STATE VEHICULAR RECREATION AREA
CIENEGA RD
REACH 5
REACH 4
HOLLISTER HILLS STATE VEHICULAR RECREATION AREA
LEGEND
Schools
Public Parks
Church
Bike route