

4.10 TRANSPORTATION

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4.10 TRANSPORTATION

This chapter provides information regarding potential traffic and circulation impacts, including roadway congestion, traffic delays, restricted access, increased traffic hazards, and damage to roadbeds. To provide a basis for the evaluation of Seasonal Storage Project (SSP) impacts on transportation, the setting section describes the existing roadway network and other modes of transportation in the SSP area.

IMPACTS EVALUATED IN OTHER SECTIONS

The following subjects are related to the Transportation Section, but are evaluated in other sections of this document:

- Air quality impacts caused by traffic are evaluated in Section 4.11, Air Quality.
- Noise increases caused by traffic are evaluated in Section 4.12, Noise.
- Safety hazards caused by project construction are evaluated in Section 4.7, Public Health and Safety.

SETTING

As the basis for evaluating transportation impacts, this section describes the existing roadway system, transit services and bicycle and pedestrian facilities within the SSP area.

Existing Regional Transportation System

The regional transportation network includes several types of roadways, each of which serves a different function in terms of movement and access. Because Sonoma County is a tourist area, the vehicle mix includes recreational and sightseeing vehicles as well as autos and trucks. Due to the type of agricultural activities in the area, local and rural roads may carry large farm-related trucks and other heavy equipment.

Freeways

Freeways carry long distance inter-city and intra-city trips and are characterized by having access controls that strictly limit the points where traffic can enter and exit the roadway. The average daily traffic on U.S. 101 in Sonoma County ranges from approximately 40,500 vehicle trips in the northern area of the County in Healdsburg to in excess of 133,000 vehicle trips in downtown Santa Rosa [California Department of Transportation (Caltrans) 2005].

U.S. 101 serves regional and countywide travel as the major north-south through route for the North Coast region. It provides regional access to Mendocino County to the north and to Marin County and the San Francisco Bay Area to the south. U.S. 101 is a commuter corridor between Sonoma County and the San Francisco Bay Area and is heavily traveled during the morning and evening peak time.

Ongoing improvements within the U.S. 101 corridor will add a high occupancy vehicle (HOV) lane from the Town of Windsor in the north to the City of Petaluma in the south. Some portions of these improvements have been constructed and others are in the planning and programming stages. There are also plans for several new and improved interchanges or underpasses at locations along U.S. 101.

State Highways (Primary Arterials)

State highways provide for interregional and inter-city travel. The state highways in the SSP area include Highway 12 and Highway 116. These highways primarily serve through-traffic, commuters, and tourists; however, due to the rural characteristics of the area, they also carry a significant percentage of the local trips. These facilities are congested during commute periods on weekdays and, due to tourism and recreational travel, on weekends as well. The state highways in Sonoma County carry between 20,000 and 74,000 daily vehicle trips. The higher volumes occur primarily on Highway 12 within the City of Santa Rosa (City) urbanized area.

Secondary Arterials

Secondary arterials in general serve the same function as primary arterials but either carry a lesser volume of traffic or carry a higher proportion of local traffic over shorter distances. They are typically relatively high speed/high capacity roads that provide access to regional transportation facilities and serve relatively long trips within a community. Secondary arterials in the SSP area include Llano Road, Occidental Road, Ludwig Avenue, Wright Road, and Todd Road.

Collectors

Collectors primarily serve internal traffic within a local area and carry this traffic to the arterial system. Major collectors do not ordinarily carry a high proportion of long through-trips and are not continuous for great lengths. In urban areas, collectors may carry traffic volumes in excess of 10,000 vehicles per day, although in rural areas volumes are considerably less. Minor collectors serve the same function as major collectors, but occur primarily in rural areas where traffic volumes are lower but the length of trips and the roadway are usually longer.

Local Streets

Local streets are low speed (25 miles per hour [mph] or less), low volume roadways that provide direct access to abutting land uses. Driveways to individual parcels, on-street parking, and pedestrian access are allowed. Local streets can carry as few as 100 daily trips and up to several thousand trips depending on the road length and adjacent land uses.

Rural Roads

Rural roads carry traffic to outlying areas serving agricultural, residential, and recreational land uses. While these roadways are primarily for land access, some may

carry a number of longer distance trips due to the sparse roadway network in some rural areas. Because of the variety of uses they serve, the traffic on rural roads may include autos, trucks, buses (public transit, tourist, and school), recreational vehicles, and farm equipment. In addition, these roads provide critical access for emergency vehicles in remote areas. Rural roads often have narrow cross-sections with no paved shoulders, and are generally not developed with curb, gutter, and sidewalk.

Existing Transportation in the SSP Area

The SSP alternatives are located to the west of Santa Rosa on the City-owned properties known as Kelly Farm, Brown Farm and Alpha Farm. A discussion of the existing transportation network near these sites is provided below.

Kelly Farm (KF1 and KF2)

Kelly Farm is situated between Highway 12 to the south and Occidental Road to the north. The KF1 and KF2 project sites are near the southern and northern ends of Kelly Farm, respectively. Because of its proposed location on the southern portion of Kelly Farm, the nearest access to and from KF1 would be from Highway 12. Conversely, because of its proposed location on the northern portion of Kelly Farm, the nearest access to and from KF2 would be from the main access road off of Occidental Road. However, access to both KF1 and KF2 could occur from either Highway 12 or Occidental Road.

According to the existing Sonoma County General Plan (Sonoma County 1989), Highway 12 near the Kelly Farm is classified as a two-lane primary arterial. According to the Planning Commission's Recommended Draft of the Sonoma County General Plan Update (Draft General Plan, Sonoma County 2007), Highway 12 near Kelly Farm would be classified as a rural principal arterial. The posted speed limit for Highway 12 near Kelly Farm transitions from 55 mph to 50 mph near the site. The existing access road off of Highway 12 into the southern portion of Kelly Farm is located immediately west of the existing Caltrans corporation yard.

According to the existing Sonoma County General Plan, Occidental Road near Kelly Farm is classified as a two-lane secondary arterial. According to the Draft General Plan, Occidental Road near Kelly Farm would be classified as a rural minor arterial. The posted speed limit for Occidental Road near the Kelly Farm is 45 mph. During SSP construction, access to Kelly Farm from Occidental Road would most likely be from the westbound lane, which would require a left turn into the site.

Brown Farm (BF1 and BF2) and Alpha Farm (AF)

Brown Farm and Alpha Farm are both situated south of Highway 12 with a main entrance off the west side of Llano Road. Access to BF1, BF2, and AF would occur from Llano Road.

According to the existing Sonoma County General Plan, Llano Road near Brown Farm and Alpha Farm is classified as a two-lane secondary arterial. According to the

Draft General Plan, Llano Road near Brown Farm and Alpha Farm would be classified as a rural major collector. The posted speed limit for Llano Road near Brown Farm and Alpha Farm is 50 mph.

Travel Patterns in the SSP Area

Existing Travel Patterns

The weekday travel patterns within Sonoma County are typical of outlying portions of urban areas. The primary peak periods of travel are between 7:00 and 9:00AM and between 4:00 and 6:00 PM. A significant number of commuters travel south to Marin County and San Francisco during the morning peak and return during the evening peak. The existing peak periods occur due to the combination of local traffic and longer distance commute traffic.

In addition to these weekday peaks, the SSP area also has high weekend traffic volumes due to the recreational and tourist traffic in the area. The weekend traffic tends to peak during mid-day on Saturday when local travel and tourist travel are each at their peak.

Existing Traffic Volumes and Levels of Service

Local roads near the City farms have low to moderate traffic volumes and acceptable levels of service (see Tables 4.10-1 and 4.10-2). Llano Road and Todd Road operate at Level of Service (LOS) A in both the AM and PM peak hours. Occidental Road operates at LOS A in the AM, but westbound traffic in the PM peak hour degrades to LOS C. Highway 12 carries higher loads, especially during commute times. It operates at LOS C in the westbound direction in the PM peak hour and at LOS F in the eastbound direction.

TABLE 4.10-1
Traffic Counts on Study Area Road Segments

Road Segments	Average Daily Trips	AM Peak Hour		PM Peak Hour	
		NB	SB	NB	SB
Llano Road at Ludwig Avenue	6,400	NB 219	SB 256	NB 472	SB 271
Todd Road at Stony Point Road	11,400	EB 492	WB 266	EB 458	WB 852
Occidental Road near Sanford Road	6,800	EB 312	WB 219	EB 339	WB 332
Highway 12 at Llano Road	N/A	N/A	N/A	EB 1,523	WB 921

Source: 2001 Traffic Counts, Draft Sonoma County General Plan 2020

TABLE 4.10-2
Existing Level of Service on Study Area Road Segments (LOS)

Road Segments	AM Peak Hour		PM Peak Hour	
	Llano Road at Ludwig Avenue	NB - A	SB - A	NB - A
Todd Road at Stony Point Road	EB - A	WB - A	EB - A	WB - A
Occidental Road near Sanford Road	EB - A	WB - A	EB - A	WB - C
Highway 12 at Llano Road	N/A	N/A	EB - F	WB - C

Source: 2001 Traffic Counts, Draft Sonoma County General Plan 2020

Public Transit Service

Three transit operators provide inter-city transit services within the SSP area. Sonoma County Transit provides inter-city travel within Sonoma County. It offers 24 routes (weekdays) with a service area that extends north to Cloverdale, west to Guerneville, south to Petaluma, and east to Sonoma. Golden Gate Transit provides inter-city commuter transit service between Santa Rosa, Sebastopol, Rohnert Park, Cotati, and Petaluma with destinations as far south as Marin County and San Francisco. The Mendocino Transit Authority provides inter-city transit service between the coastal area in Mendocino and Sonoma counties and the City via Bodega Bay and Sebastopol.

Bicycle and Pedestrian Facilities

The Sonoma County Transportation Authority (SCTA) Countywide Bicycle Plan (Sonoma County, 2003) is the countywide planning document for bicycle facilities. The current version was adopted in 2003, and the subsequent update is currently under development.

The Countywide Bicycle Plan serves as a resource for information about current and planned facilities. According to maps included in the Countywide Bicycle Plan, no existing bikeways are designated along Llano Road, Highway 12, or Occidental Road, which are the main roads in the SSP area that would be used to access Brown Farm, Alpha Farm, or Kelly Farm.

An existing Class I bikeway, known as the Joe Rodota Trail, runs east-west through the northern portion of Brown Farm and crosses Llano Road. As defined in the Countywide Bicycle Plan, Class 1 bikeways provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow of motorized traffic minimized.

Regarding proposed bikeways, the Countywide Bicycle Plan maps show a proposed Class II bikeway along Llano Road adjacent to both Brown Farm and Alpha Farm, as well as a Class III bikeway along Occidental road north of Kelly Farm. The Countywide Bicycle Plan defines Class II bikeways as a striped lane for one-way bike travel on a street or highway. Class III bikeways are defined as a shared use with pedestrians or motor vehicles.

The Laguna de Santa Rosa Protected Lands Trails Plan (Sonoma County 2006) has been developed and adopted by the Sonoma County Agricultural Preservation and Open Space District. The Trails Plan includes approximately twelve miles of proposed pedestrian-only and multi-use (pedestrian, equestrian, bicycle, and wheelchair access) trails. Some or a portion of these trails are located on the SSP alternative sites.

GOALS, OBJECTIVES, AND POLICIES

Table 4.10-3 identifies transportation goals, objectives, and policies that relate to the SSP. The table also indicates which criteria in the Transportation Section are responsive to each set of policies.

TABLE 4.10-3
Goals, Objectives, and Policies – Transportation

Adopted Plan Document	Document Section	Document Numeric Reference	Policy	Relevant Evaluation Criteria ¹
Sonoma County General Plan	Circulation and Transit Element	Goal CT-1	Develop a comprehensive circulation and transit system that is safe, efficient, environmentally sound, accessible, and coordinated with the land use plan.	1-4
		Objective CT-1.1	Design and implement a circulation and transit system that will serve projected future travel demand, minimize congestion, achieve the shortest feasible travel times and distances, and achieve the land use plan of City-centered growth and limited growth in rural areas.	

TABLE 4.10-3
Goals, Objectives, and Policies – Transportation

Adopted Plan Document	Document Section	Document Numeric Reference	Policy	Relevant Evaluation Criteria ¹
		Objective CT-2.1	Reduce congestion on the countywide highway system by maintaining a “C” level of service or better on designated arterial and collector roadways unless a lower level of service is shown on Figures CT-2c and CT-2d on pages 291-293, a lower level of service is determined to be acceptable due to environmental or community values existing in some portions of the County, or the project(s) which would cause the lower level of service has an overriding public benefit which outweighs the increased congestions that would result.”	
City of Santa Rosa General Plan	Transportation	T-A T-B T-C T-D T-D-3	Provide a safe and sustainable transportation system. Provide a safe, efficient, free-flowing circulation system. Reduce traffic volumes and speeds in neighborhoods. Maintain acceptable traffic flows. Require traffic studies for development projects that may have a substantial impact on the circulation system.	1-7

Source: Santa Rosa 2002, Sonoma County 1989

Note: 1. Evaluation criteria are identified in Table 4.10-2.

EVALUATION CRITERIA WITH SIGNIFICANCE THRESHOLDS

The evaluation criteria for Transportation are presented in Table 4.10-4. These criteria are drawn from California Environmental Quality Act (CEQA) requirements, along with traffic requirements for Sonoma County and for Caltrans.

TABLE 4.10-4
Evaluation Criteria with Significance Thresholds – Transportation

Evaluation Criteria	As Measured by	Significance Thresholds	Sources of Criteria
1. Will SSP traffic cause congestion on local roadways?	a. Increase in traffic along access roadways due to construction activities. b. Level of Service (LOS) along affected roadways and at intersections.	Increase that exceeds roadway capacity. Increase in traffic due to operational and maintenance activities resulting in LOS below standards of local jurisdictions.	CEQA Guidelines Appendix G, Checklist Item XV (a)
2. Will SSP construction cause traffic delays, transit delays, delays for bicycles and pedestrians and delays for emergency vehicles?	Miles of temporary lane or roadway closures resulting in reduction in traffic capacity.	Greater than 0 miles.	CEQA Guidelines Appendix G, Checklist Item XV (e) and (g) Professional Judgment
3. Will SSP construction restrict access to residences, businesses, or public facilities?	Number of residences, businesses, or public facilities to which access is restricted without an alternate means of vehicular access.	Greater than 0 locations.	CEQA Guidelines Appendix G, Checklist Item XV (e) Professional Judgment
4. Will SSP construction increase traffic hazards to motor vehicles, bicyclists, or pedestrians?	Number of locations where there is ingress or egress of construction equipment onto a major roadway not in accordance with defined safety regulations.	Greater than 0 locations.	CEQA Guidelines Appendix G, Checklist Item XV (d)

TABLE 4.10-4
Evaluation Criteria with Significance Thresholds – Transportation

Evaluation Criteria	As Measured by	Significance Thresholds	Sources of Criteria
5. Will SSP construction traffic damage public or private roadways?	Number of miles of roadway that are not restored to existing conditions or better.	Greater than 0 miles.	Professional Judgment
6. Will there be adequate parking for SSP construction activities?	Number of construction related vehicles that cannot be accommodated by on-site parking.	Greater than 0 vehicles.	CEQA Guidelines Appendix G, Checklist Item XV (f)
7. Will the SSP impact residential or commercial on-street parking?	Reduction in the number of on-street parking spaces, where alternative parking is not available.	Greater than 0 spaces.	CEQA Guidelines Appendix G, Checklist Item XV (f)

Notes:

CEQA checklist item XV (b) was addressed in the Initial Study for the IRWP Program, which documented that the County Congestion Management Agency is no longer funded and there are no standards to be met by the Program. CEQA checklist item XV (c) was also addressed in the Initial Study, which documented that none of the alternatives will require a change in air traffic patterns, regarding either an increase in air traffic levels or change in location.

METHODOLOGY

Traffic and circulation impacts associated with the SSP were evaluated against the criteria listed in Table 4.10-4. The number of construction vehicle trips was determined from information located in *TM 8, Implementation Evaluation* in Volume 5 of this Draft EIR. The traffic and transportation impacts caused by the construction of the SSP components were estimated based on typical construction practices.

Temporary impacts to area roads are assessed based upon the estimated additional traffic for worker and construction vehicles relative to the roadway capacity. Baseline traffic counts, roadway capacities, and levels of service have been taken from the Draft Sonoma County General Plan 2020 EIR. Baseline plus Project calculations include a 10 percent increase in baseline traffic from 2001 to approximately 2010 when the ponds may be constructed to account for growth. The Project’s peak hour morning trips were estimated at 10 percent of peak daily construction trips, and peak hour afternoon trips were estimated at 3 percent of peak daily construction trips, because the job sites would likely be closed before the 4:00 PM peak hour. The information is provided in *Appendix H, Traffic Calculations*, of this Draft EIR.

The SSP is also evaluated to determine if construction would result in lane closures or access restrictions. In addition, worker parking and construction staging areas are discussed in terms of their potential traffic impacts.

Estimated Truck Trips and Employee Trips

To capture the peak construction vehicle trips for the Storage component, it is assumed that peak construction would occur over a 7-month period in construction year one, during which pond excavation would occur and embankment, outlets, spillways, and underdrains would be constructed. In construction year two, it is assumed that peak construction for the Storage component would occur over a 4-month period during which pond excavation, and embankment and liner work would overlap with other construction activities.

During construction, each of the pond sites requires import or export of fill that would be hauled into or out of the site in dump trucks. At maximum, 100 dump truck round trips would be made in a day. In addition, employee trips and supplies and materials trips would occur, resulting in 50-65 round trips, for a total of 165 round trips, or 330 vehicle trips per day. Table 4.10-5 indicates the number of haul and material truck trips that are estimated for each site and the length of time to complete the hauling activity. It is also anticipated that hauling and deliveries (e.g., soil and equipment) would be dispersed throughout the day.

TABLE 4.10-5
Number of Construction Truck Trips and Length of Hauling Activity per Site

	KF1	KF2	BF1	BF2	AF
Construction Truck Trips	4,600	5,100	6,100	28,900	4,200
Length of Hauling Activity (months)	2	2	3	13	2

Construction of the Pump Station component would occur over a 13-month period from the beginning of October in construction year one to the end of October in construction year two. It is estimated that approximately 50 trips per day (25 round trips) would be associated with the construction of each Pump Station component, above and beyond the trips for pond construction.

Construction of the Pump Station component would overlap with many of the construction activities for the Storage component. But peak pump station construction traffic would not overlap with peak pond construction traffic. Therefore, the maximum number of one way vehicle trips estimated during concurrent construction of the Pump Station component and the Storage component is 330 (165 round trips). This calculation represents a “worst case” estimate for construction-related trips during the peak of construction activities.

No additional employees would be hired to maintain the ponds, and each of the City farms has recycled storage ponds that already need to be maintained on the sites. Operational and maintenance trips are expected to increase very little, estimated at one round trip per week.

Standard Traffic Control Procedures

Project Measure 3.2.15, Standard Traffic Control Procedures, details typical encroachment permit provisions within the SSP area roadway system right-of-way that would be required

by each relevant jurisdiction, including Caltrans and the County of Sonoma Department of Transportation and Public Works. Elements of the Standard Traffic Control Procedures provide for the requirement to obtain all necessary encroachment permits and transportation permits from the appropriate agencies. At this time, it is anticipated that the SSP would require encroachment and transportation permits from both Caltrans and the Sonoma County Permit Resource Management District. The procedures would also provide for alternative routes and detours to avoid traffic delays. The procedures also provide for repair of roadway damage and include construction methods along roadways to ensure safety, emergency vehicle access, construction hours, and ingress/egress of construction equipment onto a major roadway.

Also, Project Measure 3.2.15, Standard Traffic Control Procedures restricts Kelly Farm construction traffic entering from Highway 12 to “right in, right out” movements, and prohibits heavy truck traffic on Highway 12 after 4 PM.

IMPACTS AND RECOMMENDED MITIGATION MEASURES

TABLE 4.10-6
Transportation Impacts

Evaluation Criteria	Significance Threshold	Impact	Type of Impact ¹	Level of Significance ²
10.1. Will traffic from the SSP cause congestion on local roadways?	a. Number of trips generated that would exceed available roadway capacity.			
<i>KF1 and KF2</i>		Up to 330 daily trips	C	○
<i>BF1, BF2, and AF</i>		Available roadway capacity exceeded on eastbound lane of Highway 12	C	●
<i>KF1, KF2, BF1, BF2 and AF</i>	b. Increase in traffic due to operational and maintenance activities resulting in LOS below standards of local jurisdictions.	2 trips per week	O&M/P	○
10.2. Will SSP construction cause traffic delays, transit delays, delays for bicycle and pedestrian traffic and delays for emergency vehicles?	Greater than 0 miles of temporary lane or roadway closures resulting in reduction in traffic capacity	None	C	==

**TABLE 4.10-6
Transportation Impacts**

Evaluation Criteria	Significance Threshold	Impact	Type of Impact ¹	Level of Significance ²
10.3. Will SSP construction restrict access to residences, businesses, or public facilities?	Greater than 0 locations.	None	C	==
10.4. Will SSP construction increase traffic hazards to motor vehicles, bicyclists, or pedestrians?	Greater than 0 locations.	Up to 330 daily trips	C	○
10.5. Will SSP construction traffic damage public or private roadways?	Greater than 0 miles.	Damaged roadways would be repaired	C	○
10.6. Will there be adequate parking for the SSP construction activities?	Greater than 0 spaces.	None	C	==
10.7. Will the SSP impact residential or commercial parking?	Greater than 0 spaces where alternative parking is not available.	None	C/O&M/P	==

Notes: 1. Type of Impact:
C: Construction
O&M: Operation and Maintenance
P: Permanent

2. Level of Significance:
● Significant impact before and after mitigation
⊙ Significant impact before mitigation; less than significant impact after mitigation
○ Less than significant impact; no mitigation proposed
== No impact

Impact: 10.1. Will traffic from the SSP cause congestion on local roadways?

Analysis: *Storage component - Significant: BF1, BF2, and AF*

Construction

Peak construction trips for storage are estimated at 200 truck trips and 130 employee and supply trips for a total of 330 daily trips. Access to the BF1, BF2, and AF sites would likely occur from Llano Road via Highway 12. Table 4.10-7 shows the baseline plus peak project construction trips during the AM and PM peak hour on local roadways and Highway 12, as well as the capacity per lane of each roadway. Shading indicates lanes that would exceed capacity.

TABLE 4.10-7
Baseline plus Peak Project Construction Traffic Volumes

Road Segment	Applicable Ponds	AM Peak Hour		PM Peak Volume		Capacity per Lane
		NB	SB	NB	SB	
Llano Road at Ludwig Avenue	BF1, BF2, AF	NB 274	SB 315	NB 529	SB 308	1,200
Todd Road at Stony Point Road	BF1, BF2, AF	EB 376	WB 274	EB 383	WB 375	1,200
Highway 12 at Llano Road	BF1, BF2, AF	N/A	N/A	EB 1,685	WB 1,023	1,280

Source: GP 2020 Draft EIR 2006, Appendix 7

For construction at any of the sites, it is estimated that up to 330 daily one-way construction vehicle trips could be generated during the earth-moving phase of construction. Hauling activity would occur over a three-month period at BF1, over 13 months split between two construction seasons for BF2, and a 2-month period at AF.

Table 4.10-7 shows that Llano and Todd Roads have sufficient capacity for construction trips for BF1, BF2, and AF. The Table also indicates that construction traffic on Highway 12 eastbound would exceed the lane capacity in the PM peak hour. This is considered a significant impact.

Operation and Maintenance

Table 4.10-2 in the Setting section above indicates that local roadways operate at LOS A to C in the AM and PM peak hours, except Highway 12, which operates at LOS F in the eastbound direction in the PM peak hour. When construction of the SSP is completed, only occasional trips for maintenance of the storage pond facilities would be needed, averaging less than one trip per day at any of the pond sites. The impact would be less than significant.

Pump Station component - Significant: BF1, BF2, and AF

Construction

Construction of the Pump Station component would occur over a 13-month period from the beginning of October in construction year one to the end of October in construction year two. It is estimated that at the height of construction, approximately 50 trips per day (25 round trips) would be associated with the construction of the Pump Station component alone. Construction of the pump station would overlap with construction of the ponds, which were found to be significant for BF1, BF2, and AF because of existing congestion on Highway 12, especially during the PM peak hour. Therefore, the construction traffic for the Pump Station component would

contribute to the total daily construction traffic reaching Highway 12. This is considered a significant impact.

Operation and Maintenance

Table 4.10-2 in the Setting Section above indicates that local roadways operate at LOS A to C in the AM and PM peak hours, except Highway 12, which operates at LOS F in the eastbound direction in the PM peak hour. When construction of the SSP is completed, only occasional trips for maintenance of the pump station facilities would be needed, averaging less than one trip per day at any of the pond sites. The impact would be less than significant.

Storage component – Less than Significant: KF1 and KF2

Construction

Peak construction trips for storage are estimated at 200 truck trips and 130 employee and supply trips for a total of 330 daily trips. Access to both KF1 and KF2 sites could occur from either Highway 12 or Occidental Road. Table 4.10-8 shows the baseline plus peak project construction trips during the AM and PM peak hour on Highway 12 and Occidental Road near KF1 and KF2, as well as the capacity per lane of each roadway.

TABLE 4.10-8
Baseline plus Peak Project Construction Traffic Volumes

Road Segment	Applicable Ponds	AM Peak Hour		PM Peak Volume		Capacity per Lane
		EB	WB	EB	WB	
Occidental Road near Sanford Road	KF1, KF2	EB 574	WB 326	EB 514	WB 947	1,200
Highway 12 at Llano Road	KF1, KF2	N/A	N/A	EB - no project traffic	WB 1,023	1,280

Source: GP 2020 Draft EIR, 2006, Appendix 7

Hauling activity would occur over a two-month period. Pond construction in general would occur over a 7-month period in construction year one, and over a 4-month period in construction year 2.

Project Measure 3.2.15, Standard Traffic Control Procedures restricts construction traffic entering from Highway 12 to “right in, right out” westbound only movements, and prohibits heavy truck traffic on Highway 12 after 4 PM. The westbound lane of Highway 12 near KF1 and KF2 has sufficient capacity for construction trips; therefore, construction related traffic from the Storage component would not cause congestion. The impact would be less than significant.

Table 4.10-8 also shows that Occidental Road has sufficient capacity for construction trips for KF1 and KF2. The impact would be less than significant.

Operation and Maintenance

Table 4.10-2 in the Setting Section above indicates that local roadways operate at LOS A to C in the AM and PM peak hours, except Highway 12, which operates at LOS F in the eastbound direction in the PM peak hour. When construction of the SSP is completed, only occasional trips for maintenance of the storage pond facilities would be needed, averaging less than one trip per day at any of the pond sites. The impact would be less than significant.

Pump Station component – Less than Significant: KF1 and KF2

Construction

Construction of the Pump Station component would occur over a 13-month period from the beginning of October in construction year one to the end of October in construction year two. It is estimated that approximately 50 trips per day (25 round trips) would be associated with the construction of the Pump Station component alone. Construction of the pump station would not increase total peak construction traffic, which was found to be less than significant for KF1 and KF2. Highway 12 westbound lane and Occidental Road have sufficient capacity for construction trips; therefore, construction related traffic from the Pump Station component would not cause congestion. The impact would be less than significant.

Operation and Maintenance

Table 4.10-2 in the Setting section above indicates that local roadways operate at LOS A to C in the AM and PM peak hours, except Highway 12, which operates at LOS F in the eastbound direction in the PM peak hour. When construction of the SSP is completed, only occasional trips for maintenance of the pump station facilities would be needed, averaging less than one trip per day at any of the pond sites. The impact would be less than significant.

Mitigation: *Storage component: KF1 and KF2*
Pump Station component: KF1 and KF2

No mitigation is needed.

Storage component: BF1, BF2, and AF
Pump Station component: BF1, BF2, and AF

No feasible mitigation has been identified.

After

Mitigation: *Storage component - Significant: BF1, BF2, and AF*
Pump Station component - Significant: BF1, BF2, and AF

While alternate routes to construction sites would be identified where applicable through the Standard Traffic Control Procedures adopted as part of the Project (Measure 3.2.15), construction under this component requires access by employees, equipment and material to the locations where facilities are to be constructed, and there may be no feasible means to provide alternate routes. Therefore, the impacts related to congestion on Highway 12 due to construction of the Project, although temporary, cannot be fully mitigated, and the impact could remain significant.

Impact: 10.2 and 10.3. Will traffic from the SSP impact transportation based on evaluation criteria 2 and 3?

Analysis: Storage component – No Impact: KF1, KF2, BF1, BF2, and AF

No construction would occur within a public roadway at any of the pond sites. Because construction would not occur within the roadway, no lane closures and no restrictions on access to other properties in the area are expected to be required. Therefore, there would be no impact.

Pump Station component – No Impact: KF1, KF2, BF1, BF, and AF

Similar to the Storage component, no construction would occur within a public roadway. Because construction would not occur within the roadway, no lane closures and no restrictions on access to other properties in the area are expected to be required. Therefore, the impact would be less than significant.

Mitigation: No mitigation is needed.

Impact: 10.4. Will SSP construction increase traffic hazards to motor vehicles, bicyclists, or pedestrians?

Analysis: Storage component - Less than Significant: KF1, KF2, BF1, BF2, and AF

Construction of the Storage component would include hauling of heavy equipment and supplies, and commute trips by the construction crew to and from the construction site. These activities would result in traffic entering and leaving the construction site from public roads. An existing Class I bikeway, known as the Joe Rodota Trail, runs east-west through the northern portion of Brown Farm and crosses Llano Road.

Project Measure 3.2.15 would require the City to comply with provisions outlined in Encroachment and Transportation permits in accordance with governing agency regulations and specifications. Specifically, Project Measure 3.2.15 restricts Kelly Farm construction traffic entering from Highway 12 to “right in, right out” movements, and prohibits heavy truck traffic on Highway 12 after 4 PM. To ensure safety, under Project Measure 3.2.15, the City would install temporary caution signs on the Joe Rodota Trail during construction, as well as on any other bicycle or pedestrian trails that cross an access road in the vicinity of the SSP. Signs shall alert bicycle and

pedestrian traffic to the presence of construction traffic and to use caution when crossing roads.

Implementation of Project Measure 3.2.15 would minimize hazards to motor vehicles, bicyclists, or pedestrians from construction traffic entering and leaving the construction area. The impact would be less than significant.

Pump Station component - Less than Significant: KF1, KF2, BF1, BF2, and AF

Construction of the Pump Station component would also result in traffic entering and leaving the construction site from public roads. Under Project Measure 3.2.15, the City would comply with provisions outlined in Encroachment and Transportation permits in accordance with governing agency regulations and specifications. This Project Measure would minimize hazards due to construction traffic entering and leaving the construction area. The impact would be less than significant.

Mitigation: No mitigation is needed.

Impact: 10.5. Will SSP construction traffic damage public or private roadways?

Analysis: Storage component - Less than Significant: KF1, KF2, BF1, BF2 and AF

Construction of the Storage component would include the use of heavy vehicles which could potentially damage local public roadways. Under Project Measure 3.2.15, the City would restore any roads damaged by construction-related vehicles to existing conditions or better. The impact would be less than significant.

Pump Station component - Less than Significant: KF1, KF2, BF1, BF2 and AF

Construction of the Pump Station component would also include the use of heavy vehicles which could potentially damage local public roadways. Under Project Measure 3.2.15, the City would restore any roads damaged by SSP construction-related vehicles to existing conditions or better. The impact would be less than significant.

Mitigation: No mitigation is needed.

Impact: 10.6 and 10.7. Will there be adequate parking for the SSP construction activities, or will the SSP impact residential or commercial parking?

Analysis: Storage component – No Impact: KF1, KF2, BF1, BF2 and AF

All construction-related vehicles associated with construction of the Storage component would be accommodated by on-site parking within the staging areas at each of the proposed sites. There would be no need for off-site parking, and thus there would be no impact on residential or commercial parking.

Pump Station component – No Impact: KF1, KF2, BF1, BF2 and AF

Similar to the Storage component, all construction-related vehicles associated with construction of the Pump Station component would be accommodated by on-site parking within the staging areas at each of the proposed sites. There would be no need for off-site parking, and thus there would be no impact on residential or commercial parking.

Mitigation: No mitigation is needed.

No Project Alternative

Impact: 10.1 through 10.7. Will the No Project alternative impact transportation based evaluation criteria 1 through 7

Analysis: *No Impact*

No construction is associated with the No Project alternative, and no operation of new facilities would occur. Therefore, this alternative would not cause congestion on local roadways, cause traffic delays, restrict access to businesses, increase traffic hazards, damage roadways, or impact parking.

Mitigation: No mitigation is needed.

CUMULATIVE IMPACTS

A number of projects in the SSP study area could have overlapping effects on traffic. For example, improvements are planned for the portion of Highway 12 near Kelly Farm that would ultimately improve the LOS (Draft Sonoma County General Plan). The planned improvements include changing Highway 12 from 2 lanes to 4 lanes from Fulton Road to Llano Road, and from 2 lanes to 3 lanes from Llano Road west towards Sebastopol. Roadway improvements such as these in the SSP area would ultimately improve traffic flow, but could cause traffic congestion, delays, access restrictions, and hazards during the construction period.

In addition to roadway improvements, there are other construction projects that include sewer and water line replacements and extensions, all of which would disrupt roadways and have construction-period impacts on traffic, especially on Ludwig and Llano Roads. This includes other projects proposed by the Subregional System such as urban reuse of recycled water and discharge of recycled water, as well as maintenance and upgrade projects slated for the Laguna Plant in the City of Santa Rosa's Capital Improvement Program.

Impact: 10.1C. Will the SSP plus cumulative projects cause congestion on local roadways?

Analysis: *Significant*

Highway 12 in the eastbound direction currently exceeds the roadway capacity during the PM peak hour. If BF1, BF2, or AF were constructed simultaneously with the planned improvements along Highway 12, the combination of the projects could temporarily worsen traffic congestion

during peak hours. Cumulative projects may also occur along Occidental Road that could cause significant cumulative impacts for KF1 and KF2 construction traffic. No feasible mitigation has been identified to reduce the SSP contribution to cumulative impacts.

Pending General Plan Updates

The Draft General Plan 2020 for Sonoma County includes one new objective applicable to transportation for the Project. Consistency of the Project with the new objective is evaluated below:

New Objective CT-1.5: Reduce greenhouse gas emissions by minimizing future increase in vehicle miles traveled.

Increases in vehicle miles travelled for operation and maintenance of the SSP would be minimal from the standpoint of increasing greenhouse gas emissions. An analysis of the impacts that operation of SSP facilities plus cumulative projects would have on the city's goals for reducing eCO2 emissions is provided under Impact 11.7C in the Air Quality Section.

Impact: 10.2C and 10.3C. Will traffic from the SSP plus cumulative projects impact transportation based on evaluation criteria 2 and 3?

Analysis: *No Impact*

Storage and Pump Station component construction would not occur within a public roadway; therefore, no lane closures causing traffic delays or access restrictions to other properties are expected to be required. Increases in traffic for operation and maintenance are very small. As a result, the Project does not contribute to cumulative impacts.

Impact: 10.4C. Will SSP construction plus cumulative projects increase traffic hazards to motor vehicles, bicyclists, or pedestrians?

Analysis: *Less than Significant*

Under Project Measure 3.2.15, the City would comply with provisions outlined in Encroachment and Transportation permits in accordance with governing agency regulations and specifications, and would install temporary caution signs on the Joe Rodota Trail during construction, as well as on any other bicycle or pedestrian trails that cross an access road in the vicinity of the SSP construction site. If Llano Road projects or Highway 12 improvements were to occur at the same time as SSP, Caltrans, the County of Sonoma, and City would amend their Traffic Control Procedures to reduce traffic hazards to acceptable levels. As a result, the project's contribution to cumulative impacts would not be considerable. The impact would remain less than significant.

Impact: 10.5C. Will SSP construction traffic plus cumulative projects damage public or private roadways?

Analysis: *Less than Significant*

Though heavy vehicles used in the construction process may damage area roadways, the City would restore affected roadways to existing conditions or better as required under the Standard Traffic Control Procedures. Thus the SSP would not contribute to cumulative roadway damage. The impact would remain less than significant.

Impact: **10.6C and 10.7C. Will traffic from the SSP plus cumulative projects impact transportation based on evaluation criteria 6 and 7?**

Analysis: *No Impact*

All construction-related vehicles associated with construction of the SSP facilities would be accommodated by on-site parking within the staging areas at each of the proposed sites. There would be no need for off-site parking, and thus there would be no impact on residential or commercial parking. The project would therefore not contribute to cumulative parking demand.

SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

TABLE 4.10-9

Summary of Significant Impacts and Mitigation Measures – Transportation

Impact	Level of Significance	Mitigation Measure
KF1		
10.1C. The SSP plus cumulative projects may cause congestion on local roadways.	●	No feasible mitigation has been identified.
KF2		
10.1C. The SSP plus cumulative projects may cause congestion on local roadways.	●	No feasible mitigation has been identified.
BF1		
10.1 The Storage component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1 The Pump Station component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1C. The SSP plus cumulative projects may cause congestion on local roadways.	●	No feasible mitigation has been identified.
BF2		
10.1 The Storage component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1 The Pump Station component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1C. The SSP plus cumulative projects may cause congestion on local roadways.	●	No feasible mitigation has been identified.
AF		
10.1 The Storage component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1 The Pump Station component construction may cause congestion on local roadways.	●	No feasible mitigation has been identified.
10.1C. The SSP plus cumulative projects may cause congestion on local roadways.	●	No feasible mitigation has been identified.

Notes: Level of Significance:

- Significant impact before and after mitigation
- ⊙ Significant impact before mitigation; less than significant impact after mitigation

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