

Site Qualification Guide  
**SynSel**  
Oroville, CA





## A letter from the CEO:

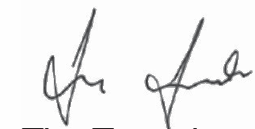
SynSel's mission is driven by socially responsible investing to produce Renewable Second-Generation Biofuels. We've assembled a leading team to bring this best-in-breed technology to market. Our goal is deploying our repeatable platform to 100 sites across the US and Canada in the next eight years.

Many rural communities are struggling from the closing of paper mills. Our Biorefineries complement existing forest-related industries within these communities by providing a profitable and eco-friendly outlet for waste wood. We use this wood to produce American-made, drop-in fuels. The production process is also good for the environment and provides a reduction in greenhouse gas emissions compared to fossil fuel-based equivalents.

Government incentives to create jobs and reduce carbon footprints are shepherding the petroleum industry to support America's burgeoning synthetic fuel sector. The SynSel fuel platform garners the highest priority and rewards from mandates designed to avoid the shortcomings of ethanol and biodiesel fuel.

Not only does your socially responsible and impact investor achieve an attractive return that is good for the environment, it also creates nearly 250 direct and indirect jobs at each site. The end result is resilient communities that can continue to succeed in forest-related industries. One SynSel Biorefinery at a time, we will do our part to increase national energy security, combat global warming, and increase resiliency in rural America. Are you ready to join the SynSel Synthetic Fuels Revolution?

Respectfully yours,



Tim Tawoda





## Sustainable Forestry

Although renewable waste wood feedstock is readily available across the US, SynSel works with and supports organizations that use best practices in sustainable forestry. We promote Environmental Stewardship for landowners within our procurement zones.

SynSel's biomass will be procured in accordance of multiple third-party certification programs including:

- The Forest Stewardship Council
- The Sustainable Forestry Initiative (SFI)
- The Program for the Endorsement of Forest Certification (PEFC)
- The American Tree Farm System

We will continue to promote certifications across the supply chain with an emphasis on sustainable forestry – one SynSel Biorefinery at a time.

## Enviro Industrial Parks

SynSel is throwing away the “Take, Make, Waste” model of production where waste is landfilled. Instead, we are further creating a Post-Carbon Economy that is designed to use the byproducts from the production of biofuel to provide material streams that are efficiently reused. The benefits of this approach are clear: less waste, improved environmental impact, and lower costs. We will also provide opportunities to further mitigate waste from the community.

The clustering of these manufacturing and service organizations near SynSel plants allows for the sharing of resources – infrastructure, inputs, and information – for better economic, environmental, and social performance.





## Community Resiliency

Rural America needs help. Plant closures and job loss have stressed local communities. What remains is high unemployment, underutilized manufacturing zones, and excess wood feedstock.

The locations highlighted in this Site Qualification Guide are an ideal fit for a SynSel Biorefinery. These projects have the necessary support by local and state officials. There is a qualified and available workforce. Plus, there is an abundance of wood feedstock required for SynSel Plants to produce drop-in fuels.

One Biorefinery at a time, SynSel does its part to rebuild rural America and strengthen community resiliency.

## Responsible Investing

Today's Socially Responsible Investor has a lot to consider when making investment decisions. What is the technology and its environmental impact? What's the source of feedstock? What's the carbon footprint of production and transportation? Where is the product produced and by whom? Not to mention, what is the return?

SynSel Biorefineries use a breakthrough catalytic process to produce drop-in fuels that reduces greenhouse gas emissions by over 65% compared to fossil fuel-based equivalents. Locally grown wood is used for the "Americanmade" fuel. The drop-in fuel price is market-driven, while wind and solar sell electricity back to the grid at a price set by the utility company.





# SynSel Oroville

## Site Specifications

### Industrial Site Information

City ..... Oroville, CA  
County ..... Butte  
Elevation..... 167 ft  
Site Acreage ..... 80  
Zoning Classification ..... Industrial/Commercial

### Transportation

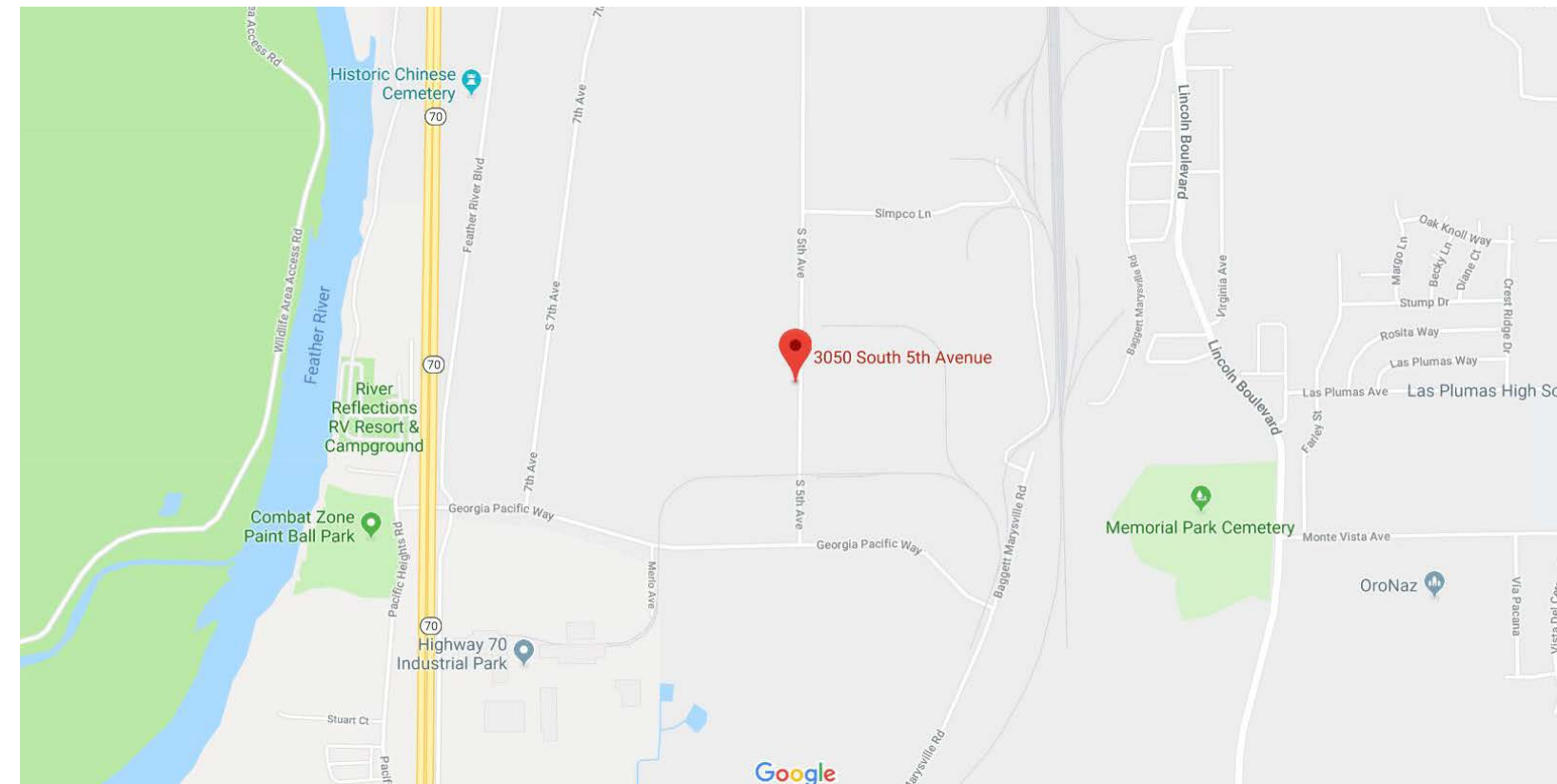
Adjacent Roadway..... State Route 70 & 99  
Nearest Airport..... Oroville Municipal Airport  
Distance ..... 3 miles  
Nearest International Airport..... Sacramento (SMF), CA  
Distance ..... 66 Miles  
Nearest Water Way ..... Feather River  
Distance ..... 1.2 miles  
Nearest Railroad..... Union Pacific  
Distance ..... 1 mile

### Utilities

Natural Gas Company.....Xoom Energy  
Electric Power Company..... Pacific Gas & Electric  
Water Supplier..... California Water Service Co.  
Sewer Supplier..... Thermolito Water & Sewer

### Economy (County)

Current Unemployment ..... 6%  
Population estimates (2016)..... 19,895

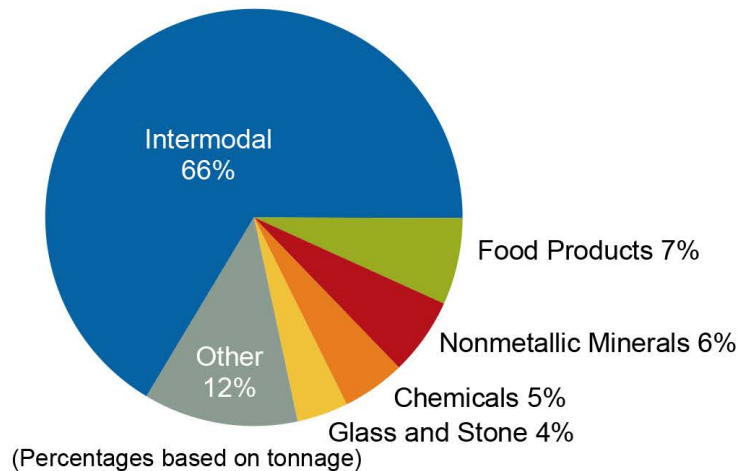




## Rail Fast Facts For 2017

<b>Operations</b>	Number of freight railroads	25
	Freight railroad mileage	4,828
<b>Employment and Earnings</b>	Number of freight rail employees	8,153
	Average wages & benefits per freight rail employee	\$123,400
<b>Railroad Retirement</b>	Number of railroad retirement beneficiaries	25,593
	Railroad retirement benefits paid	\$572 million
<b>Economic Impact</b>	Nationwide, in 2017, major U.S. railroads supported approximately 1.1 million jobs (about eight jobs for every railroad job), nearly \$219.5 billion in annual economic activity, \$71 billion in wages and almost \$26 billion in tax revenues.	
<b>Fuel Efficiency</b>	In 2017, America's railroads moved a ton of freight an average of 479 miles on one gallon of fuel. That's like going from Los Angeles to Tucson, AZ. On average, railroads are four times more fuel efficient than trucks. Moving freight by rail instead of truck reduces greenhouse gas emissions by on average 75 percent.	
<b>Cutting Highway Gridlock</b>	One train can carry as much freight as several hundred trucks. It would have taken approximately 9.0 million additional trucks to handle the 162.3 million tons of freight that originated in, terminated in, or moved through California by rail in 2017.	

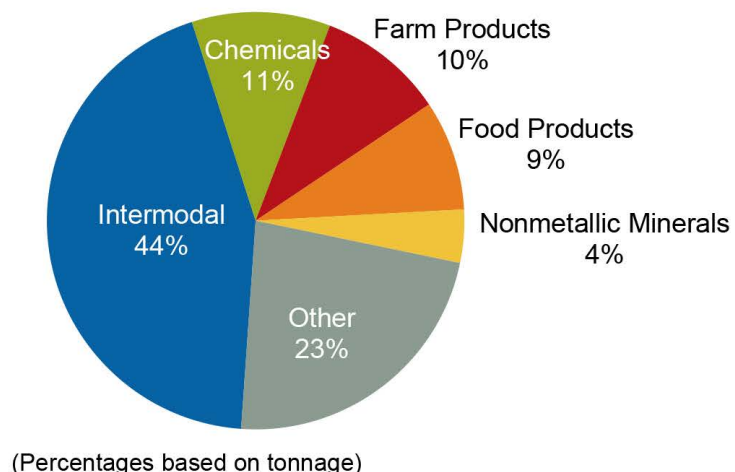
## Rail Traffic Originated in 2017 Total Tons: 62.9 million Total Carloads: 3,577,300



Commodity	Tons	Carloads
Intermodal	41,804,000	3,294,200
Food Products	4,232,000	54,000
Nonmetallic Minerals	3,775,000	46,700
Chemicals	3,079,000	31,400
Glass and Stone	2,494,000	23,000
Other	7,537,000	128,100

Source: AAR Analysis of STB Waybills

## Rail Traffic Terminated in 2017 Total Tons: 103.7 million Total Carloads: 3,660,700



Commodity	Tons	Carloads
Intermodal	45,579,000	2,925,900
Chemicals	11,130,000	117,800
Farm Products	10,174,000	95,700
Food Products	8,851,000	95,100
Nonmetallic Minerals	4,274,000	51,400
Other	23,704,000	374,800

Source: AAR Analysis of STB Waybills

	Miles Operated In California in 2017
<b>Class I Railroads</b>	
BNSF Railway Company	2,169
Union Pacific Railroad Co.	3,291
	<hr/> 5,460
<b>Regional Railroads</b> (none)	
<b>Local Railroads</b>	
Arizona & California Railroad Co.	91
Central Oregon & Pacific Railroad	65
Goose Lake Railway, LLC	38

California 2017 Totals	Number of Freight Railroads	Miles Operated	
		Excluding Trackage Rights	Including Trackage Rights
Class I	2	3,663	5,460
Regional	0	0	0
Local	15	862	1,062
Switching & Terminal	8	303	381
<b>Total</b>	<b>25</b>	<b>4,828</b>	<b>6,903</b>

	Miles Operated In California in 2017
<b>Local Railroads, cont.</b>	
Northwestern Pacific Railroad	62
Pacific Sun Railroad, LLC	67
Sacramento Valley Railroad	9
San Diego & Imperial Valley Railroad	43
San Joaquin Valley Railroad Co.	492
Santa Cruz and Monterey Bay Railway Co.	32
Santa Maria Valley Railroad	14
Sierra Northern Railway	75
Stockton Terminal & Eastern Railroad	25
Trona Railway Co.	31
Ventura County Railroad Company	13
West Isle Line, Inc.	5
	<hr/> 1,062

<b>Switching &amp; Terminal Railroads</b>	
California Northern Railroad	283
Modesto & Empire Traction Co.	5
Napa Valley Railroad Co.	21
Pacific Harbor Line, Inc.	51
Quincy Railroad	3
Richmond Pacific Railroad Corp.	11
San Francisco Bay Railroad	5
West Oakland Pacific Railroad	2
	<hr/> 381



**Class I Railroad:** A railroad with 2017 operating revenues of at least \$447.6 million. **Regional Railroad:** A non-Class I line-haul railroad that has annual revenues of at least \$40 million, or that operates at least 350 miles of road and revenues of at least \$20 million. **Local Railroad:** A railroad which is neither a Class I nor a Regional Railroad, and which is engaged primarily in line-haul service. **Switching & Terminal Railroad:** A non-Class I railroad engaged primarily in switching and/or terminal services for other railroads.





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