

DARLING INGREDIENTS INC. OPERATIONAL STATEMENT

Project Background

RENDERING PLANT

The existing Darling Ingredients Inc. (Darling) facility is located on a 5.22-acre parcel on Belgravia Road between Church Avenue and E Street. California Avenue and between Fruit Avenue and West Avenue in the southwest area of the City of Fresno (the City). The facility was constructed and began operation in 1956 as a slaughterhouse and beef packing company, with limited rendering operations. Rendering gradually expanded, packing operations phased out and the rendering plant site was annexed to the city in 1971. Over the last 60 years, non-industrial urban uses were allowed to be developed in the surrounding area such that residential neighborhoods are now within one-quarter mile of the rendering plant (City of Fresno 2016).

The existing Darling facility is a food processing byproduct conversion operation that collects and processes raw material (primarily beef fat, bone, and offal) into proteins and fats that can be beneficially used as ingredients in food, fertilizer, feed, and fuel. The conversion process has the potential to generate odor which is managed through an odor abatement system. Evaporated moisture from the conversion process is condensed, pretreated, and discharged to the Fresno-Clovis Wastewater Treatment Plant (the WWTP). Air emissions from the process, including but not limited to the boiler system and odor abatement system, are regulated and permitted by the San Joaquin Valley Air Pollution Control District (SJVAPCD). The facility currently employs 38 people and is permitted to process as much as 850,000 pounds of material daily in accordance with a SJVAPCD Permit. The facility's major sources of raw materials include Cargill, Harris Ranch Beef, and others. Most materials are shipped from within 200+ miles of the existing facility.

In order to relocate this heavy industrial facility away from the residential neighborhoods that have been developed in close proximity to the existing facility, Darling has indicated a willingness to relocate to another suitable site in the City.

Proposed Project

The City is considering a general plan amendment (GPA) and rezone of the land adjacent to the WWTP to accommodate relocation of the Darling conversion facility from a more sensitive location in the City.

The proposed project would relocate the Darling facility from its current location on Belgravia Ave just southwest of downtown to the new 35 to 50-acre site near the WWTP and expand its current permitted processing limits from 850,000 pounds per day to a minimum of 10 million pounds per week. The project would require a GPA to change the General Plan land use designation of land from Public Facility to Heavy Industrial, and a rezone of the same property from PI to Industrial-Heavy (IH). The proposed Darling facility would also require a conditional use permit (CUP) to operate within the IH zone.

The proposed project, including necessary entitlements and other approvals, is described in detail below.

Project Entitlements

Discretionary approvals and permits are required by the City for implementation of the proposed project. The project would require the following discretionary approvals and actions, including:

- ▲ General Plan Amendment
- ▲ Rezone
- ▲ Site Plan Approval
- ▲ Conditional Use Permit

Subsequent ministerial actions would be required for the implementation of the proposed project including issuance of grading and building permits.

PERMITS AND LICENSES

Like the existing conversion plant, the permits, licenses, and plans listed in Table 1-1 below will also likely be required for operation of the relocated facility.

Table 1-1 Required Permits, Plans, and Licenses for the Darling Facility	
Permit/Licenses	Agency/Entity
Licensed Renderer	CA Department of Food and Agriculture
Inedible Kitchen Grease Renderer	CA Department of Food and Agriculture
Unified Program Facility Permit	County of Fresno Department of Public Health
Spill Prevention Control and Countermeasure Plan (SPCC)	US Environmental Protection Agency (EPA)
Stormwater Pollution Prevention Plan (SWPPP)	California State Water Resources Control Board (SWRCB)
Air Permit	San Joaquin Valley Air Pollution Control District (SJVAPCD)
Wastewater Discharge Permit	City of Fresno
Source: Darling 2017	

Responsible and Trustee Agencies

In addition to approvals from the City, the proposed project would require permit issuance and other discretionary approvals from other agencies. These agencies will serve as responsible and trustee agencies pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This document provides the necessary environmental information for discretionary actions by these agencies.

These agencies may include, but are not limited to, the following.

- ▲ California Department of Transportation
- ▲ California State Water Resources Control Board (SWRCB)
- ▲ San Joaquin Valley Air Pollution Control District (SJVAPCD)
- ▲ County of Fresno

Actions that are necessary to implement the project that must be taken by other agencies are:

- ▲ Issuance of Encroachment Permits – Caltrans and County of Fresno
- ▲ Obtain coverage under the State General Stormwater Permit – SWRCB
- ▲ Issuance of an Authority to Construct Permit – SJVAPCD

▲ Issuance of a Wastewater Discharge Permit – City of Fresno

Location

The project site is located within the City, but not within the City proper; the site is located just east of the WWTP within a large island of incorporated, City-owned property. This 3,200-acre area of incorporated land is separated from the rest of the city by over 2 miles.

Surrounding Land Uses

The project site is located between the WWTP and a PG&E substation at the corner of South Cornelia Avenue and West Jensen Avenue. The WWTP facilities occupy 180 acres (located adjacent to the western boundary of the project site) and percolation ponds occupy an additional 1,700 acres.

Most of the area surrounding the project site is in agricultural use (vineyards, orchards, and various row crops). A few agricultural residences are located near the proposed project site; these residences are located approximately 1,200 feet northeast of the site and 1,300 feet southeast of the site, both on the east side of South Cornelia Avenue.

Project Site Physical Setting

The project site fronts Cornelia Avenue and consists of a total of approximately 35 to 50 acres of land that is leased from the City and mostly cultivated with row crops. The northwest corner of the project site is not cultivated, but the ground is disturbed. There are no structures on the site, except for two metal-lattice electrical transmission towers supporting overhead power lines that bisect the site in an east-west direction.

Land Use Designations and Zoning

The project site is currently designated “Public Facility” in the Fresno General Plan and zoned “Public and Institutional (PI).” The Public Facility designation applies to public facilities such as City and County buildings, schools, colleges, municipal airports, hospitals, fire and police stations, recycling centers, sewage treatment plants, parks, trails, recreational centers, and golf courses.

Consistent with the General Plan designation, the PI zone allows public or quasi-public facilities, including City facilities, utilities, schools, health services, corporation yards, utility stations, and similar uses. Accessory retail uses and services, including food facilities and childcare, are permitted by right.

RENDERING PLANT RELOCATION

Operation

The industrial activities related to the proposed project will be similar to those of the existing Darling facility, and will include an increase in processing capacity. The new plant will continue to serve area businesses including packers, restaurants, food service establishments, butchers, and grocers in the production of animal and vegetable derived fats and proteins for use as ingredients in food, feed, fertilizer, and fuel. The primary industrial activities at the facility would include:

- ▲ Raw Material Collection
- ▲ Conversion of Raw Materials

- ▲ Storage of Finished Products
- ▲ Shipment of Finished Products
- ▲ Fleet Related Activities

Darling anticipates that the relocated operation would process a minimum of 10 million pounds of food processing byproducts on a weekly basis. The anticipated daily production rate would be approximately 2 million pounds or more per day.

The primary operational goal is to process raw materials as quickly as possible. This focus helps improve operational efficiency and the quality of finished products, while at the same time limiting the odor potential. Limited outdoor staging of raw materials is sometimes necessary when inflow of raw materials exceeds processing rates or when there are plant malfunctions.

Wastewater Pretreatment

All the wastewater generated at the facility (a portion of which may include stormwater) would pass through a primary treatment system before being discharged to the WWTP. The primary treatment system would likely consist of a screening step, settling tank with skimmer, an equalization tank, and a dissolved air flotation system. This pretreatment step is designed to reduce the loading of solids, organic matter, and fat, oil, and grease to the WWTP. Despite the performance of the primary treatment system, certain levels of nutrients, soluble organic matter, and other pollutants will be discharged to the WWTP for further treatment. Table 1-2 below provides a summary of the predicted loading to the WWTP. The wastewater discharges from the Darling facility to the WWTP would be compliant with the typical sewer ordinance.

Table 1-2 Anticipated Flow and Loading Ranges

Hydraulic Flow (gallons/day) ¹	Ammonia (lbs/week) ²	BOD5 (lbs/week) ³	TSS (lbs/week) ⁴	FOG (lbs/week) ⁵
250,000-350,000	18,750-26,250	125,000-175,000	6,250-8,750	8,750-12,250

Notes:

1. Conservatively assumes volume is produced over six (6) days.
2. Average concentration of 1,500 milligrams/liter (mg/L) with the flow ranges in the table above.
3. Average concentration of 10,000 mg/L with the flow ranges in the table above.
4. Average concentration of 750 mg/L with the flow ranges in the table above.
5. Average concentration of 500 mg/L (City Ordinance Limit) with the flow ranges in the table above.
6. Loading can be seasonally influenced.

lbs = pounds
TSS = total suspended solids
FOG = fats, oils, and grease
Source: Darling 2017

Hours of Operation and Fleet Activities

Raw materials to be converted would be collected and delivered to the facility for processing 6 to 7 days per week. Processing would typically begin on Monday and run through Saturday or as needed Sunday.

The collection routes and delivery schedules would be variable and would likely change day to day depending on the work schedules of the byproduct generators. Raw materials would be delivered to the facility by way of Darling-owned trucks, contract haulers, and customer-owned trucks. The conversion process would be continuous and would typically operate 24 hours per day, 6 to 7 days per week. Delivery schedules would be relatively stable with only limited seasonal fluctuations.

The fleet would include, but would not be limited to, barrel trucks, pump trucks, end dumps, hopper trailers, and tankers (see Table 1-3 below for details). The types and numbers of vehicles would vary based on customer needs, type of service being provided, and economic conditions, but it is anticipated that project operation would generate a daily average of 75 truck trips per day. The equipment used in the collection and delivery of these of raw materials to the facility would be maintained in good operating condition and travel in a closed/covered condition, consistent with industry standards.

Table 1-3 Anticipated Darling Vehicle Types¹

Vehicle	Estimated Capacity
Fat and Bone (End Dumps)	15,000 to 45,000 lbs
Raw Material (Trailers)	Legal Load Limit
Used Cooking Oil (Barrel Trucks)	3,000 to 3,500 gal
Used Cooking Oil (Tank Trucks)	3,500 to 5,000 gal
Finished Fat (Tankers)	6,000 gal
Finished Meal (Hopper Trucks)	25 ton
Miscellaneous Plant Vehicles (fork lifts, man lifts, pickup trucks, yard trucks, front end loaders, etc.)	N/A
Notes: 1. This does not include contract hauler or customer-owned trucks. Lbs = pounds gal = gallons Source: Darling 2017	

There will be a truck shop located on-site as well as a fueling station. The fueling station will include a double-walled tank that is self-contained.

Spill Prevention

The potential for spills would be reduced through the management of Spill Prevention Control and Countermeasures (SPCC). The SPCC would be managed in accordance with the requirements of 40 CFR 112, Oil Pollution Prevention.

Air Quality

The project will require the SJVAPCD to issue an Authority to Construct (ATC) permit. This ATC would require that Darling maintain and operate only state-of-the-art odor abatement technology, which would need to meet the Best Available Control Technology standards established by SJVAPCD. Details of an Odor Control Plan would be developed once the terms and conditions of the subject permit were defined. The ATC would also address combustion emissions associated with the facility boiler system.

Design and Appearance

The project would include four total buildings—a conversion facility, a truck shop, a maintenance shop, and an office building—with a total floor area of approximately 40,000 square feet (s.f.). Excluding equipment (discussed below), typical building height would be approximately 28 feet with a maximum building height of 45 feet. The conversion facility would be a concrete pre-cast building, and the other three buildings would include metal, brick, or block veneer.

The tallest equipment would include two new 60-foot protein storage silos.

Landscaping and Lighting

The project would include green areas and landscaping per the City code. Treated non-potable water from the WWTP may be used for irrigation. Trees would be planted around the project perimeter to provide visual screening as needed and as required by ordinance or code.

The project would include exterior lighting for nighttime operation and parking lot security. A lighting plan will be prepared for review and approval by the City.

Vehicular Access

As part of the proposed project, all truck traffic will utilize Jensen Avenue to ingress and egress. Employees and sales calls will access the plant via Cornelia Avenue.

Parking

The proposed parking lot would include up to 36 spaces for employees and visitors. This is exclusive of the truck spaces needed for raw material trucks which must be segregated to avoid contaminating the raw material.

Infrastructure and Utilities

Drainage

The proposed project would add up to 10 acres of impervious surface to the site. Stormwater from these areas would sheet flow into grassy areas, which would function as bio filters to remove sediment from stormwater. Stormwater management will be addressed in the final site plan development.

Stormwater Quality Management

The proposed Darling facility would manage stormwater quality through a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements of the SWRCB.

Utilities

The estimated demand for City supplied water would be 75,000 gallons per day of potable water. Use of non-potable water will be on a as needed basis. The facility will use air cooled condensing as part of the conversion process.

The demand for natural gas is estimated to be up to 150 million British thermal units (Btu) per hour; however, it is estimated that at least 18% percent of this demand would be supplied by conditioned gas, produced from the waste methane generated by the WWTP.

It is anticipated that one 4,000 kilovolt-ampere (kVA) transformer would be needed to support the demand for electricity.

Employment

Approximately 60 to 70 full-time employees would work at the facility. The facility will operate in three shifts with three production shifts and one maintenance shift. It is expected that there will be a maximum of 25 employees on site per shift.

Project Construction

Project construction would include five primary phases: grading and site preparation; utility installation and connection; roadway, driveway, and parking lot construction; building construction and equipment installation; and landscape installation. Construction equipment would vary by phase, but the entire construction process would include operation of the following types of equipment: graders, dozers, excavators, scrapers, water trucks, cranes, forklifts, generators, pavers, rollers, welders, and air compressors. The construction staging area would be located onsite. It is expected that the construction will take place during typical daylight hours. Depending on the activities going on during any given day there could be up to 50+ workers on site.

Offsite construction would be limited to connection to the existing natural gas line and recycled water line, both located west of the site within the Jensen Avenue right of way, connection to the conditioned gas pipeline located southwest of the site on the WWTP property, and construction of and connection to a new potable water well and new sewer manhole, both located west of the site on the WWTP property.

REFERENCES

Darling. See Darling Ingredients Inc.