

APPENDIX

*City of San Rafael – Initial Study/Mitigated Negative Declaration
Marin Sanitary Services Facility Project – 1050 Andersen Drive/535-565 Jacoby Street, San
Rafael, CA*

Source Reference 7

Master Use Permit Amendment (MSS MUPA)
application description, operations summary and
materials submitted January 17, 2014 (dated
March 29, 2010, with revisions 2015)



**Master Use Permit
Amendment Application**

for

Marin Sanitary Service

by

Fredric C. Divine Associates, Architects, Inc.

May 29, 2009

Revised April 6, 2010

Revised Sept. 30, 2011

Revised Jan. 4, 2012

Revised Dec. 19, 2013

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Fredric C Divine Associates

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MASTER USE PERMIT AMENDMENT APPLICATION

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I. Master Use Permit History

In January of 1993, the City of San Rafael (City) approved UP 92-7, a Master Use Permit which consolidated 12 existing use permits on the property. These 12 permits authorized a variety of activities including the daily operations of the transfer station (MSSTS), the recycling center (MRC) and resource recovery facility (MRRC). This Master Use Permit also authorized the expansion of on-site composting operations, processing of miscellaneous metal and inert materials, and provided for a permanent collection site for household and small quantity generator hazardous waste (MPHHWF).

In July of 1995, the applicant applied for, and received approvals for, several lot line adjustments to the existing Marin Sanitary Service (MSS) parcels. The purpose of the parcel reconfigurations was to locate all of the MSS buildings/facilities on a single parcel. These modifications coincided with the Master Use Permit.

In July of 1996, the City approved UP 96-8, which allowed minor alterations to the site and incorporates the previous UP 92-7. Changes in the locations of land uses necessitated addressing improvements to the state-of-the-art resource recovery facility (MRRC) since the Master Use Permit was granted in 1993. MSS maintains several ongoing jurisdictional permits which are shown in the Operations Appendix prepared by Edgar & Associates.

II. Master Use Permit Amendment Baseline Reports

The requirement for MSS to apply for a Master Use Permit Amendment was initiated by the Planning Dept to bring into compliance alterations to the site that have occurred since 1996 as well as older historical development which was not addressed in the two previous Use Permits. Another important goal of the process was to create a more complete approval document to act as a baseline for the inevitable future facility changes MSS will need to have approved as it adapts to the community's evolving waste management needs. To this end, four reports were requested, provided, and have been deemed complete.

A. Traffic

*Final Report – Peak Hour Trip Comparison for the Marin Sanitary Service (MSS) Facility on Jacoby Street in the City of San Rafael. Date: October 28, 2010.
Prepared by: George W. Nickelson, P.E.*

DPW requested that MSS provide a report comparing the MSS trip generation at the time of the 1992 Use Permit with the current actual counts at the MSS facility. The data is presented in the traffic engineer's "Final Report" dated October 28, 2010 which is attached as Appendix A. The traffic engineer compares his evaluation of current traffic to historical figures based on the report by Dowling Associates which was presented as part of UP 92-7. This 1991 report provides the most recent available data. Nickelson's 2010 analysis breaks down both historical and current data into conditions for primary operations, on-site mini storage, and off-site mini-storage; and computes the total of new peak hour trips. It is important to note that this report, per the direction of DPW, compares current conditions to the baseline and does not quantify or comment on any of the changes impacting trips proposed as part of this master use permit amendment.

B. Drainage

*Drainage Analysis
Marin Sanitary Services Property, San Rafael, California
Dated: July 2010
Prepared by: Oberkamper & Associates, Civil Engineers, Inc.*

The Department of Public Works reviewed the original submittal documenting the existing site drainage conditions. In order to respond to their comments and requests for additional analysis, the civil engineering firm of Oberkamper & Associates was retained. The requested reports were prepared and new plans and calculations submitted for review replacing all previous drainage documents. At DPW's request, calculations of stormwater runoff were provided to insure the adequacy of the City's system to handle runoff from the site. Four separate calculations were prepared that allowed DPW to compare runoff in March of 2003 to current conditions, as well as the runoff contribution

of current paved road developed on the hill to an undeveloped condition for each of these points in time. These documents were accepted as complete by DPW. See drawings DS1, DS2, and DS3; and see Appendix E to this document.

The results of the drainage analysis showed deficient capacity in the Jacoby St. drainage system to handle runoff directed there by the on-site system. It also showed; however, sufficient excess capacity existing in the system connecting to the Andersen Dr. system to handle redirecting enough runoff from one to the other to correct the imbalance. Construction documents have been prepared for a piped redirection of runoff. They have been reviewed by DPW, and approved. Construction has not started on this improvement. See drawings C3.1 and C3.2.

C. Cultural

A Cultural Resources Evaluation of the Marin Sanitary Service Parcel, Jacoby Street, San Rafael, Marin County, California

Dated: April 5, 2010

Prepared by: Archaeological Resource Service

The report is included under Appendix J. The evaluation presents the results of a literature check and an on-site investigation of the unpaved areas of the site. Information is included regarding the historic Bartel House which no longer exists and about several prehistoric archaeological sites which have been identified and studied. Maps are included which show evidence of the historic roads on the site. Recommendations are included (see page 22) which outline the level of care for any future development in the area of these cultural resources. Recommendations are based on the results of this and former cultural resource evaluations and the requirements of current laws and regulations.

D. Biological

Marin Sanitary Service

*Biological Resources Assessment and
Focused Rare Plant Survey: White-rayed Pentachaeta*

Dated: May 2010

Prepared by: WRA, Environmental Consultants

The report is included under Appendix K. The study area was all of the Open Space known as Parcel E. The following is an excerpt from the reports introduction on page 1:

This report describes the results of the site visits, which assessed the Study Area for the (1) potential to support special status species; and (2) presence of other sensitive biological resources protected by local, state, and federal laws and regulations. Specific findings on the habitat suitability or presence of special

status species or sensitive habitats may require that protocol level survey be conducted.

A biological assessment provides general information on the potential presence of sensitive species and habitats. The biological assessment is not an official protocol level survey for listed species that may be required for project approval by local, state, or federal agencies. However a focused survey for white-rayed pentachaeta was conducted during the biological assessment. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visits.

A summary and recommendations are presented on page 12 regarding future activities in the open space which have the potential of impacting habitat.

III. Master Use Permit Amendment Proposal

The Master Use Permit Amendment application proposes approval of the following:

A. Zoning Change and Consolidation of Parcels

Existing Parcel A is zoned industrial. Existing Parcels B, C, D, and E are zoned PD. Staff has suggested, and MSS is agreeable to, making all five parcels PD. All five parcels are part of the use permit, and all four of the industrial parcels are linked operationally. No change is proposed to the General Plan designations. MSS is proposing that Parcels A, B, C, D, and E be consolidated into one parcel. Going forward buildings and operations will be referred to as being located in "Work Area A, B, C, or D". Site features existing on Parcel E will be referred to as being located in the "Open Space"

MSS leases property from the GGBD adjacent to the SMART ROW. See sheet A2.1. The property has traditionally been used by MSS as a storage area for steel debris boxes. It is currently sub-let to a tree service business, a roofing business, and an auto dealer. To access this property you must cross or traverse the graveled SMART ROW. The lease could be terminated by GGBD at any time. The current MUP includes this parcel. It is proposed by Staff that this property will no longer be linked to the MUP for the primary Marin Sanitary Service property.

Reasoning: 1. Rezoning resolves FAR issues. The development of the 82 acre MSS site with structures occurs almost exclusively on the 12.2 acre Parcel A. Total FAR for Parcel A seems even higher, because it includes covered areas for MSS operations that are normally exterior. The Zoning Code allows exclusion of some of these areas from FAR, such as covered vehicle storage and covered driveways. However, MSS covers additional areas such as: the public dump area with parking and drive, the franchise dump area with covered drive, and the commercial dump with covered drive. These are covered primarily to benefit the public by protecting users from the elements, screening the operations from view, and controlling wind driven debris and odors. Area tabulations with an FAR analysis can be found on sheet A2. Some of these extra areas are excluded from the FAR tabulations as is clearly noted. Still, because the buildings are all on Parcel A, the FAR is high. Consolidation of the parcels and the use of one zoning designation makes sense because of the interconnected use and access requirements of the property and would allow for more flexibility when minor additions are needed to existing improvements within Work Area A.

Reasoning: 2. Consolidation resolves water service issues. MMWD Ordinances prohibit meters on one parcel serving uses on another and prohibit parcels without structures from having meters. Consolidation of the parcels will facilitate the flexible and efficient use of water throughout the Work Areas of MSS.

B. Open Space Line Establishment

While staff supports consolidating Parcels A, B, C, D, and E into one Parcel, they consider it important to establish a line defining the separation between the Work Areas and the Open Space. The proposed line is defined on drawing A3. With some deviation for unique site characteristics it sets 10' behind the backside of existing concrete retaining walls, which allows for cleanout and maintenance of drainage facilities. For Work Areas above retaining walls the line is 10' behind the edge of pavement to also allow maintenance of drainage facilities. Where the line crosses the two existing paved roads which provide access to the Open Space, there will be gates. Wherever the location of the line is tied to an existing edge of pavement it is proposed to have that edge of pavement surveyed and then to drive 2" galvanized steel fence posts every 50' along the separation line.

C. Open Space Use Clarifications

Along with defining a boundary to the Open Space, it is proposed that the MUP clarify which existing features/uses are approved to remain or continue, and, which are to be removed or discontinued. The specific features/uses and what is proposed for each are briefly discussed below.

Storage of Recycled Material: It is proposed that all stored recycled material is to be removed from the Open Space and that the practice of storing it there in the future is prohibited. Examples of recycled materials which are acknowledged to have been stored and are henceforth prohibited are firewood and recycled earth.

Existing Paved Roads: Staff has indicated concerns with the creation and paving of roadways. The roadways were historic. MSS has not created new roadways. See attached Appendix B for copies of older maps and aerials supporting this fact. MSS acknowledges that they paved the roadways and installed drainage improvements. MSS uses the roadways to monitor the reoccurring presence of homeless encampments, to maintain the area, and to remove dying trees. PG&E uses the roadways to access their power line easement. MMWD has the right to use the roadways to access their land at the corner of the Open Space. The police department uses the roadways to deal with homeless issues in the Open Space. In addition, the roadways provide easy access for the fire department to control the spread of a potential fire. If the roadways were not paved, the area would be inaccessible in the winter, erosion and siltation would occur on the developed portion of the property, and major work would be necessary each

spring to repair seasonal damage. The roads and drainage are shown on DS1, DS2, C1.2, and C1.3. The road widths and slopes are called out on A5 – Site Circulation, Parking, and Fire Access Plan. MSS has added paving to the ridge top which appears on the same drawings listed. The proposal is to leave all existing paved roads/areas or dirt roads as is.

Existing Structures: Staff has indicated concerns about the existing structures in the Open Space. The following is a brief accounting of what exists. There are several small livestock out buildings up the hill away from the main livestock pens; but, within the fenced livestock perimeter. Just up the road from the firewood storage area is a structure which predates the 1992 MUP and is visible on a 1993 aerial photo. This structure is on the site of a historic residence that burned and is partially constructed on remnants of that foundation. The structure currently houses maintenance equipment and vehicles. Directly up the hill from this structure is a water tank. This application does not propose removing any structures.

Animal Grazing: Animal grazing is permitted in the Open Space under the current use permit and no change is proposed. There is an existing small bee keeping operation in the Open Space. It is proposed that this remains.

D. Gabion Wall Details and Landscape Screening

Staff has requested structural documentation for the gabion wall constructed on Parcel C to create the level work area behind it that is currently dedicated to firewood storage. In October 2006 plans and engineering prepared by Richard Jansen, engineer, was submitted for the wall. Cheng P. Yeo, a public works engineer at that time, reviewed the submittal and after consultation with Richard Jansen and Fred Divine, architect, approved the documentation verbally. Those plans are included and are the same plans the city has had since that time. See Sheet RV-1. In addition, the Planning Department requested a landscaping plan for the earth area just behind the top of the wall. The landscaping would serve to screen from view the firewood or other recycled material stored above the wall. See drawings prepared by Kirk Morton Landscaping, L-1B, L-2B, and L2.1. A component of the landscaping is a bio-swale to passively treat the pavement run-off from the wood storage area. See Civil drawing C1.1 prepared by Oberkamper & Assoc. Staff requested a photo study of the landscape screening proposed. See Appendix J, Wood Storage View Analysis.

E. New Landscaping and Parking at MRRC

It is proposed that the existing parking at MRRC be reconfigured to add capacity, disabled parking spaces, and landscaping. See Sheets A5.2 and L-2A.

F. New Fire Line Across City Property

Because of the fire-protection requirements for Parcel D and the lack of a separate water service, MSS pursued the purchase of an easement over a small “remaindered” piece of city property for a private fire line. The property was a remainder after the City abandoned a portion of Jacoby Street and deeded it to property owners on each side. This small piece was the last sliver adjacent to Andersen Drive and is only 6’ on one of its sides. MSS provided all the survey, title, and appraisal work as directed originally by the public works director and then, later, under direction of Cheng P. Yeo, a public works engineer. Legal documents were essentially complete and ready for council approval when the process stopped. MSS pursued the easement with the understanding that the city was amenable to its granting. Subsequently Public Works has proposed a simpler agreement allowing MSS to cross city property with their underground improvements. It is proposed that a License Agreement be approved allowing MSS to install a fire line and a domestic water line with their related metering and backflow protection elements across city property.

G. Temporary Uses to be Maintained

There are currently two temporary uses which act as place holders for future Operations uses. They are located in Work Areas B, C, and D.

- American Soil Products: Located in Work Area C American Soil Products sells soils, soil amendments, rock, stone, and general supplies for the landscape industry. They are a good fit for a temporary use in that homeowners and landscape contractors use MSS for recycling yard waste, public storage, and American Soils purchases recycled soil and compost from MSS. It is proposed that American Soils remain at its current location.
- Rafael Storage: Located in Work Areas B and D

The original use permits allowed for storage containers on Parcel B. An area was delineated on the approved site plans as having a Storage/Container Option. Adjacent areas were identified for other storage uses. MSS acknowledges that additional storage containers were added to the areas on Parcel B identified for other storage uses and that containers were added to Parcel D.

Parcel B is where most of the current containers are located. They are leased through Rafael Storage. Approximately 240 containers exist in the area that was delineated for containers. In the areas identified for other storage uses another approximately 175+ containers exist. These are consistent with the use permit. The parking spaces that were shown on the original use permit drawing surrounded by these storage uses have been relocated to the administration area in Work Area A where they are closer to uses generating parking demand. The Parcel B storage

container area has a separate public entrance from the MSS operations, and is an appropriate use for property held in reserve for future operational needs.

It is proposed that the public storage use remain in what will be known as Work Area B. As a condition, the city has requested that MSS modify the layout to provide adequate emergency vehicle access and to demonstrate adequate fire hydrant coverage or add hydrants. The plans have been modified to incorporate these requests. In addition, required fire walls are shown and accessible containers are provided. The revised layout is presented on Sheet A5.1.

The public storage containers serve an important role. The use is compatible, as there is a low level of activity associated with mini storage uses. Because of that, the traffic impacts are low and for Work Area B no operational conflicts exist. Without creating or demanding infrastructure, they are a "place saver" to reserve land for future operational needs. They provide a low cost storage option to the public. Any future use of this property which requires grading may be limited in scope due to the remains of a documented Native American midden which is currently capped by the existing concrete paving.

Parcel D was not included in the previous use permit as a designated area for storage containers. There are currently 325 storage containers in this area. Approximately 50 are being used by MSS Operations and 275 are leased to the public through Rafael Storage. It is proposed that the total number set aside for public storage be reduced as required to provide fire lanes, hydrant coverage, and building fire separation requirements under the code, per the approval of the SRFD and Building Dept. It is proposed that the hours of operation be restricted to the off hours of MSS Operations. This restriction is to mitigate safety concerns related to the public accessing the container area during the hours of heavy machinery and vehicle operation by MSS. Access will be restricted to after 4pm and to weekends. It is further proposed that the existing Area D Rafael Storage users who require unrestricted access (primarily contractors) be moved to Area B. Going forward leases for Area D will specifically limit access as proposed above.

It is proposed that the existing temporary uses be approved with conditions, and it is acknowledged that they are a source of AM and PM peak hour trip generation and that the trip load should be calculated and traffic fees paid as a condition of the uses remaining. Once traffic fees are paid, those trips should be banked and be available to off-set the traffic generation of future development in Work Areas B, C, and D for Operational Uses when the temporary uses are removed.

H. Completion of Previously Approved Jacoby St. ROW Vacation

A review of the Title Documents and the previous Use Permit approvals revealed that, while the vacation of Jacoby St. was approved, the actual vacation documents were never filed and recorded. The ROW exists from the westerly property line of Marin Sanitary Service at Jacoby St. through the length of the property to just short of Andersen Dr. near the entrance to Marin Sanitary District treatment plant. It is proposed that the vacation process which may include creation of easements for existing utilities be completed as previously approved.



Operations Overview

for

Master Use Permit

Amendment Application

for

Marin Sanitary Service

January 28, 2014

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INTRODUCTION

History of Marin Sanitary Service

Marin Sanitary Service (MSS) developed from an ethic of scavenging. In the 1920's, the Garbarino Family began hauling garbage in giant burlap bags on their backs over the steep hills of San Francisco. Entrepreneurs early on, they discovered that people threw away more than they should, and most of it could be reused. They soon began scavenging wine bottles, eyeglasses and shoes and reselling them.

MSS was officially founded in 1948 when the Garbarino family along with several other families left San Francisco and ventured into the growing communities of Marin County to start a new garbage service. Today, only one of the original founders remains with the company.

MSS currently services more than 33,000 residential and commercial accounts in nine communities within Marin County; a vicinity map is presented in Figure 1:

- City of San Rafael
- City of Larkspur
- Las Gallinas Valley Sanitary District
- County of Marin
- Ross Valley Sanitary District (North)
- Ross Valley Sanitary District (South)
- Town of Ross
- Town of San Anselmo
- Town of Fairfax



Figure 1. Location of MSS and Vicinity

Marin Sanitary Service Defines Recycling

In 1998, the Chair of the California Integrated Waste Management Board (CALRECYCLE) presented the citizens of Marin with an award as the first county to reach and exceed its AB 939 goal of 50% diversion. In 2006, the CALRECYCLE Chair returned to MSS, and awarded Marin County the highest rated recycler in the State of California for the third year in a row. Marin Sanitary Service has utilized the knowledge and dedication of its owners, employees and customers to develop what is considered one of the most successful recycling programs in the United States.

Since MSS was founded, its goals have paralleled those of the communities it serves. The company's personal commitment to diversion, recycling and composting and close work with its

customers have helped the County of Marin achieve a 2012 diversion rate of 75%, well above the State of California's mandate of 50%. The business has grown and expanded into three separate divisions in order to address every facet of the waste stream. These three divisions work together to run the facilities and to provide comprehensive collection, recycling, composting and education services:

- Marin Sanitary Service (MSS) – Provides weekly residential and commercial curbside recycling, organics and waste collection. In addition, MSS offers street sweeping, confidential document shredding, and debris box rental. The MSS Transfer Station has recently been permitted for the collection and processing of commercial food waste. This processed material will be transported to Central Marin Sanitation Agency for anaerobic digestion and energy generation.
- Marin Recycling Center (MRC) – Accepts and processes recyclables including glass bottles and jars, aluminum and tin cans, plastic containers #1-7, waste papers, and cardboard. All residential curbside dual stream recyclables collected by MSS are processed in the MRC. In addition, the public may drop off and sell source separated recyclables. The center also provides community education through the Environmental Classroom.
- Marin Resource Recovery Center (MRRC) – Accepts and processes non-hazardous materials from commercial and residential self-haul and construction and demolition (C&D) debris boxes. Using a customized system of screens, conveyors, blowers, magnets, fork-lifts and hand-sorting, the company processes recyclable materials, yard debris, and C&D debris.
- The Marin Recycling and Resource Recovery Association has also established a public-private partnership to operate the Marin Household Hazardous Waste Facility onsite. The Marin County Hazardous and Solid Waste Management Joint Powers Authority funds the Marin HHW Program, the City of San Rafael Fire Department provides management oversight, for the Marin HHW Facility. Household Hazardous Wastes are collected from Marin County residents and businesses, excluding Novato.

Progressive Innovation

MSS has expanded the services it provides over the last six decades. In total, more than 250 people are employed at all the facilities. As mentioned previously, the company has a worldwide reputation and a record of innovation in the solid waste industry. MSS has historically provided the communities of Marin County with very progressive and proactive waste diversion programs. Examples of "cutting edge" undertakings include:

- First county-wide curbside recycling program in the U.S (1979).
- First materials recovery facility for mixed waste (generally commercial) in the U.S (1987).
- Containerized collection of residential yard waste (1981). Residential food waste collection added in 2010
- Split-cart and split-body truck collection of curbside recyclables (2007)
- Curbside collection of commercial food waste for anaerobic digestion through public-private partnership with Central Marin Sanitation Agency (2013).

Master Use Permit and Zoning History

Processing Facilities and Waste Stream Flow Chart

Marin Sanitary Service owns and operates a comprehensive, multi-faceted, waste management facility located in San Rafael, California governed by Master Use Permit 92-7 and 96-8 and a series of state permits. An overview of the processing operations is presented in a schematic diagram of the entire operation (Figure 2).

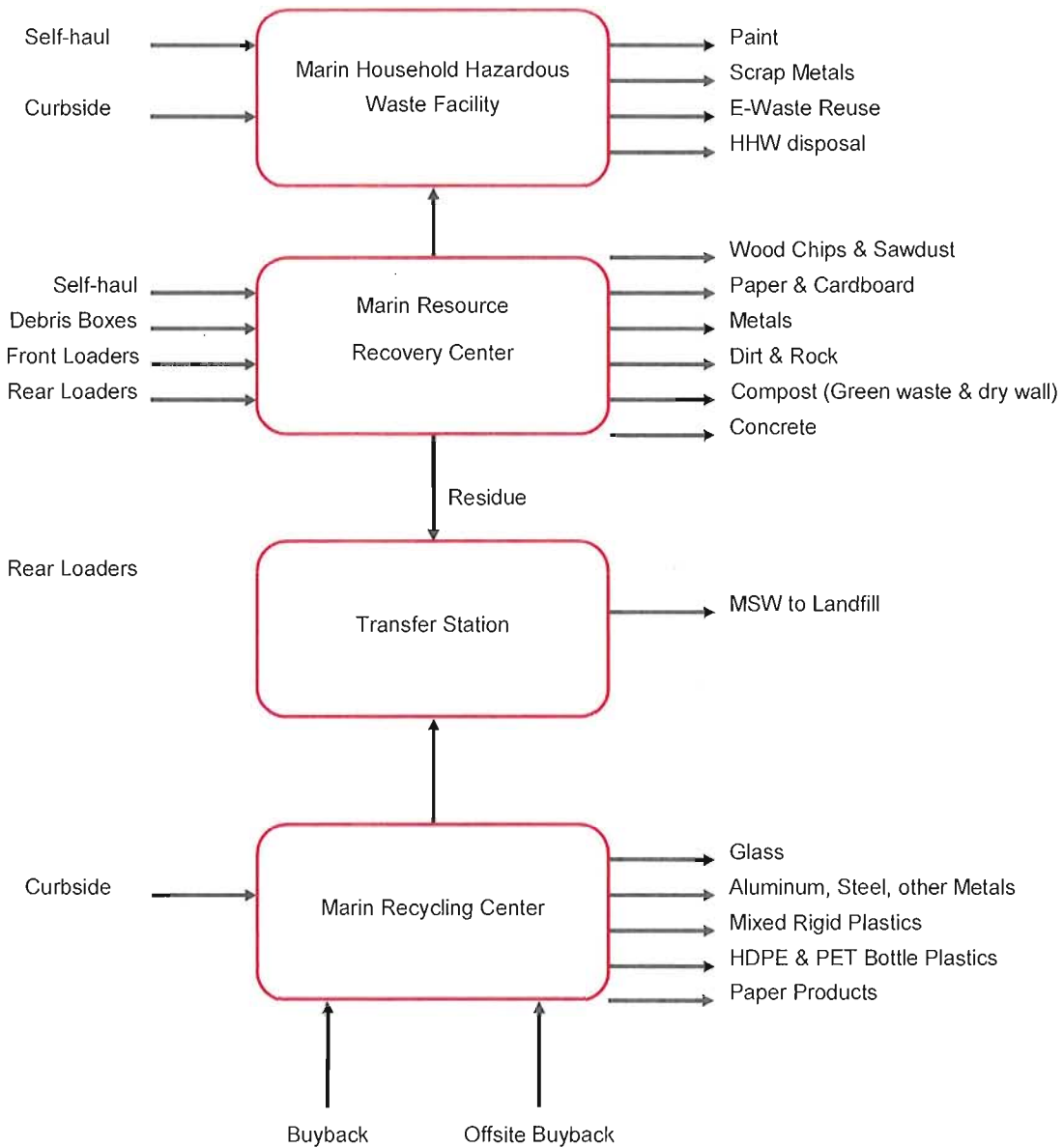


Figure 2: Schematic Diagram of Processing Operations

Processing Facilities and Permits

A brief description of the facility operations and permits is provided below in Table 1. A more detailed description follows. The California Department of Recycling Resources Recovery (CalRecycle) oversees the Full Solid Waste Facility Permit for the Transfer Station and MRRC, which was recently renewed for another five years in March 2010. The facilities below are part of the National Pollutant Discharge Elimination System (NPDES) general permit for discharges if storm water associated with industrial activities on file with the State Water Resources Control Board. The mobile equipment used for processing the materials on Parcel C and D have California Air Resource Board's (CARB) Portable Equipment Registration Program (PERP) permits.

Table 1: Overview of Processing Facilities and State Permits

Processing Facilities	Area	Activity	State Permit
Marin Recycling Center	A	Process residential recyclables and drop-off and buy-back	California Department of Conservation for buy-back. Recycling Center exempt from state permit.
Marin Sanitary Service Shop	A	Maintenance of Fleet: chemical inventory (oils, gas, diesel, and other onsite chemicals).	Permit with California Environmental Reporting System (CERS) overseen by the County Certified Unified Program Agency (CUPA)
Marin Resource Recovery Center	A	Process commercial front-end loaders, debris boxes, and self-haul waste	Full Solid Waste Facility Permit issued by County Environmental Health Services and concurred with by the former California Integrated Waste Management Board (SWIS #21-AA-0005) for up to 2,650 tons per day.
Marin Sanitary Service Transfer Station	A	Transfers solid waste and food waste processing	
Marin Household Hazardous Waste Facility	A	Collects household hazardous waste universal wastes, and electronic wastes	Permanent Household Hazardous Waste (HHW) Facility permitted by California Department of Toxic Substances Control and regulated by the CUPA. Curbside HHW Collection Program permit
Green Waste Composting	B, C & D	Compost green waste and fines	Ability to file Enforcement Agency Notification to the County Environmental Health Services for up to 12,500 cubic yards upon activation of the entitlement. Reserve entitlements that are not active.
Concrete and Soil Resource Recovery Operations	C & D	Processes clean concrete and asphalt, and mixed soil and concrete	Inert Recycling Center is exempt from state permitting requirements. The Inert Debris Processing Facility has filed an Enforcement Agency Notification to the County Environmental Health Department. PERP air permits.

Table 1: Additional Facility Permit Information

Storm Water Monitoring for Industrial Activities

The State Waste Resources Control Board (SWRCB) adopted NPDES General Permit for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities. The General Permit requires that a site-specific SWPPP be developed and implemented at MSS. The SWPPP has two major objectives: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges, and, (2) to describe and ensure the implementation of practices for reducing pollution in storm water discharges. The SWPPP must be developed and implemented in accordance with the requirements of the General Permit. The SWPPP is retained on site and is subject to inspection upon request from a representative of the RWQCB. The General Permit requires annual self-inspection by the facility operator to verify that all elements of the SWPPP are accurate. This inspection is done in conjunction with the filing of an annual report which must include test results of storm water run-off taken at two separate times, once early and once later in the rainy season. Testing of storm run-off samples taken from four separate sampling locations is done by a certified independent outside testing lab. An annual report has been filed each year by MSS since 1992. A copy of the most recent annual report (Appendix C) is attached.

Table 1: Additional Processing Facility Information

Marin Recycling Center (MRC) – 535 Jacoby St. - Area A

In 1981, Marin Sanitary Service designed and built the Marin Recycling Center (MRC) to process recyclable materials collected from residential curbside collection programs. In the first year of operation, about 1,000 tons of materials were recycled. Currently, more than 31,000 tons of materials are recycled each year by the company's 30,000 residential and 3,000 commercial and multi-family customers. The MRC was modified in 1987 and expanded in 2007 to cover new processing equipment to handle dual-stream, source-separated material. The external glass processing plant was replaced by bunker storage of dual stream material and the storage of other recovered products. The primary purpose of the MRC is to sort and recycle items that have been source separated by residential customers. Paper, cardboard, glass, plastic, ferrous metals and aluminum are sorted using a computerized system, crushed and/or baled and sold back to manufacturers to be recycled and reused. The glass crusher and a video-scanning device are two state-of-the-art equipment technologies that allow the MRC to maximize material diversion. The Marin Recycling Center also has a public buyback and drop-off operation that is heavily used by the residents of Marin County and is certified by the California Department of Conservation.

Marin Resource Recovery Center (MRRC) – 565 Jacoby St. – Area A

In order to maximize the potential for material diversion, in 1987 MSS designed the Marin Resource Recovery Center (MRRC). The "indoor dump," also known as a Materials Recovery Facility, is a warehouse-like structure the size of three football fields (128,000 sf.), and was the

first facility of its kind in the United States. The MRRC accepts commercial waste, as well as waste brought in by private citizens (self-haul), yardwaste, dirt, rock, concrete, demolition debris, large appliances, old vehicles and other debris. The MRRC uses a customized system of mechanical and manual segregation to recover recyclable materials. Some of the equipment used includes screens, conveyors, blowers, and magnets. MRRC has a 2,640 ton per day design and permitted capacity. The facility recycles 70%-80% of the waste stream it processes. The remaining materials are then carried by an enclosed conveyor belt to the adjacent Transfer Station.

In 1991, having the ability to shred wood and brush into biomass fuel and sawdust, the company saw an opportunity to extend another service to MSS customers including the collection of source separated yardwaste. These materials were collected curbside every other week in 64-gallon carts. In 2010, the company began accepting food scraps and food soiled papers in with the yard waste and increased collection frequency of this organic material to every week. This material is processed at the MRRC facility and then composted off site at a fully permitted facility. Since 2009, 66,693.80 tons of compostable materials have been diverted from the landfill with this program.

MSS Transfer Station – 1060 Andersen Dr. – Area A

Built in 1981 the transfer station is approximately 37,434 square feet in area. The design and permitted capacity of the transfer station is 2,640 tons. Marin Sanitary Service refuse trucks utilize Jacoby Street to enter the building where they weigh, park, and dump refuse into a 12,000 square foot pit. Non-recyclable materials from MRRC are dumped into the same pit via a conveyor system. Vehicles exit on Andersen Drive. Incoming refuse trucks utilize the transfer station between the hours of 7 am and 3 pm (weekdays) and 7 am to 12 noon (Saturdays). Outbound transfer trailer trucks operating between the hours of midnight and noon, load refuse and carry the material to Redwood Landfill. Other MSS vehicles access the building 24/7.

Commercial Food Waste Processing

@ MSS Transfer Station – 1060 Andersen Dr. – Area A

In 2008 MSS partnered with the Central Marin Sanitation Agency (CMSA) and local jurisdictions on the design and roll-out of a commercial food waste collection program. Food waste is now collected by Marin Sanitary and processed at the MSS Transfer Station under an amendment to the current SWFP for pre-processing. Materials are then delivered to CMSA for further processing at the waste water treatment plant using anaerobic digestion to achieve energy recovery. For the first three months of collection, the company has recorded 150.42 tons of food waste and diverted that material from the landfill.

Marin Household Hazardous Waste Facility

@ Wood/Metals Recycling & HHW Canopy – 565 Jacoby St. - Area A

The Household Hazardous Waste (HHW) and Commercial Conditionally Exempt Small Quantity Generator (CESQG) HHW Collection and Consolidation Facility (HHWF) represents MSS' efforts to remove household hazardous waste from the waste stream and landfill and maximize recycling in Marin County. Use Permit 92-7 approved a Permanent Household Hazardous

Waste Facility. The HHWF opened in 1998, replacing the BOP (batteries, oils, and paints) program, and is a public-private partnership between MSS and the San Rafael Fire Department for the City of San Rafael. The facility operates under the auspices of the Marin County Joint Powers Authority, Office of Waste Management and the City of San Rafael Fire Department. It is permitted by the Department of Toxic Substances Control and inspected by the County Certified Unified Program Agency (CUPA). Customers utilize the facility to dispose of paint products, adhesives, auto fuel, waxes, motor oil, oil filters, batteries, fertilizers, pesticides, and a myriad of other universal waste materials such as electronic waste, fluorescent tubes, and treated wood wastes. A reuse bin offers residents free, partially used paints and other household items; this helps to keep disposal costs low and is environmentally beneficial. A renovation of the facility was completed in 2011.

Green Waste Composting – Areas B, C, and D

UP 92-7 approved composting operations to occur on any of the five parcels, for the operation of a tub grinder to grind wood chips and fines, and for the storage of the yard materials. The tub grinder was later modified by MSS to mitigate dust impacts by spraying a fine mist of water over the grinding area; however, it is currently not in operation. UP 96-8 continued to allow these operations on Parcels B, C, and D. Over the years, there have been various composting operations along with the storage of fines on these Parcels. Composting operations have been suspended at this time while the storage of fines continues. MSS reserves the entitlement to compost green waste on one or all three of these Areas and will file for appropriate state permit upon activation. MSS would file an Enforcement Agency Notification to the County Environmental Health Services for up to 12,500 cubic yards of green waste composting upon activation of the entitlement.

Bulk Tree Waste – Areas A, B, & C

Bulk tree cutting waste, which is not suitable for composting, is processed through the MRRC wood splitting area at the Wood-Metals Recovery/HHW Canopy where it is cut and split into firewood. It is then air dried in bulk firewood storage areas on Areas B & C. Bulk firewood is sold for domestic use, campground use, or to licensed wood-fired power generation facilities.

Concrete and Soil Resource Recovery Operations - Area C and Area D

Master Use Permits 92-7 and 96-8 allowed the receipt of surplus topsoil, earth fill, and broken concrete to the site, which was then processed and temporarily stored for possible reuse in new development projects. In order to maximize the potential for material diversion, MSS has had a series of concrete and soil resource recovery operations at the facility for a number of years:

1. Concrete and soil were separated from the mixed C&D at MRRC and trucked to the Redwood Landfill for beneficial reuse.
2. Loads of soils were received on-site and processed into top soil.
3. Loads of mixed soil and concrete were processed on-site to separate out the concrete from the soil for recycling.

Over the years, soil recovery operations have occurred within Area D. The processes now include the screening and processing of mixed concrete, asphalt and soil, where a state permit

is now needed for this type of operation. In 2008, an Inert Processing Operation was allowed by the County Environmental Health Services with the filing of an Enforcement Agency Notification.

In 2007, MSS began to collect source separated concrete and asphalt and process the material into a CALTRANS base rock for local construction projects following the new state minimum standards for inert recycling centers, which are exempt from state permits. The current operational area is within Area C. It is proposed under this Master Use Permit Amendment to increase the allowable height of piles to 20 feet. The screening from public view is good, most other physical elements on this industrial site are taller, and the current 10' limit is not practical.

Miscellaneous Operations on Areas A, B, C, and D

Area A

MSS's administrative and dispatch offices, truck repair shop/general maintenance building and corporate yard (1050 Andersen Drive; see buildings identified as "office", "truck ports" and "shop" on the submitted Site Plans).

The 14,930 square foot administrative and dispatch office building is occupied in 2,770 square feet of office and 12,160 square feet of warehouse. The warehouse portion of the structure is utilized for document and parts storage.

The 8,400 square foot repair shop and general maintenance building is approved for repair and storage of refuse containers and for the maintenance and repair of vehicles. A truck washing facility (steam cleaning bay) is also attached to this building. This operation contains and recycles all water used washing MSS vehicles. The water drains to a sump, which drains to a 1200 gallon storage tank. A Beckhart water treatment plant recycles the water for truck washing.

Area B

Area B is currently occupied by a wood storage area, the animal husbandry area, debris box storage, and a temporary use, Rafael Storage. The uses approved under Master Use Permit 96-8, which include composting activities, general storage and operational uses, as well as parking is requested to continue. MUP 96-8 showed 36 parking spaces in this area. These have been moved to parcel A. See the discussion of Temporary Uses, which hold in reserve there areas for future operational uses.

Animal Husbandry

Approximately 50 barnyard animals occupy this fenced area. Animal waste from the barnyard is removed from the site twice weekly. Fresh wood chips and sawdust are spread in the confined area at least twice weekly. Master Use Permit 96-8 allowed the animal husbandry operation in this area to be continued. If it is removed, the other uses permitted in Area B can be continued in its place. The current animal inventory includes pigs and fowl; but historically, has also included sheep and goats. MSS proposes maintaining the right to keep the barnyard facility at its current size and to vary the animal inventory in the future.

Area C

Area C is currently occupied by uses outlined in Table 1, and its expanded information section. It is also occupied by a temporary use, American Soils. See the discussion of Temporary Uses, which hold in reserve these areas for future operational uses. The bulk recycled materials storage area above the gabion wall is currently proposed for firewood storage with a height limit of 20'. Fire lanes and fire hydrant protection to be approved by the SRFD is proposed for this area.

Area D

Area D is currently occupied by uses outlined in Table 1, and its expanded information section. It is also occupied by a temporary use, Rafael Storage. See the discussion of Temporary Uses, which hold in reserve their areas for future operational uses. Storage of other materials, debris containers, appliances, and MSS operations storage in shipping containers is proposed to continue. Vehicle storage and facility/operations maintenance activities are proposed to continue.

Innovating for the Future

Despite these accomplishments, the company is interested in pursuing the development of new methods to recover additional materials. Increased diversion of materials away from landfill disposal supports the strong environmental movement in Marin County, protects the environment by preserving resources that would otherwise be disposed of, and avoids costs associated with landfill disposal. The industry has shifted from scavenging in the 1920's to garbage hauling in the 1940's. In the 1970's the industry again shifted to resource hauling with the goal of diversion and resource conservation. For the 21st Century, the industry is going through a dramatic shift from hauling resources to using the resources to produce renewable energy with Biomass Conversion and Anaerobic Digestion technologies.

Alternative Technology

In spring 2014, MSS will conduct another waste characterization study to identify how the waste stream may have changed since the 2008 study. The type of technologies that would be utilized will depend upon a number of factors including the proven technologies available, the quantity and composition of the disposed waste stream, the impact on rates, the needs and interests of the community. Currently anticipated is that a substantial portion of the incremental diversion would be used for the production of fuel or energy.

Biomass Conversion Operation

MSS is investigating the addition of a 1.0 mega-watt biomass conversion operation at the MRRC operation on Area B, or within Area C or D, to produce electricity out of the clean processed wood waste materials that are currently recovered and planning to be recovered. The biomass conversion facility will only receive clean processed wood chips, and will obtain the necessary air permits from the Bay Area Air Quality Management District. Based on the waste

characterization study that was conducted in 2008, on the composition of the disposed waste stream, additional lumber diversion was identified. In addition, the lumber, that is recovered and processed into biomass wood chips currently, about 32,000 tons per year, is hauled to the Central Valley (to either Woodland, Tracy, Rocklin or Andersen, CA), to be combusted at biomass-to-energy facilities. Electricity is produced using boilers and steam-driven engines or turbines. The electricity is considered renewable power and has been sold to the utilities in order to achieve the state mandate of utilizing 20% renewable energy by 2010. Current state policy and future laws could increase the amount of renewable energy used in California to 33% by 2020.

MSS proposes to use technologies that convert biomass into a synthetic natural gas ("syngas") through the process of thermo-chemical conversion called "biomass gasification". This syngas is then used to fuel a specially modified natural gas genset that provides renewable electricity and heat. The electricity will be used on-site to power MSS, with excess electricity net-metered for off-site users. The biomass conversion process is a thermo-chemical one that 'cooks' biomass in an oxygen starved environment. By depriving the fuel of sufficient oxygen the biomass does not burn, but rather gives off a hydrogen rich syngas. As the biomass gives off the syngas, it is transformed into bio-char and ash approximately 3-5% of the volume of biomass fuel. The syngas is then captured, cleaned and cooled before being sent as fuel to the genset. The gensets are provided by a variety of nationally known vendors such as Cummins, Caterpillar, or GE. This ensures that there are readily available spare parts and maintenance technicians available locally. The biochar has demonstrated ability to sequester carbon in solid form for upwards of 1,000 years if applied as a soil amendment.

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