

APPENDIX A
SAMPLE INSTALLATION SWMP

SOLID WASTE MANAGEMENT PLAN

NAVAL STATION

COASTAL CITY

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1. Introduction

The Naval Station Coastal City Solid Waste Management Plan (SWMP) is based upon the findings of the solid waste field survey conducted by Coastal City Solid Waste Consultants, Inc. from 24 to 28 February 1992.

A SWMP is required of all Navy installations by Chief of Naval (CNO) Operations in OPNAVINST 5090.1A. The SWMP documents how each installation will manage their solid waste in accordance with federal, state, and local regulations.

2. Definitions

Qualified Recycling Program. A recycling program which is established by installation directive or regulation. The program enables an installation to receive revenue from the sale of recyclable government property. The managing activity will be designated by the Commanding Officer.

Solid Waste. Any non-hazardous waste in solid form which is normally discarded in the landfill.

Recyclable Material. Any Material which still has useful physical or chemical properties after serving its original purpose and that can, therefore, be reused or remanufactured.

Source Reduction. The process of reducing solid waste by procuring materials which generate less solid waste.

Composting. The process of creating fertilizer or soil amendment from yard waste by controlled biological decomposition.

Appropriated Material. Material which belongs to the federal government.

3. SWMP Management Responsibilities and Goals.

3.1 Solid Waste Program Manager. SOLID WASTE PROGRAM MANAGER is responsible for administering the overall base-wide solid waste management program at Naval Station Coastal City.

3.2 Goals. There shall be three specifically stated goals of the Solid Waste Management Program:

- a.) The 25% reduction in the amount of solid waste being sent to land disposal,
- b.) The composting of all green wastes at the Naval Station Coastal City
- c.) Procurement and use of recycled paper for copiers.

The SOLID WASTE PROGRAM MANAGER will be required to submit quarterly reports to the Commanding Officer of the Naval Station on the progress of the program.

4. Solid Waste Collection and Disposal. The waste hauling contractor is responsible for the collection and disposal of refuse. The waste hauler will provide monthly reports to the SOLID WASTE PROGRAM MANAGER. This report is to include tons of solid waste hauled, final destination of wastes hauled, and lists of tipping fees.

SOLID WASTE PROGRAM MANAGER is to correspond with Public Works Center Coastal City's Contracting Office in selecting and administering the contractors who collect and dispose refuse from Naval Station Coastal City .

The waste hauling contractor and SOLID WASTE PROGRAM MANAGER will determine the location of all refuse dumpsters, the collection route and schedule. This information will be published in a written "pick-up plan".

Contractor will maintain the dumpsters with a plan to keep clean and swap damaged or otherwise unsatisfactory dumpsters on a regular basis. Dumpsters should be clearly marked to indicate that no materials that are available for recycle, reuse, composting or mulching are to be deposited along with refuse (i.e. no wood, metals, organic matter, etc.).

The contractor must take into consideration the possible limitations on existing landfill space. Some landfills will take only a certain tonnage of refuse per day. This will require the contractor to plan early routes in order to get that refuse to the landfill in time to be accepted. The contractor will also be required to have a plan in place for alternate landfill sites which can be used for disposal if the primary landfill used is no longer taking refuse.

As well as space limitations, the contractor and the SOLID WASTE PROGRAM MANAGER should investigate the use of monofills or so-called "full-service" landfills. The tipping fees at a monofill that takes only construction refuse may be lower. This means that those loads that might normally be taken to the primary landfill used by the contractor would be taken to the monofill instead, at a savings.

Some landfills have many stations which take various types of refuse loads instead of one dumping station where all refuse is dropped regardless of type. In areas where active recycling of certain products is not yet deemed feasible, these products may be segregated in the landfill such that they may be easily removed at later date if it is feasible to use them as a resource. In some cases these products may even be baled first to minimize their degradation and to minimize the space they take up in the landfill. If the tipping fees at such a landfill are sufficiently low, refuse may be further separated prior to or after collection.

5. Waste-to-Energy. The use of refuse to produce energy is an enticing alternative to land disposal. However, due to the increased public sentiment against incineration of wastes and increasingly strict air emissions regulations applied to point sources, the building of facilities to thermally dispose of wastes on Navy land is not encouraged. Instead, the SOLID WASTE PROGRAM MANAGER should follow up on genuine public interest in such a project.

The Naval Station should be looking to work on a waste-to-energy facility that would be a joint effort between the public and the Navy. This will help defray the costs of such a facility and will possibly make public acceptance easier to obtain if the project will not result in a solely Navy source.

6. Recycling.

6.1 Qualified Recycling Program (QRP). MWR Director is responsible for managing the QRP.

MWR Director is responsible for keeping records on the quantity by weight and revenue collected for each type of appropriated material recycled and QRP expenses.

MWR Director and activities on base are responsible for the collection and transportation of appropriated materials.

Defense Reutilization Marketing Organization (DRMO) is responsible for the sale of appropriated materials. Note mention in Section 3.4 of the consideration being given to allowing activities to sell directly to buyers in the case where that might be more cost effective.

MWR Director is responsible for managing the on base recycling center.

DRMO shall post a list of materials they are currently accepting in a visible location outside or inside the DRMO office.

The funds collected from the sale of appropriated materials will first be spent on operating costs. Any funds left over will be split between PW and MWR.

MWR funds will be used to develop and implement an Incentive Awards program. Utilizing a weight system, a daily account of recycled material is kept by the Recycling Center, and will be provided to the SOLID WASTE PROGRAM MANAGER on an annual basis. MWR will distribute (Recycling Awards) to various competing activities based upon participation. Any remaining funds may be distributed equally amongst all MWR fund recipients or MWR may utilize these funds for approved projects.

6.1.1 Paper. All computer, high grade (this include white computer paper) and mixed paper will be segregated in storage containers provided by PW in the administrative and industrial areas. Do not intermingle "post its" or any other type of adhesive paper with the mixed paper. Container size will correspond to the quantity of paper generated. PW Recycling Center will collect the

paper as needed from administrative and industrial areas which do not have the means to transport it themselves to the recycling center, Building 85. From the recycling center, the paper will be delivered to DRMO. MWR Director will be responsible for providing the containers, trucks, manpower and any other necessary items for paper collection.

6.1.2 Scrap Metal. Scrap metal will be collected and transported to DRMO by the PWC Coastal City on an as needed basis. The scrap metal is available to all Department of Defense facilities first, then to state governments. If the metal is not donated, then it is entered into the National Sale Bid, where contractors from across the country may submit their purchase bids.

6.1.3 Cardboard/Corrugated Containers. All corrugated containers will be collected in bins provided by the Recycling Center.

6.1.4 Wooden Pallets. All Navy standard pallets will be reused by Supply unless damaged. Damaged Navy and all commercial pallets will be taken to the Recycling Center located in building 85 at Naval Station Coastal City. (MWR keeps records)

6.1.5 Tires. Used tires will be collected and hauled to PWC Coastal City for recycle. This will count as diversion credit from landfilling. A weight ticket of these tires must be supplied to the SOLID WASTE PROGRAM MANAGER.

6.1.6 Used Oil Filters. Used Oil Filters will be drained and collected and crushed in bins by the Auto Hobby Shop. The crushed cans will be collected by a state certified oil filter scrap metal recycling contractor.

6.1.7 Plastics. Plastic drink containers will be collected in special bins provided by the Recycling Center. Plastics need not be sorted. Any plastics items which fall into the categories listed in Appendix B should be placed in the bins for recycling.

6.1.8 Miscellaneous. Additional recyclable materials not mentioned above will be recycled as conditions warrant.

7. Composting.

SOLID WASTE PROGRAM MANAGER is responsible for managing the installation composting program. The SOLID WASTE PROGRAM MANAGER is responsible for keeping records on the quantity of material composted by weight.

The Grounds Maintenance contract will specify the contractor be responsible for composting yard clippings at Coastal City Composting Facility or at a resource recovery facility. The contractor will be responsible for keeping records on the quantity of material composted by weight. These records will be provided to SOLID WASTE PROGRAM MANAGER.

The SOLID WASTE PROGRAM MANAGER will designate an appropriate area on the base for the contractor to deliver the compost. This area will be suitable for the windrowing of the compost and it these windrows shall be turned once a week with a mechanical turning machine.

The temperature of the compost shall be monitored twice daily to insure that a high enough temperature is maintained to insure destruction of the viability of any seeds in the compost itself. It will be acceptable if the SOLID WASTE PROGRAM MANAGER sees fit to add sewage sludge to the compost to help maintain the temperatures necessary. This sludge may not come from any industrial wastewater source or from any source which may be contaminated with Hazardous Wastes.

The SOLID WASTE PROGRAM MANAGER shall determine the best application of various types of wastes collected. Some of the compost will be used as soil amendment. The leaves, twigs and any appropriate wood products (such as pallets, old chunks of plywood, etc.) will be shredded and used for mulching purposes.

8. Education and Awareness.

Morale Welfare and Recreation (MWR) is responsible for managing the Solid Waste Education and Awareness program at Naval Station Coastal City .

Base Instructions, Letters, Flyers. Department heads will be informed in writing by SOLID WASTE PROGRAM MANAGER which materials to collect, of the collection route schedule, and where to place recycling containers for collection. Department heads, in turn, will convey this information to their employees during staff meetings.

Container Labeling. Containers will be clearly marked as to their use. The labels will be either painted on the containers with a stencil or stuck on to the dumpsters with a "bumper sticker". Locations where certain items can be collected for recycling on base as well as phone numbers to answer any questions about recycling or proper disposal will also be provided on dumpsters.

Office paper recycling bins will be labeled for computer paper, mixed paper, high grade paper, etc. Definitions of the above paper types will be posted next to the bins.

Classes. A recycling awareness class, sponsored by MWR, will be presented once a year for base personnel. The class will teach which materials can be recycled, where these materials can be recycled on base, how these materials are processed for recycling, and where these recycled materials can be purchased. The solid waste video by NEESA will also supplement these classes.

A representative from MWR recycling center will give a brief talk on recycling to the children at the child care center and the teen center.

Special Events. Recycling and solid waste awareness exhibits will be included at the annual MWR base-wide picnic. A person from MWR will be designated to set up booths demonstrating different types of recycling technology. Awards will be given to the activities who recycle the greatest percentage. Recycling containers will be placed at various locations around the picnic. Guest speakers will be invited to talk about recycling on the band stage between shows.

Newspaper Articles. Solid waste articles will be submitted in the base newspaper. Naval Station

Coastal City will be included on the mailing list of the "Morale Welfare and Recreation Bulletin" (write to: MWR Training Unit, Bldg. 1489, NAS Patuxent River, MD 20670-5489) and the NEESA "Minimizer" (call: James Harlowe (805) 982-4873) so the base can share solid waste ideas and technology with other naval installations in the form of news articles. Articles will be submitted in local newspapers about Naval Station Coastal City's progress in solid waste management.

BQ Management Department will inform bachelor quarters occupants of new solid waste management policies.

Recommended Reading. Set up SOLID WASTE PROGRAM MANAGER and MWR with a free subscription of "Waste Age" magazine. For information on current solid waste technology, refer to the following:

The Recycling Guide, The Earth Works Group, Berkeley, CA, 1990.

50 Simple Things You Can Do to Save the Earth, The Earth Works Group, Berkeley, CA, 1989.

What You Should Know About Recycling, Booklet # 48595, Channing L. Bete Co., Inc.; South Deerfield, MA, 1989.

Recycling: A Viable Solution, California Waste Management Board, Solem and Associates, San Francisco, CA, 1983.

Solid Waste Management Plan for County of Santa Clara, Santa Clara Department of Planning and Development, San Jose, CA, 1989.

Miscellaneous. A large recycling progress thermometer, indicating the percentage of refuse diverted from the landfill, will be displayed inside the main gate of the base. Special environmental bulletin boards with interesting information and statistics about conservation, recycling, composting, and source reduction will be placed in the central area of every office building.

Posters will be strategically placed around the base to encourage recycling.

9. Material Procurement/Source Reduction.

All individuals and activities will attempt to buy recycled products whenever possible.

The guidelines in the "Waste Reduction Checklist", attachment (1), will be followed. It contains suggestions on smart purchasing to reduce solid waste. One example of such purchasing would be buying materials such as tires which have a longer projected life (i.e. 40,000 mile tires instead of 20,000 mile tires).

Use E-mail memorandums to reduce paper waste. Consideration will be given to duplex copying capabilities when renewing copy machine contracts.

High grade paper already used on one side will be printed on the other side for making draft copies in the copy machine and laser printers. Used bond paper will be used as scratch paper. This paper will also be donated to the Child Care Center at building No. 619 for use in art projects.

Electronic mail will possibly be used in the future for memorandums, letters, and messages between offices and commands. Electronic mail is the use of computers and modems to send messages by electronic means. Electronic mail eliminates the need to use paper, and shortens the logistic time for sending messages.

Whenever possible reusable containers for parts are to be used in exchanges for replacements. It will also be policy to purchase those items which come with the least amount of packaging and encourage all suppliers of products to attempt to minimize the packaging they use.

10. Waste Characterization. In order to implement this program and achieve the goals as set out in Section 3.2 of this document, it will be necessary to perform an initial waste characterization study to set the initial baselines for waste diversion goals and targets for recycling. Once the program has begun, the SOLID WASTE PROGRAM MANAGER should perform periodic economic and waste market analyses. Along with these analyses, the progress of the programs various goals shall be reported to the CO as per section 3.2 of this document.

11. Solid Waste Stream Tracking.

Naval Station Coastal City SOLID WASTE PROGRAM MANAGER will be responsible for collecting all weight records for all appropriated and non-appropriated material recycled, composted, and landfilled. This information will be used to calculate the solid waste diversion rate for Naval Station Coastal City .

$$\% \text{ Diversion} = \frac{\text{Total solid waste diverted}}{\text{Total solid waste generated}} \times 100$$

Total solid waste diverted is solid waste recycled, incinerated, composted, or not disposed of in a landfill.

Total solid waste generated is amount of solid waste in tons generated from the facility. It is the sum of solid waste landfilled, composed, incinerated, recycled, medical infection waste, scrap sold through DRMO, and any material that would normally be thrown away.

The waste diversion percentage will be painted on a thermometer inside the main gate.

The solid waste stream tracking information will also be documented in the NEESA Solid Waste Annual Report.

Solid waste stream information will also be provided "for information only" to state and county agencies upon request.