

# PUBLIC BUILDING RECYCLING PROGRAMS MODEL PLAN

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## **SECTION 1: INTRODUCTION**

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### **1.1 Purpose**

The Division is proposing this *PUBLIC BUILDING RECYCLING PROGRAM MODEL PLAN* for adoption by the SEC. It is intended to meet a statutory requirement established in 1999 to provide a model plan for office paper and other recycling programs at public buildings. Although this document uses the terms “public building” and “state agency” in discussing recycling programs, it is intended to provide useful guidance for any government, institutional, or commercial building recycling program. The plan also describes some basic local government actions necessary to make recycling programs available, as required by the statute in counties whose population is more than 100,000.

This *Model Plan* supplements the *RECYCLING & WASTE REDUCTION MODEL PLANS For Municipalities - September 1992*. Questions or requests for assistance should be directed to:

State Recycling Coordinator    PHONE: (775) 687-4670  
Bureau of Waste Management    EMAIL: dfriedma@ndep.carson-city.nv.us  
Nevada Division of Environmental Protection  
333 W. Nye Lane  
Carson City, NV 89706

### **1.2 1991 State Recycling Laws**

Nevada Revised Statutes (NRS) 444A.010 through 444A.110, which were established in 1991, set a goal of recycling at least 25% of the total solid waste generated within a municipality. The law also establishes some minimum community recycling program requirements. Counties of over 25,000 population must establish recycling programs which include drop-off collection sites for recyclable materials. Counties of over 100,000 population must establish programs which provide for the collection of source-separated recyclable materials at residential premises (curbside collection) where garbage collection is provided. Clark County, Washoe County and Carson City all have well-established residential curbside recycling programs.

### **1.3 Recycling by State Government Entities**

The 1991 legislation, as amended by AB 564 in 1999, also directs certain public entities to recycle paper and paper products:

- ◇ State agencies (NRS 232.007);
- ◇ Courts of justice (NRS 1.115);
- ◇ The Legislative Counsel Bureau (NRS 218.655);
- ◇ The University and Community College System of Nevada (NRS 396.437); and
- ◇ School Districts (NRS Ch. 386).

The State Environmental Commission (SEC) was directed to adopt procedures for the recycling of paper and paper products at state agencies, and the other entities noted above were similarly directed to develop such procedures.

A draft state agency regulation containing such procedures is included in Appendix C. The new regulation requires state agencies to develop paper recycling plans for each of their buildings or groups of buildings. To facilitate and guide recycling program planning, two forms are also provided in Appendix C, *Form #1: Nevada State Agency Recycling Programs - Recycling Policy & Program Building Inventory* and *Form #2: Nevada State Agency Recycling Programs - Building Recycling Plan*. The forms are for use by state agencies to meet the requirements of NRS 232.007. State agencies (defined as “every public agency, bureau, board, commission, department, division, officer or employee of the executive department of state government”) must complete these forms, submit them to the NDEP and implement the recycling plan for each building. The other public entities noted above, i.e. the courts, the Legislative Counsel Bureau, the University and Community College System of Nevada and the school districts, although subject to the paper recycling requirement, are not required to use these forms or submit recycling plans to the NDEP.

#### **1.4 Public Building Recycling and the 1999 Recycling Law Amendments**

In 1999 the Nevada legislature passed Assembly Bill No. 564, which amended the recycling statutes to broaden programs for the collection of source-separated recyclable materials to include public buildings, in addition to residential premises, in counties of over 100,000. The bill also directed the SEC to establish minimum standards and a model plan for recycling at public buildings. AB 564 also strives to expand recycling programs at the five state entities noted above by providing for the voluntary adoption of procedures for the recycling of other materials, in addition to paper products.

## **SECTION 2: THE MUNICIPAL GOVERNMENT LEVEL**

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### **2.1 Municipal Government Responsibilities**

In order to meet the requirement for source-separation of recyclables in municipalities with populations greater than 100,000, i.e.. Washoe and Clark Counties, these municipalities must adopt such ordinances, enter new contracts, or amend solid waste franchise agreements, as necessary to make available recyclable material collection services at public buildings. As stated in the implementing regulation (see App. B), the municipality must provide for the collection of at least three recyclable materials, to be designated by the municipality, and selected from the following list taken from NAC 444A.100 "Recyclable material" defined:

- |                           |                         |                  |
|---------------------------|-------------------------|------------------|
| (a) Newspaper;            | (e) Office paper;       | (I) Motor oil;   |
| (b) Corrugated cardboard; | (f) Glass;              | (j) Plastic; and |
| © Aluminum;               | (g) Tin and steel cans; | (k) Antifreeze.  |
| (d) Yard debris;          | (h) Metal;              |                  |

Although the law does not require counties outside of Clark and Washoe to set up programs for public building recycling, opportunities for the collection or drop-off of paper, cardboard and other commodities currently exist in several other communities, including Carson City, Douglas County, Elko County and Winnemucca.

## **2.2 Establishing the Municipal Program**

In developing a program for the source-separation of recyclable materials at public buildings several questions must be addressed by the municipality. These questions, and some suggested responses, are provided below:

### **2.2.1 Who are the stakeholders?**

- ◇ Owners of public buildings;
- ◇ Government agencies which occupy public buildings;
- ◇ Employees working in public buildings;
- ◇ Visitors to public buildings;
- ◇ Students at public schools and the University of NV and Community College System;
- ◇ Solid waste collection franchisees; and
- ◇ Recycling companies, especially those which collect and recycle paper.

### **2.2.2 Who will have access to the service?**

The term *public building* is broadly defined in the regulation, and the statute requires that the service be available wherever solid waste collection service is also provided. The service should be publicized and provided upon request.

### **2.2.3 Who will provide the collection service?**

In order to assure that it is available, there must be some formal arrangement such as a contract or franchise with the solid waste collection company(s) and/or recycling services.

### **2.2.4 What recyclable materials will be collected?**

The regulation requires at least three commodities to be designated by the County. Paper and paper products, such as cardboard, are the most prevalent commodities generated at public buildings. Further, state agencies, public schools and other public entities are required by statute to recycle them. Aluminum and plastic containers are also good candidates for consideration, as these are typically generated at public buildings. Although three is the minimum, municipalities are encouraged to include as many different commodities as possible in the recycling program. In so doing, they will be providing a higher standard of service and promoting increases in local diversion rates.

### **2.2.5 How will the materials be collected?**

The answer to this question depends on which materials are designated and who will be providing the service. Collections are likely to be included on existing commercial routes or residential routes.

### **2.2.6 What collection frequency is appropriate?**

This will depend on the customer's generation rate and the size of containers. The municipality may want to establish a minimum service level or simply allow it to be worked out between the service provider and the customer.

### **2.2.7 What are the customer's responsibilities?**

An economical and efficient collection system depends on the customer to properly separate the commodities and remove them to a designated location outside the building at the designated time. It is very important that the customer maintain this separation and prevent contamination by other recyclable or waste materials. The building owner or occupant must exercise sufficient control over outdoor containers to prevent contamination from their use as waste disposal containers.

### **2.2.8 Are other conditions of service appropriate?**

The desire for unlimited service must be balanced against the demands of efficiency and economy. Some limitations on convenience may be necessary to keep overall costs down. For example, in lieu of routine curbside collection, it may be appropriate to offer special quarterly collection days or new permanent drop-off facilities for very small or remote public building customers.

### **2.2.9 Implementation and Monitoring**

The municipality may need to address some of the above questions with changes in local ordinances or franchise agreements. Some of them may best be handled informally. Whatever plan is ultimately arrived at, the municipality must also ensure that it is adequately publicized and must monitor program implementation.

## **2.3 PROGRAM APPROVAL AND REVIEW**

The municipality must submit to the NDEP a request for program approval as provided in NAC 444A.120. The request should contain a description of the public building recycling program and be accompanied by: 1) copies of all ordinances which govern the program or provide for the participation of the municipality in a program adopted by an adjoining municipality, and 2) copies of all contracts and agreements to provide the collection of source-separated recyclable materials from public buildings. The request for approval must also include any other documentation and information which demonstrates that the municipality will meet the recycling goal (25%) set forth in NAC 444A.110. Also, at least every 36 months, the municipality must include a review of the public building recycling program as part of its general recycling program review, in accordance with NRS 444A.050.

## **SECTION 3: THE PUBLIC AGENCY/ PUBLIC BUILDING LEVEL**

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### **3.1 PROGRAM COORDINATION**

#### **3.1.1 The Recycling Program Coordinator**

Each state agency or building manager should select a staff member to be the recycling program coordinator. Recycling experience isn't necessary for this task. Enthusiastic commitment, coupled with good organizational and communications skills, will help build a successful program. Typical duties of a recycling program coordinator are to:

- ◇ prepare a written recycling plan taking into account the specific nature and circumstances of

the agency or building;

- ◇ promote the plan and inform staff of how to reduce waste and recycle at work;
- ◇ coordinate with the custodial service and collection services to ensure that the materials are removed to the collection area and picked up in a timely manner; and
- ◇ report on progress towards established waste reduction and recycling goals.

### 3.1.2 Program Promotion

Recycling programs must have the support of both management and staff. Here are a few suggestions to develop this support:

- ◇ A kick-off memo signed by the agency administrator to describe the program and its benefits;
- ◇ Clear “how-to” notices posted at recycling areas such as copy and break rooms - what does and does not go into the bins;
- ◇ Continual promotion via memos, posters and e-mail;
- ◇ Include information on recycling in new-employee orientation;
- ◇ Reinforce the program with updates on participation rates, recyclable products purchased, natural resources conserved, materials marketed, cost savings, etc.

### 3.1.3 Recycling Plan

A public building recycling plan should:

- ◇ Contain a statement of the agency’s recycling goal;
- ◇ Designate an agency recycling coordinator;
- ◇ Determine what services are available locally for the collection of recyclable materials;
- ◇ Determine what types of recyclable materials are generated by the agency;
- ◇ Contain a method for the separation and collection of recyclable materials;
- ◇ As far as possible, make available recycling containers for the visiting public, as well as for the employees;
- ◇ Identify agency personnel and custodial service responsibilities for the separation and collection of recyclable materials; and
- ◇ Contain provisions to inform all employees of the recycling plan and to

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#### PAPER RECYCLING FACTS\*

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- ◇ Paper recovery for recycling has increased steadily over the last decade. In 1988 the paper recycling rate (as a percentage of paper consumed) was 30%; by 1999 this rate had jumped to 45%. (AF&PA, May 2000 Paper Recovery Progress Report )
- ◇ In a typical office building about 70% of the waste generated is office paper.
- ◇ The manufacture of newsprint uses 40% less energy when made from recovered materials.
- ◇ Old corrugated containers collected in 1997 were valued at nearly one billion dollars.
- ◇ Recycling office paper reduces hazardous air pollutant emissions by 90% and particulate emissions by 40%.

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\*This and other information concerning the benefits of recycling can be found in the US EPA publication, *Puzzled About Recycling’s Value-Look Beyond the Bin*. (See App. D)

encourage them to participate.

The recycling plan may also need to address certain special issues, such as:

- ◇ Provision of sufficient space for recyclable collection containers; and
- ◇ Management of confidential documents.

It is recommended to include the recyclable collection service(s) and custodial service in the plan development. Their participation is important to ensure that adequate facilities and containers are available and that the times, places and methods of separation and collection are understood by all concerned.

### **3.1.4 Recycling Goals**

A statement of goals can encourage program participation by helping participants understand the value of their recycling efforts. Recycling can reduce dependence on natural resources, including energy, forests, water, minerals and landfill space. Recycling can sometimes also reduce the costs of waste disposal. Goal statements should be specific enough to provide a standard against which program effectiveness can be measured. Examples of goal statements:

- ◇ Provide every employee a convenient system for recycling office paper, cardboard, aluminum and plastic bottles in order to conserve natural resources.
- ◇ Recycle 30% of the office paper purchased by the agency within one year and 50% within 3 years.

## **3.2 WASTE REDUCTION**

The waste management hierarchy is commonly stated as:

### ***REDUCE - REUSE - RECYCLE***

It is best to REDUCE waste generation because this is the most efficient way to conserve resources, landfill space and disposal costs. With waste reduction, the monetary and resource costs to separate, collect, transport, process and re-manufacture the material are entirely avoided. A few of the many ways to reduce waste are:

- ◇ double-sided copying and printing;
- ◇ re-evaluate & update mail and distribution lists for letters, reports and publications;
- ◇ electronic mail;
- ◇ proof-reading documents on the computer screen before printing;
- ◇ rent, rather than buy, equipment that is used only occasionally.

REUSE is the next most efficient waste management technique for conserving resources. When an item is reused, the costs of processing, re-manufacturing and marketing are avoided. Examples of reuse options at work include:

- ◇ reuse foam peanuts, cardboard boxes and other packaging materials;
- ◇ advertise surplus or reusable items throughout your organization.

Identify areas in your organization where waste can be reduced or reused - then recycle. For more information see the EPA *Business Guide for Reducing Solid Waste* (Doc# K-92-004)

### **3.3 RECYCLABLE MATERIALS COLLECTION & MARKETS**

#### **3.3.1 Your Recycling Collection Service**

There is value in separating out recyclable materials only if someone else will take them and use them. Markets for recyclable commodities fluctuate just as other commodity markets do, but municipal recycling programs have established stability in the types of recyclable materials that can be set out for collection. Under proposed Nevada regulations (see App.B), subject municipalities must designate at least five recyclable materials, two of which must be paper or paper products, for collection at public buildings. Contact your recycling collection service to find out what materials will be picked up.

The building recycling system must be designed to prevent contamination of separated recyclables with other waste materials. For example, even minor quantities of newspaper in a white ledger paper dumpster may result in the whole load being managed as mixed paper, a lower-value commodity. Separating ledger paper adds value to the material; employee education and program monitoring are necessary to achieve and maintain the value of material separation.

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#### **ASK YOUR RECYCLING SERVICE PROVIDER:**

- ◇ What paper grades do they collect?
  - ◇ What is considered a contaminant?
  - ◇ Will they provide recycling bins?
  - ◇ Will they pay for the paper?
  - ◇ Can the garbage collection rate be reduced by going to a smaller container or less frequent pickups?
- 

#### **3.3.2 Paper Grades**

Examples of “paper grades”, as defined in the recyclable commodities marketplace are:

- ◇ white ledger - most white office paper in single sheets or continuous forms, including computer paper, copy paper, letterhead, etc.;
- ◇ ledger - same as above but includes colored paper;
- ◇ mixed - a mixture of various grades including ledger, newspaper, magazines, etc.;
- ◇ newspaper - also known as ONP (old newspapers);
- ◇ corrugated cardboard - also known as OCC (old corrugated containers).

Check trash cans and recycle bins to visually identify paper grades and their quantities in the public building waste stream. Check with your paper collector to determine which grades they collect. Note that different grades have different prices and that it may be worth the effort to sort out different grades.



### **3.3.3 Other Recyclables - Aluminum, Glass, Tinned Steel Cans, Plastic Containers**

These waste items are typically generated at public and commercial buildings as well as at residential premises. Again, determine which of them your collection service will accept, and whether they can be commingled (put out together in the same container). Note that most collection services will accept these materials only in the form of containers, i.e., cans and bottles, but not aluminum foil, window glass, plastic film, etc.

Plastics separation can be a challenge for recycling programs because there are so many different kinds, and not all may be accepted by the collector. Plastics are labeled according to the resin type (see App.E). Many collection programs will accept only beverage containers made from #1 (PET) and #2 (HDPE) resins. Since beverage containers are nearly all composed of PET or HDPE resins, instructing employees to recycle only beverage containers may be a simple plan that achieves a good separation result.

### **3.3.4 Organic Wastes**

Under this heading are included yard debris and food waste. A municipality may designate yard waste as a commodity to be collected under its recycling program. Yard waste constitutes a large portion of municipal solid waste, and diverting it to mulching and composting plants is a good way to significantly reduce waste disposal. Many public buildings create significant quantities of yard waste and may want to divert it to composting. Some coordination and training of the building's landscaping service will be necessary to prevent contamination of yard waste with other materials such as plastic and inorganic materials.

Food waste is generated in institutional facilities such as schools and prisons, as well as in office cafeterias. Food wastes can be collected in separate containers or with yard waste and used as compost feedstock. With minimal processing, food waste can also be used as livestock feed. Check with your recycling collector, with local pig farmers or composters to see if food waste collection service is available.

## **3.4 BUY RECYCLED-CONTENT PRODUCTS**



### **3.4.1 Closing the Loop**

The universal symbol for recycling is three arrows chasing each other in a circle. These arrows symbolize the three necessary elements of recycling - collection, remanufacturing and purchasing. In other words, waste materials have not been recycled until they have been remanufactured into new products, which have, in turn, been purchased by consumers. It makes sense for people and organizations which separate recyclable materials to buy recycled-content products. Public building recycling programs can contribute to the development of recycling markets by adopting, and implementing, a procurement policy which promotes the purchase of recycled-content products.

Examples of commonly used products in public buildings which can be purchased with recycled feedstock are listed below:

- ◇ motor oil
- ◇ printer toner cartridges
- ◇ ledger paper
- ◇ compost
- ◇ landscaping products

Many other recycled content products are listed, with specifications, in the Comprehensive Procurement Guidelines, issued in the Federal Register by the US EPA. Information on the federal procurement guidelines is available at [www.epa.gov/epaoswer/non-hw/procure](http://www.epa.gov/epaoswer/non-hw/procure).

### **3.4.2 Developing a Procurement Policy**

A model municipal government procurement policy can be viewed at the King County, Washington web site: [www.metrokc.gov/procure/green/mdpolicy/htm](http://www.metrokc.gov/procure/green/mdpolicy/htm). In addition to recycled-content products purchasing, this model includes other measures concerning the purchase of environmentally preferable products. Consideration is also given to waste reduction issues such as product use life and packaging. As noted in Section 3, above, it is highly appropriate to address waste reduction in the development of public building recycling plans, because waste reduction is a more efficient way of cutting disposal costs and consumption of natural resources.

### **3.4.3 Costs**

Nevada Revised Statutes allow 5% price preference to state agencies for the purchase of recycled-content products; a 10% price preference is allowed for purchasing recycled-content products manufactured in Nevada. With the development of recycling markets, however, there are more and more recycled-content products which provide equivalent performance at competitive prices.

## **3.5 PROGRAM MONITORING AND ASSESSMENT**

The recycling coordinator for the agency or public building should monitor implementation of the recycling program to make sure that there are enough recycling containers and that they are appropriately sized. It should also be verified that recycling areas are kept neat and clean and that the materials are separated properly to minimize contamination.

The recycling coordinator should also periodically (annually or semi-annually is suggested) assess the program's effectiveness. The method of this assessment will depend on the goals established in the recycling plan. For example, if the stated goal is, "provide every employee a convenient system for recycling..." , then the assessment can be performed by a visual examination of the building's recycling containers and collection areas or by conducting a "customer satisfaction survey". If, on the other hand, the goal is to, "recycle 30% of the office paper purchased by the agency within one year and 50% within 3 years", then a systematic effort to collect this data will be necessary. Whether the program assessment is qualitative or quantitative, it should begin with a baseline assessment before the program is implemented. It is also suggested to include some basic information about the building or agency to allow comparisons with other programs. If a quantitative assessment is desired, the following

measurable parameters will help to provide a clear picture of the program over time:

- ◇ quantity of paper purchased;
- ◇ quantity of refuse collected;
- ◇ quantity of paper collected;
- ◇ quantity of other recyclable materials collected;
- ◇ costs of refuse collection
- ◇ revenue from collection of paper or other recyclables
- ◇ size of recyclable collection containers;
- ◇ quantities of recycled-content products purchased.

The above information can sometimes be obtained from agency purchasing and accounting departments. Visual inspection of the waste and recyclables picked up on collection days, and of the bins used for waste and recycling throughout the building, can also provide the necessary information. Other points to consider in assessing the program are:

- ◇ any promotional events or information activities conducted;
- ◇ performance of, and employee satisfaction with, recycled-content products;
- ◇ employee participation levels;
- ◇ categories of recyclable materials collected.

## **SECTION 4: SUMMARY**

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New statutes and regulations require counties with populations over 100,000 to make available the collection of source-separated recyclable materials at public buildings. State agencies and other state government entities, including school districts, the University and Community College System, the Legislative Counsel Bureau and the justice courts, are required to recycle paper and paper products. Upon implementing these requirements, Nevada's urban areas should have both the infrastructure and the recovery systems in place to achieve significant recovery rates for paper and paper products generated in public buildings. Many agencies have done this already, but there is much room for expansion of recycling programs in the public building arena. Public buildings which have not yet established paper recovery systems can do so now. Those already recycling paper can now expand their programs to other commodities, such as aluminum, plastic or steel, as designated by county ordinances and contracts.

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Questions concerning this plan or starting a recycling program can be directed to:  
State Recycling Coordinator, Bureau of Waste Management, Nevada Division of Environmental Protection, 333 W. Nye Lane, Carson City, NV 89706      PHONE: (775) 687-4670