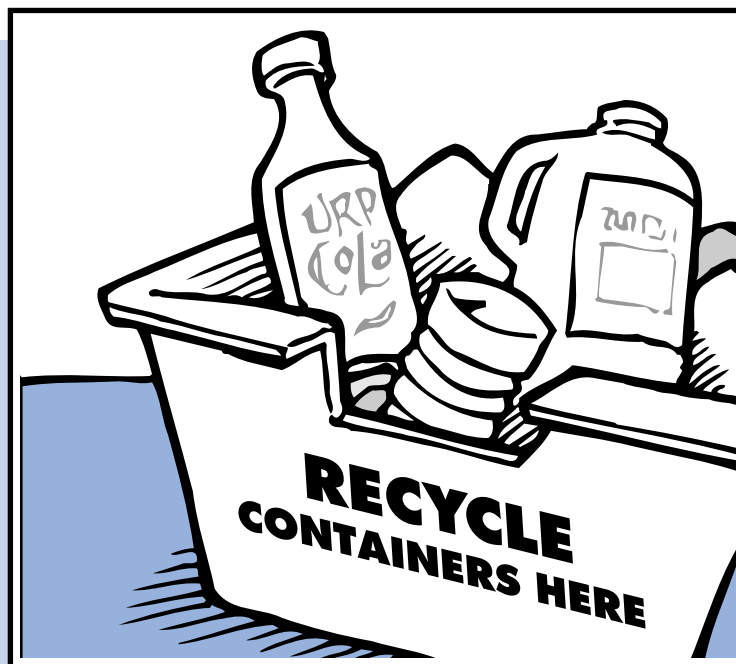




Community Partners for Clean Streams



SERIES #7: Managing Wastes



COMMUNITY PARTNERS FOR CLEAN STREAMS

NOTE: This handbook is one in a series of handbooks that describe specific practices businesses can use to protect water quality. A complete list of all handbooks and fact sheets available through the Community Partners for Clean Streams program is provided on the inside of the back cover. To obtain other handbooks in this series contact the Program Manager at the address or phone number provided below.

Becoming a "Community Partner for Clean Streams"

We hope you'll join with the Washtenaw County Drain Commissioner's office and other area businesses and institutions by participating in the Community Partner for Clean Streams program. Through this program, businesses help protect the Huron River and local streams.

To participate in the program, fill out the checklist in the back of this handbook. Send it to the address below and our staff will work with you to become a Community Partner for Clean Streams. In return for your effort, we'll publicly acknowledge your business through newspaper articles, displays and speaking engagements. We'll also encourage consumers to look for the Community Partners logo at your business when they select services.

Washtenaw County Award for "Environmental Excellence"

By becoming a Community Partner, your business will have completed the water quality criteria for Washtenaw County's "Environmental Excellence" award. This annual award is presented to businesses in the County that proactively protect the environment. For more information about this award program, contact the Community Partners Program Manager:

**Community Partners for Clean Streams Program Manager
Washtenaw County Drain Commissioner's Office
110 N. Fourth Ave.
Ann Arbor, MI 48107-8645**

**Phone: (313)994-8344 or 994-2525
Fax: (313)994-2459**

Handbook Design and Illustration by David Zinn

Minimizing Waste

Why be concerned?

Using the least toxic products and procedures is one of the most important ways to protect water quality. Minimizing waste is just as important. Look for opportunities to reduce the toxicity and volume of your waste and take advantage of them, whenever possible. This will not only protect the environment – it will often reduce your liability and disposal costs.



Choosing the Least Toxic Option

First, identify potentially hazardous products and their uses. Next, look for materials and procedures that can either be eliminated completely or substituted with a less toxic alternative. For example, less hazardous options for common cleaning activities include:

- using hot water/steam cleaning methods when washing oil from metal parts.
- using non-chlorinated and aqueous compounds rather than chlorinated and petroleum-based ones.
- using phosphate-free detergents.

When purchasing products, ask your supplier to provide you with information about less toxic alternatives. For more assistance, contact one of the agencies listed under “Getting Help.”

Purchasing Power

- Buy the most durable products and parts available. Consider whether an item is easily repaired, reused and/or recycled.
- Avoid disposable products and excessive packaging.
- Try to buy *only* what you need. For example, buy materials only in amounts that can be completely used in a timely manner.
- Consider hiring a contractor to perform occasional work so that unused materials don't accumulate. Whenever possible, require contractors to implement practices recommended by Community Partners for Clean Streams.
- Develop a policy against accepting unnecessary samples from product vendors.

Ideas for Using, Storing and Disposing of Products



- Recondition and reuse products, instead of buying new ones.
- Avoid routine applications. When using pesticides, acids and other chemicals outdoors, think about it first and make sure that their application is necessary.
- Carefully read and follow label directions: never use more product than the directions suggest.
- When possible, apply products to targeted areas *only*, versus wholesale over a larger area.
- Maintain equipment and calibrate it frequently (including sprinklers) to prevent leaks, over-application and drift. Don't apply products outdoors when rain or winds are in the forecast.
- Use up materials *completely* and allow containers to air dry before disposing of them. When cleaning containers and applicators, don't use methods that generate even more waste, such as washing out paint sludge with solvent.
- Keep stored materials dry and contained. Make sure they're properly labeled and dated so that the oldest materials can be used first. For more information about storing materials and wastes, see **Series #1, Fact Sheet 1.1**.
- Separate wastes. Mixing wastes can prevent reuse and recycling. It can also cause previously non-hazardous materials to become hazardous – increasing both their threat to the environment and disposal costs.

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- Find out if others can use your materials when you're done with them. If they can't be reused, recycle your wastes whenever possible. For more information about reuse and recycling, see **Series #7, Fact Sheet 7.2** or contact one of the agencies listed under "Getting Help."

Preventing Leaks and Spills

Plan ahead to prevent leaks and spills. For more information about spill prevention and clean-up, see **Series #1, Fact Sheet 1.2**.

More Ideas for Minimizing Waste

Since each business is unique, opportunities to reduce waste will vary. Common options for reducing oil, paint and solvent waste include using:

- extended-life engine and transmission oils.
- high volume low pressure or airless paint guns.
- cyclonic parts cleaners which spin dirt out to the side and so extend the life of the solvent. Solvent waste can be further reduced by buying or leasing a spray gun cleaner that recirculates thinner.

When looking for ways to minimize waste, be creative. Any reduction in waste that you can achieve will protect the environment by an equivalent amount. For more information about ways to reduce waste, contact one of the agencies listed under "Getting Help."

GETTING HELP

Michigan Department of
Environmental Quality (800) 662-9278

Washtenaw County DPW
Pollution Prevention
Program (313) 971-4542

Washtenaw County DPW
Solid Waste Program (313) 994-2398

Community Partners for
Clean Streams (313) 994-8344

Recycling

Why be concerned?

Instead of dumping your waste, see if it can be converted into a resource. Take advantage of opportunities to recycle your wastes and to buy recycled products.

Recycling fact sheets, specific to business types, are available through the Washtenaw County DPW Solid Waste and Recycling Program. For more information about the materials and services available through this program, call the Solid Waste Program Coordinator at (313) 994-2398.



“Closing the Loop”

True recycling hasn't occurred until recycled materials are purchased as new products. This is called “closing the loop.” When you buy recycled products, you help to expand their market and reduce their cost.

Whenever possible, purchase products that you know can be recycled. For example, some absorbent materials are designed to be recycled whereas others, such as cat litter, must be landfilled. Ask your vendor about substituting products you currently use with those made from recycled - and recyclable - materials.

5 STEPS TO SUCCESSFUL RECYCLING:

1. Separate wastes

Combining different types of waste can prevent recycling and greatly increase disposal costs. For example, uncontaminated waste oil can be recycled, whereas waste oil mixed with solvents requires a much more costly disposal process.

2. Recycle what you can

The following materials can usually be recycled:

- antifreeze
- tires
- car batteries
- oil and oil filters
- uncontaminated gasoline and brake fluid
- some solvents such as degreasing agents and paint solvents
- concrete and asphalt
- bricks
- metal scraps
- latex paint
- drywall/sheetrock
- pallets and untreated wood
- landscaping wastes
- cooking oil, fats, and greases
- paper and cardboard
- glass, plastic, aluminum and tin containers

To start a recycling program, talk to the person that currently handles your waste removal or call one of the agencies listed under “Getting Help.” Look for haulers that are flexible and willing to work with you to design a recycling program based on *your* needs. Basic questions include:

- What materials will they accept?
- What quantities will they accept?
- Will the firm pay for recyclable materials?
- Will they provide recycling containers?
- How much will the service cost?
- Where will the materials be taken?
- Do they provide education materials such as training videos or pamphlets?
- Do they have references?



When designing a recycling program, be sure that it's useful to all of your employees. Provide clearly marked bins for storing materials and place them where they'll be easy to use. Involve your staff in designing and implementing the program.

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3. Consider contracting with an industrial fluid recycling service

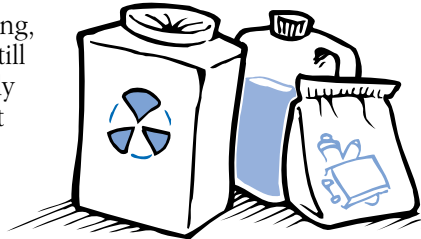
These services will pick up and recycle a variety of used industrial fluids. Some will also recycle other materials, such as used oil filters and absorbent materials. Depending on the company, these services can offer several advantages, including:

- assured compliance with all applicable state and federal laws.
- financial protection in the event of a spill.
- assistance analyzing your waste stream (finding ways to minimize waste and identifying wastes that are recoverable).
- assistance with paperwork, such as shipping manifests.
- equipment leasing and maintenance. For example, some companies lease parts cleaners, which they maintain and supply with solvent. On a regular schedule, clean solvent is exchanged for spent solvent which is recycled and used again. This service is also available if you already own a parts cleaner. By using this type of service, over 85% of waste solvent can be turned back into fresh solvent and reused.

When choosing an industrial fluid recycling service, find out exactly what will be done with your wastes. If possible, hire a company that will refine and reuse materials instead of burning them for fuel (even though the latter is preferable to simple incineration or landfilling).

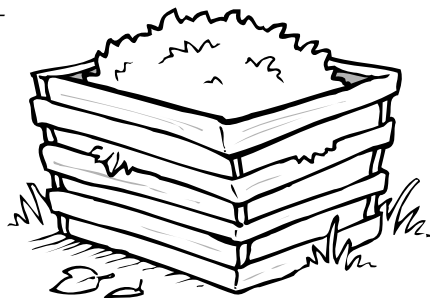
4. Properly store hazardous wastes prior to recycling

Legal requirements for storing, handling, and transporting hazardous wastes still apply until the point that they're actually recycled. For more information about hazardous waste regulations, contact one of the agencies listed under "Getting Help."



5. Compost landscape wastes

Local landfills no longer accept landscaping waste. Composting this waste provides an environmentally sound alternative to landfilling. In addition, the compost can be used to enrich the soils on-site. For more information about composting, contact one of the agencies listed under "Getting Help."



GETTING HELP

Washtenaw County DPW
Solid Waste Program (313) 994-2398

Washtenaw County DPW
Pollution Prevention
Program (313) 971-4542

Washtenaw County
MSU Extension Office (313) 971-0079

Michigan Department of
Environmental Quality (800) 662-9278

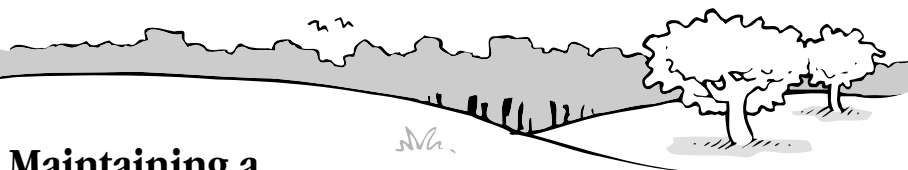
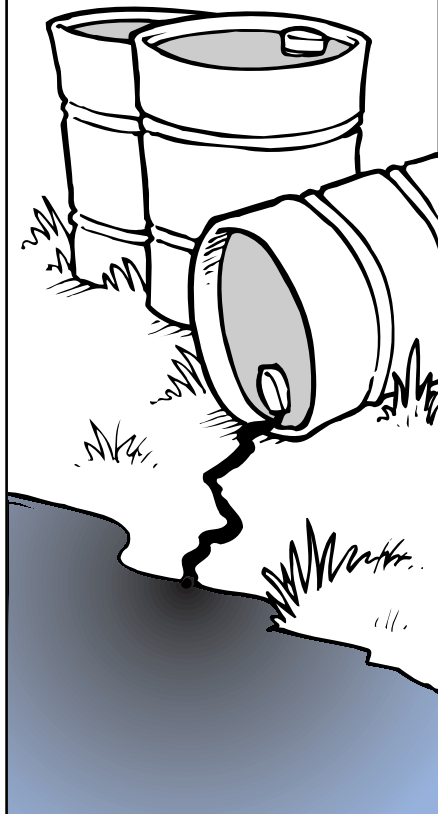
Community Partners
for Clean Streams (313) 994-8344

Disposing of Wastes

Why be concerned?

Unfortunately, improperly disposed of wastes don't just disappear: they eventually go somewhere else. For example, they filter into our groundwater and wash off the land directly into lakes, rivers and streams.

Proper waste management is extremely important to avoid not only environmental problems, but legal ones as well. Businesses are legally responsible for their waste disposal even if it's handled by an outside contractor. And while the business owner has ultimate responsibility for disposing of wastes, employees may also be legally liable.



Maintaining a Litter-Free Landscape

Regularly remove debris from outside areas and dispose of it properly. This is especially important right before large storms and snow melts. Be sure to pick up and, if possible, compost landscape wastes. Many people don't know it, but leaves and other organic wastes are pollutants if too many are allowed to enter surface waters.

Make sure that waste containers are conveniently placed and aren't allowed to leak or overflow. (For more information about properly storing wastes, see **Series #1, Fact Sheet 1.1.**)

Identifying Hazardous Wastes

A waste is considered hazardous if it could be dangerous to human health, property, or the environment. The EPA lists 450 types of hazardous wastes. In general, these materials are ignitable, reactive, corrosive, and/or toxic.

Hazardous products commonly used by businesses include:

- paints
- thinners
- solvents
- cleaning and polishing fluids
- coolants
- pesticides
- degreasers
- lead acid batteries
- acids/caustics
- metallic compounds
- petroleum products

If you don't know whether a waste is hazardous, contact one of the agencies listed under "Getting Help." Assume a material is hazardous until you find out otherwise. When in doubt, place the waste in a sealed container, label it, and store it in a safe place where no one can accidentally use it, prior to safe disposal.

Determining the Best Disposal Method

First and foremost, prevent wastes (including wash water) from entering storm drains: these lead straight to local lakes, rivers and streams. If you're not sure where a drain leads, call the Drain Commissioner's office and request that it be dye-tested.

Proper disposal will depend on how much waste is generated and the material's chemical properties. Even if a waste *isn't* hazardous, you may not be able to put it into a dumpster or the sanitary sewer. State law prohibits the landfilling of some non-hazardous materials, such as liquids, uncontaminated soil, and landscape wastes, as well as hazardous ones.

There are also limits on what can go down the sanitary sewer. Dumping a substance down the sanitary sewer without prior approval can cause explosions or other problems due to the mixing of incompatible chemicals.

Before disposing of wastes via a dumpster or the sanitary sewer, call your local landfill and/or wastewater treatment plant and – if in doubt – make sure they can be accepted (phone numbers are listed under "Getting Help").

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Disposing of Hazardous Wastes

Once you've determined that a waste is hazardous, estimate how much of it you generate and accumulate: this will dictate how it can be transported and disposed of under state law. Next, contact the Michigan Dept. of Environmental Quality (MDEQ) to find out whether you can transport your waste yourself or if you must use a licensed hauler. No matter who transports your hazardous wastes, they must have an EPA identification number. They must also deliver these wastes to a licensed treatment, storage and disposal facility (TSDF).

Be careful when deciding how to transport and dispose of wastes. As a generator, you remain legally liable for their fate "from cradle to grave." Many waste haulers, brokers, and TSDFs operate in this area. When choosing, be sure to:

- Check references. Seek referrals from businesses similar to yours.
- Make sure the business has a license and an EPA identification number from the MDEQ.
- Find out if the business has been recently cited for violations and, if so, what changes have been made in its practices.
- Find out what steps will be taken to prevent spills, as well as the type and amount of insurance the company carries. Ask for proof of this insurance.
- Find out what will be done with your waste. It must end up at a TSDF where it can be reprocessed, recycled, blended into fuels, incinerated, or taken to a special landfill. If your waste isn't delivered to the treatment or disposal facility on the same day it's picked up, find out where it will be stored. Whenever possible, further verify the information you receive.

Laws governing waste disposal can be confusing. For example, it's often difficult to distinguish between the laws that apply to all hazardous *substances* and those that apply only to hazardous *wastes*. For the most current information regarding waste regulations, contact the MDEQ, Waste Management Division.

The Importance of Shipping Manifests

Shipments of liquid industrial waste must be accompanied by a uniform waste manifest signed by the generator. A manifest is also required when transporting regulated amounts of hazardous waste. Be sure that waste manifests are provided when required and that they're filled out accurately and completely.

GETTING HELP

Michigan Department of
Environmental Quality (800) 662-9278

Washtenaw County DPW
Pollution Prevention
Program (313) 971-4542

Washtenaw County DPW
Solid Waste Program (313) 994-2398

BFI Landfill (810) 349-7230

City of Ypsilanti - Recycling, Composting
& Trash (313) 480-1030

City of Ann Arbor
Solid Waste Dept. (313) 994-2807
24 Hour Information (313) 994-7336

Wastewater Treatment Plants:
City of Ann Arbor (313) 994-2840
City of Ypsilanti (313) 484-4600

Community Partners for
Clean Streams (313) 994-8344

Community Partners for Clean Streams WATER QUALITY ACTION PLAN

SERIES #7: SITE DESIGN AND CONSTRUCTION Fact Sheets 7.1, 7.2, and 7.3

Completing Your Water Quality Assessment and Action Plan

To create your own "Water Quality Action Plan", please fill out the following checklist (instructions are included on the other side of this page). The "Actions" in this checklist directly correspond to recommendations made within this handbook. If you have any questions or would like help completing this form, please contact the Community Partners for Clean Streams Program Manager at (313)994-8344 or (313)994-2525. Send completed checklists to:

Community Partners for Clean Streams
Washtenaw County Drain Commissioner's Office
110 N. Fourth Ave.
Ann Arbor, MI. 48107-8645
Fax: (313)994-2459

NOTE: To become a "Community Partner for Clean Streams", all checklists that apply to your business must be filled out and returned. A complete listing of all program handbooks/checklists is provided on the inside of the back cover. To obtain copies, contact the Community Partners Program Manager.

Business Information

Business Name: _____

Type of Business: _____ No. of Employees: _____

Address: _____ Zip: _____

Contact Person: _____ Title: _____ Phone: _____

Water Quality Action Plan prepared by: _____ Date: _____

Business Activities That Can Affect Water Quality

Please check the activities that your business is responsible for:

- | | | |
|---|--|--|
| <input type="checkbox"/> Storing materials | <input type="checkbox"/> Maintaining buildings/pavement | <input type="checkbox"/> Maintaining landscapes |
| <input type="checkbox"/> Spill containment and response | <input type="checkbox"/> Maintaining constructed stormwater controls | <input type="checkbox"/> Site design and/or construction |
| <input type="checkbox"/> Managing wastes | <input type="checkbox"/> Managing employees | |



Directions for Completing this Checklist (see sample below):

1. For each action, check the appropriate box in the ASSESSMENT column (*Not Applicable, Always, or Needs Improvement*).
2. Next, check the corresponding box in the ACTION PLAN column (*Plan to Continue or Plan to Improve*).
3. For every current *and* proposed action, indicate who will do it and in when.
4. If possible, provide additional information (about both current *and* proposed activities) in the space preceded by the word "Action(s)". If insufficient space has been provided, please feel free to attach extra pages.
5. If the action requires ongoing employee training or commitment from management, check that box as a reminder to include it in you employee education activities.
6. Detach the checklist from this handbook and return it to Community Partners for Clean Streams!

EXAMPLE	ASSESSMENT	ACTION PLAN
<p>1. Steps are taken to minimize the amount of potentially polluting materials and wastes kept in storage.</p>	<p> <input type="checkbox"/> Not applicable <input type="checkbox"/> Always <input checked="" type="checkbox"/> Needs improvement </p>	<p> <input type="checkbox"/> Plan to continue <input checked="" type="checkbox"/> Plan to improve </p>
	<p>Who: <u>Purchasing Dept./Facilities Manager</u></p>	
	<p>Schedule: <u>As applicable</u></p>	
	<p>Action(s): <u>Deicing chemicals will be purchased in smaller quantities and stored in water-proof, leak-proof containers</u></p>	
	<p><input type="checkbox"/> Requires ongoing education/commitment</p>	

SERIES #7: MANAGING WASTES
(Fact Sheets 7.1, 7.2, and 7.3)

ASSESSMENT

ACTION PLAN

1. Purchasing decisions are made to minimize waste (e.g., excess materials and packaging are avoided).

- | | | |
|--|---|---|
| <input type="checkbox"/> Not applicable | | <input type="checkbox"/> Plan to continue |
| <input type="checkbox"/> Always | ☞ | <input type="checkbox"/> Plan to improve |
| <input type="checkbox"/> Needs improvement | ☞ | |

Who: _____

Schedule: _____

Action(s): _____

Requires ongoing education/commitment

2. Steps are taken to minimize waste when using chemical and petroleum products (e.g., over-application is avoided and products are used completely).

- | | | |
|--|---|---|
| <input type="checkbox"/> Not applicable | | <input type="checkbox"/> Plan to continue |
| <input type="checkbox"/> Always | ☞ | <input type="checkbox"/> Plan to improve |
| <input type="checkbox"/> Needs improvement | ☞ | |

Who: _____

Schedule: _____

Action(s): _____

Requires ongoing education/commitment

3. Steps are taken to ensure that wastes are *not* dumped onto the ground or into storm drains.

- | | | |
|--|---|---|
| <input type="checkbox"/> Always | ☞ | <input type="checkbox"/> Plan to continue |
| <input type="checkbox"/> Needs improvement | ☞ | <input type="checkbox"/> Plan to improve |

Who: _____

Schedule: _____

Action(s): _____

Requires ongoing education/commitment



4. All wastes that can be reused or recycled.

- Not applicable
- Always Plan to continue
- Needs improvement Plan to improve

Who: _____

Schedule: _____

Action(s): _____

Requires ongoing education/commitment

5. Wastes that can't be reused or recycled are disposed of according to federal, state and local law.

- Not applicable
- Always Plan to continue
- Needs improvement Plan to improve

Who: _____

Schedule: _____

Action(s): _____

Requires ongoing education/commitment

Additional Comments:

COMMUNITY PARTNERS FOR CLEAN STREAMS FACT SHEETS

FACT SHEET: STORMWATER RUNOFF AND WATER QUALITY

SERIES #1: HOUSEKEEPING PRACTICES

Fact Sheet 1.1: Storing Materials and Wastes
Fact Sheet 1.2: Preventing and Cleaning Up Spills

SERIES #2: MAINTAINING ENGINEERED STORMWATER CONTROLS

Fact Sheet 2.1: Catch Basin Care
Fact Sheet 2.2: Oil/Water Separators
Fact Sheet 2.3: Maintaining Stormwater Management Systems

SERIES #3: MAINTAINING EQUIPMENT AND VEHICLES

Fact Sheet 3.1: Storing and Maintaining Equipment and Vehicles
Fact Sheet 3.2: Washing Equipment and Vehicles

SERIES #4: MAINTAINING BUILDINGS AND PAVEMENT

Fact Sheet 4.1: Outdoor Pressure Washing
Fact Sheet 4.2: Maintaining Building Facades
Fact Sheet 4.3: Maintaining Paved Areas
Fact Sheet 4.4: Using and Storing Deicing Materials
Fact Sheet 4.5: Cooling Water Systems

SERIES #5: MAINTAINING LANDSCAPES

Fact Sheet 5.1: Maintaining Healthy Lawns, Shrubs and Trees
Fact Sheet 5.2: Using Fertilizer
Fact Sheet 5.3: Integrated Pest Management
Fact Sheet 5.4: Using Pesticides

SERIES #6: SITE DESIGN AND CONSTRUCTION

Fact Sheet 6.1: Designing Landscapes for Water Quality
Fact Sheet 6.2: Designing Stormwater Management Systems
Fact Sheet 6.3: Clearing and Grading Land

SERIES #7: MANAGING WASTES

Fact Sheet 7.1: Minimizing Waste
Fact Sheet 7.2: Recycling
Fact Sheet 7.3: Waste Disposal

SERIES #8: EDUCATION

Fact Sheet 8.1: Education and Community Leadership

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