

**EXERCISE 1**  
**WHAT IS POLLUTION PREVENTION?**

The purpose of this exercise is to practice using the environmental management hierarchy to classify waste management activities. Read each of the activities below and select the part of the environmental management hierarchy that corresponds to the activity (*i.e.*, source reduction, recycling, treatment or disposal). If the scenario is an example of source reduction, identify the type of source reduction technique that is being used (*i.e.*, process efficiency improvements, material substitution, inventory control, preventive maintenance or improved housekeeping). Please note that the examples are not necessarily clear-cut; some examples may have more than one answer.

1. A military base establishes additional recycling collection capabilities to accept plastic containers, yard waste, and household hazardous waste.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

2. A petroleum refinery uses spent caustic from a process as a substitute for basic chemical substances used to neutralize acidity in waste water treatment.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

3. A vehicle painting operation replaces its conventional paint guns with high volume, low pressure spray guns.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

4. A Federal facility provides a training program that emphasizes keeping working areas neat and in good order.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

5. A manufacturing plant adds a scrubber to control the release of particulate emissions to the air.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

6. A vehicle maintenance facility purchases a crusher for used oil filters.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

7. An office complex changes its maintenance contract to require the use of non-hazardous cleaning products.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

8. A warehouse changes its inventory procedures so that new incoming materials are placed behind existing stock on the storage shelves.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

9. A paint shop leaves paint containers uncovered to allow residual paint to evaporate.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |

10. A photofinishing facility purchases silver recovery equipment.

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|---|--|
| <input type="checkbox"/> Source reduction | <input type="checkbox"/> Process efficiency improvements |
| <input type="checkbox"/> Recycling        | <input type="checkbox"/> Material substitution           |
| <input type="checkbox"/> Treatment        | <input type="checkbox"/> Inventory control               |
| <input type="checkbox"/> Disposal         | <input type="checkbox"/> Preventive maintenance          |
|   | <input type="checkbox"/> Improved housekeeping           |