

Landfill Sites vs. Transfer Stations

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Prepared for: Seventh Generation Waste Warriors

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Do you ever wonder what happens to your garbage once it's thrown away?



Outline:

- Landfills
- Transfer Stations
- Direct Haul Methods



Solid Waste Management “Building Blocks”

Every community is unique and so are the challenges they face in solid waste management.

In any settlement, it is critical that communities have:

- A reliable and accessible site for waste disposal OR a site for waste to be hauled out of the community
- Trained workers, registered vehicles, safe equipment OR secure services of a company/organization that has these.

Equipment (Trucks, Outdoor and Household Bins) ✓

Partnerships with organizations, communities or municipalities ✓

Trained Waste Operators ✓

Designated zones/ areas for waste disposal or temporary holding ✓



Landfills:

- ❖ Historically, landfills have been holes in the ground for people to throw away all of their garbage in, eventually to be buried.
- ❖ Today, landfills have become more sophisticated to minimize the harmful risks they present to the environment and human health; however, they still play a major role in solid waste management.
- ❖ More and more communities are choosing not to have landfills - why do you think that is?



Why are communities deciding not to have landfills?



The risk to the environment and to human health
Ideological or cultural beliefs



They take up space: landfills use up land that could be used for other community buildings or homes OR the community is “running out of land”



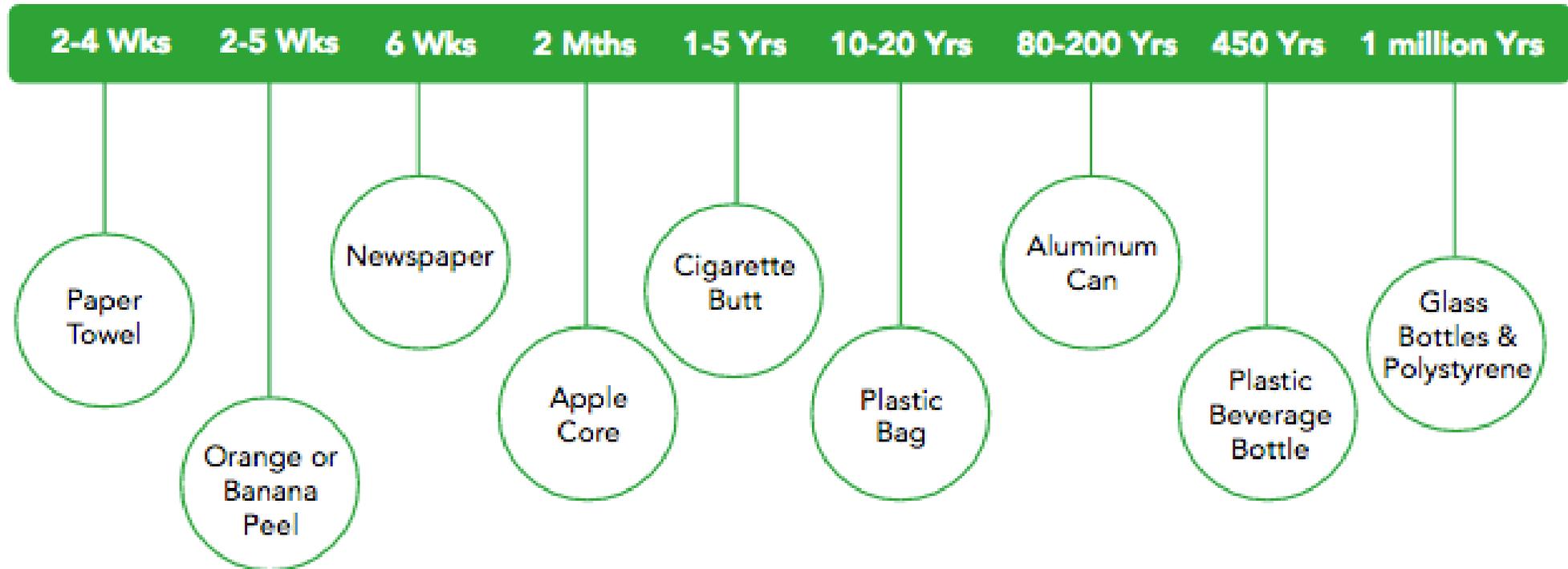
Regulatory: requirements have become more strict - for example, prohibiting landfills from being 1km from surface water to prevent contamination, some community designs *may not* support a landfill with all of the new regulations in place

Landfills smell, they don't look nice, and they may attract wildlife or feral animals

Waste takes so long to break down, the landfill (and surrounding areas) will be a liability for hundreds or even thousands of years!



TRASH TIMELINE: IT TAKES TIME FOR GARBAGE TO DECOMPOSE IN THE ENVIRONMENT



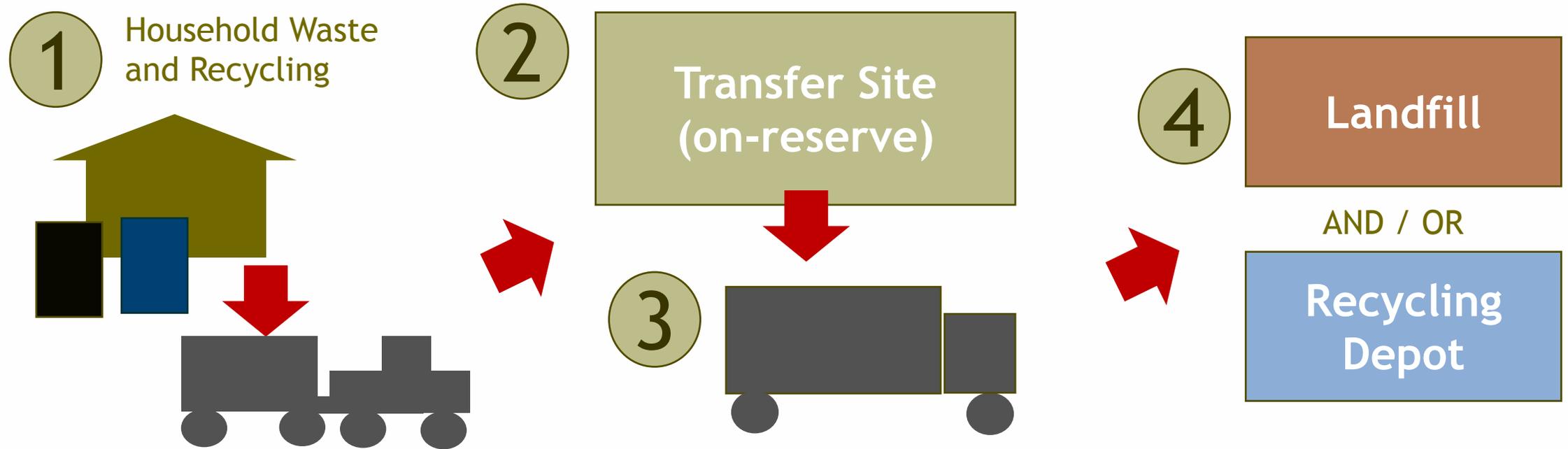
Information Source: U.S. National Park Service; Mote Marine Lab, Sarasota, FL.
http://des.nh.gov/organization/divisions/water/wmb/coastal/documents/marine_debris.pdf

Note: Waste takes even longer to breakdown in lined landfills. Under new regulations all landfills require liners.

So if a community does not want a landfill,
what are their options?



Transfer Station



“A site used for the purpose of transferring waste from one vehicle to another* for transportation for further processing or disposal.”

Transfer Station Considerations

- Where will the waste go?
- Does the cost offset the driving distance?
- The size of your community; how much waste is generated?
- How much land can you use for a transfer site? How accessible is it?
- Where is the nearest landfill; how much life does it have?
- Which landfills provide the most reasonable tipping fees? (it costs money to pollute now!)
- Can you secure a service agreement or MTSA?
- Is a transfer station a viable long-term solution; can you develop a plan to cover the costs to maintain and operate it?
- **What will your level of service be?**





Transfer Station Design

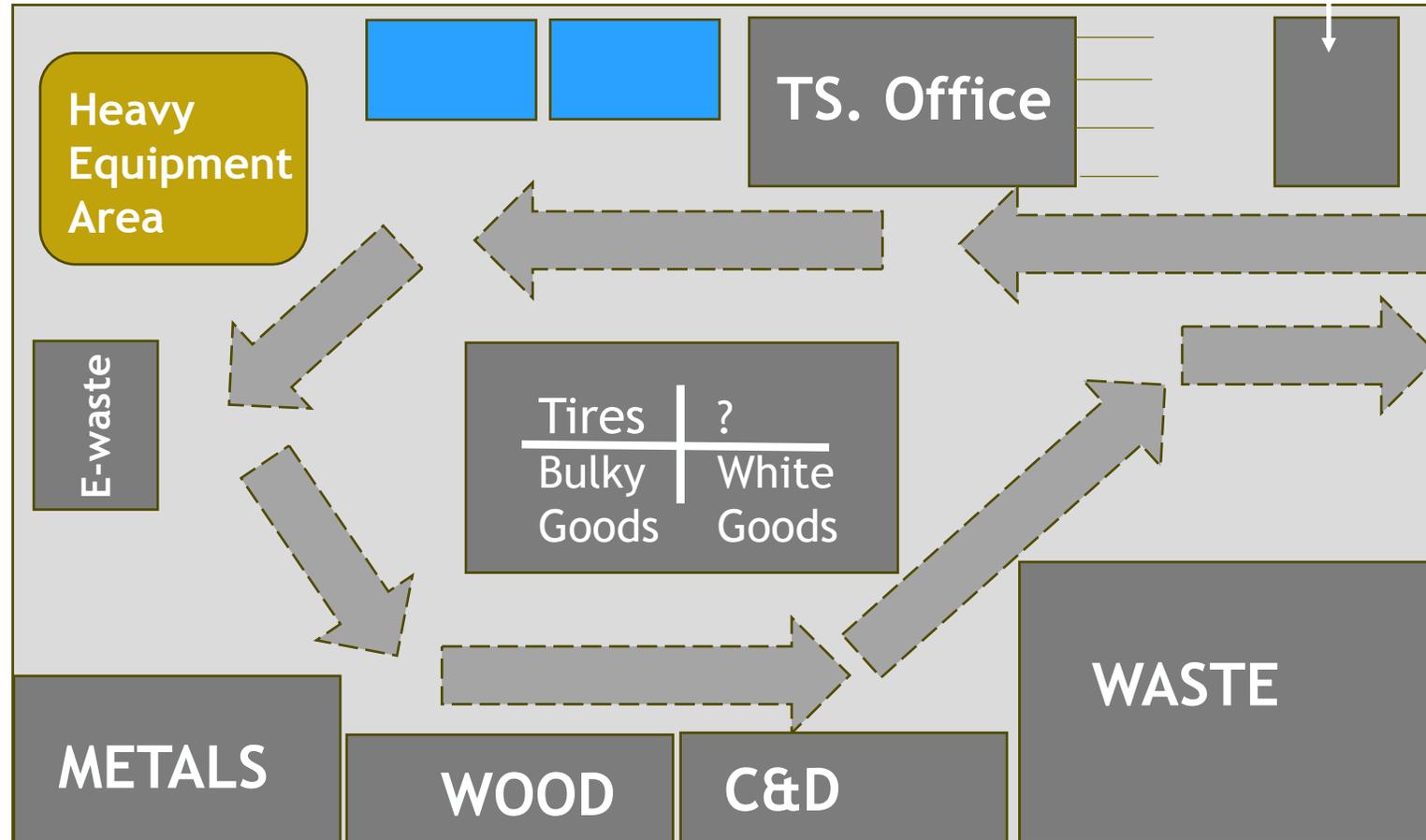
What will your level of service be? (which materials/ waste streams will you accept/refuse?)

- ❖ Household waste
- ❖ Household recyclables
- ❖ Bulky Materials (e.g. furniture, mattresses, etc.)
- ❖ “White Goods” (e.g. refrigerators, stoves, etc.)
- ❖ Hazardous Waste (e.g. paint, used oil, etc.)
- ❖ Batteries
- ❖ Tires
- ❖ “E-waste”

There are many more types of waste to consider and different types of waste require different storage and handling for safety and easier pick-up for PROs

Transfer Station Design

Take-it/Leave it
Shed



Outside of T.S.

- Zoning requirements

Inside of T.S.

- Waste screening
- Safety (public and operators)
- One-way traffic flow
- Signage!
- Ease-of-use
- Security



Transfer Station or eco-depot?

- Alternatively, a less complex, 'eco-depot' could be used to store waste and household recycling
- Must be publicly accessible with an area for bulky materials (furniture, stoves, fridges, etc.)
- It would need to adhere to the pick-up regulations set by PRO's or other service providers



Direct Haul Options

May involve picking up waste from households and driving the load directly to the landfill or it may have an extra step: dropping the waste off at a bin for pick-up (not the same as a transfer station or eco-depot).

- ❖ Will household pick-up be done by the community?
- ❖ Will it be a service provider?

Either option comes with a cost.



If the waste is going to a landfill in a different community (or “municipality”) – it may require a partnership or agreement.

Common forms:

- Service Agreement/Contract
- “MOU” (Memorandum of Understanding)
- “MTSA” (Municipal Type Service Agreement)



Key Elements to Solid Waste MTSAs

- ❖ Clarifying roles of each party and service being offered
- ❖ Defining what forms of waste will be accepted
- ❖ Access to site (hours of operation, etc.)
- ❖ Recycling programs in place or to be developed



Key Elements to Solid Waste MTSAs

- ❖ Payment Schedule
- ❖ Develop Formula for tipping fee:
 - Based on weight (tonnage), Number of loads / bags,
 - Include site and road maintenance, staff, future cell development
 - Municipal taxation rate for service
- ❖ Dispute Resolution



Thank you!

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