
INTEGRATED WASTE MANAGEMENT ELEMENT APPENDIX H

DESCRIPTION OF WASTE MANAGEMENT

Solid wastes can be disposed of in the following ways:

1. Sanitary landfill: Unsorted solid wastes are placed, usually in a canyon, and then covered daily with soil to prevent odors from escaping or water from saturating the filled material.
2. Recycling: Reusable solid wastes, including but not limited to newspaper, glass, or metals can be removed from the waste stream and disposed of at recycling centers for their eventual reuse.
3. Waste-to-energy facilities: Refuse are disposed of at a waste-to-energy facility where waste is incinerated to produce heat for either steam production or electrical generation.
4. Composting: Biodegradable wastes such as tree trimmings, grass, or kitchen wastes can be composted to produce a humus-like product. Humus can be used either commercially for fertilizer or for land reclamation projects or for the final cover at landfills.

Sludge removed from liquid, non-hazardous wastes can be disposed of in the following several ways:

1. Sanitary landfill: Sludge can be mixed with solid wastes at a landfill and covered with a daily layer of soil.
2. Sludge farming: Sludge can be air dried at "sludge farms," composted, and used for either commercial or land reclamation uses.
3. Incineration: Sludge is mixed with either solid wastes or other combustible material to be incinerated. The resulting heat can be used to produce steam for either commercial use or electrical generation.

MATRIX INSTRUCTIONS

I. Proximity to Sensitive Uses: The City of Irvine considers residential, schools, public institutions and unique open space areas, both existing and planned, to be sensitive uses for any solid waste facility. Proximity to commercial uses is usually unacceptable for a waste to energy facility, except when design considerations are accounted for. Proximity to industrial uses for a transfer station is normally acceptable. Commercial and industrial uses are not acceptable near a landfill site.

A. Impact Rating: When considering a solid waste facility's impact on sensitive uses, the following items should be considered. Will the facility subject large concentrations of people to noise, dust, odors, vectors or view of the facility?

0	=	no impact
1,2	=	minimal impact
3,4	=	nuisance
5	=	significant impact

B. Mitigation Potential: A facility can best be mitigated by distance from sensitive uses; however, other considerations such as prevailing wind conditions or screening by landforms could be used to assess the mitigation potential.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

II. Access Through Sensitive Use Areas*: Access routes through any residential areas are unacceptable to the City of Irvine. Care should be taken to minimize access along routes where schools, hospitals and other public institutions are located. For a transfer station, access routes as well as egress routes should be analyzed. Industrial areas are normally acceptable as an access/egress route for a transfer station or waste to energy facility. Commercial areas are normally not acceptable for access to any facility.

A. Impact Rating: When assessing an access route, care should be taken to consider not only uses adjacent to the route but also the number of vehicles proposed, impacts of noise and litter and visibility of trucks to uses.

0	=	no impact
1,2	=	minimal impact
3,4	=	nuisance
5	=	significant impact

*both existing and planned

B. Mitigation Potential: The best mitigation would be relocation of the access route through a non-sensitive area (i.e., open space areas with no scenic value), but consideration should also be given to screening of access routes(s).

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

III. Relation to Major Arterials: Waste facilities should be located near major arterials so that traffic impacts are minimized. In addition, major arterials are generally built for heavy vehicular and truck traffic. The addition of collection vehicles then would not be unexpected.

A. **Impact Rating:** Items to consider when reviewing a facility's proximity to arterials are the arterials' ability to handle additional traffic, their structural ability to handle daily heavy loads, and the pedestrian/vehicle conflict potential.

0	=	adequate arterials available, no impact to circulation
1,2	=	adequate arterials available minor circulation impact
3,4	=	limited arterials, major traffic impacts
5	=	no arterials nearby for use

B. **Mitigation Potential:** Possible mitigation measures would be street improvements such as widenings or signalization of intersections. Special consideration should be given to proposals that reduce traffic congestion or conflict.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts completely mitigated

IV. Size of Facility: Waste facilities can range from small local facilities to large scale facilities which serve a large portion of the region. Size of the facility is usually indicative of the impacts a facility will have on surrounding land uses in terms of noise, odors, traffic and visual intrusion.

A. **Impact Rating:** When considering the size of a facility, acreage as well as capacity should be reviewed to determine its impact rating. Whichever factor presents the greatest impact shall be used.

0	=	not applicable
1,2	=	5 acres or less; less than 100 tons/day (TPD) accepted
3,4	=	20 acres or less; less than 1,000 TPD accepted
5	=	21 or more acres; over 1,000 TPD accepted

B. **Mitigation Potential:** Not applicable, assigned a "0".

V. Expected Lifetime: Facilities which have the potential for long term operation will have long term impacts on land use planning in adjacent areas. Given the potential for land use implications, the City considers a long lifetime to be a significant impact on adjacent properties.

A. **Impact Rating:** Facilities shall be rated as follows:

0	=	not applicable
1	=	less than 5 years
2	=	6-10 years
3	=	11-20 years
4	=	21-25 years
5	=	25 or more years

B. **Mitigation Potential:** Not applicable, assigned a "0".

VI. After Use Potential (Landfills Only): The City of Irvine considers it important for landfill sites to be developed so their after use potential can be maximized. Landfills which are poorly developed or restrict an effective after use are not acceptable to the City.

A. **Impact Rating:** When reviewing a landfill's after use potential, care should be given to determining the extent of natural habitat/scenery destruction, relationship with adjacent uses, and compatibility with the City's General Plan land use map.

0	=	significant potential
1,2	=	significant potential; some cost to habitat
3,4	=	limited potential
5	=	no potential

B. **Mitigation Potential:** Landfills can be developed which mitigate destruction to large areas of wildlife or the natural scenery. Other items to consider are the landfill's grading plan which can maximize after use, contouring to blend in the after use with adjacent uses and compatibility with the after use and adjacent open space areas.

0	=	no mitigation potential
1,2	=	minimal potential
3,4	=	significant potential
5	=	all impacts or restrictions to after use mitigated

VII. Waste Generation Area: The City of Irvine accepts responsibility for wastes generated within its own planning area. However, the City is not obligated to provide a waste disposal solution for other cities or areas which have not or will not find a solution for themselves. In reviewing a facility the percentage of Irvine wastes to be accepted there shall be considered and rated.

A. **Impact Rating:** Facilities shall be rated as follows:

0	=	100% of waste is locally generated
1	=	85% - 99% of waste is locally generated
2	=	60% - 84% of waste is locally generated
3	=	45% - 59% of waste is locally generated
4	=	30% - 44% of waste is locally generated
5	=	less than 30% of waste is locally generated

B. **Mitigation Potential:** Not applicable, assigned a "0".

**FIGURE 1
LAND USE COMPATIBILITY MATRIX**

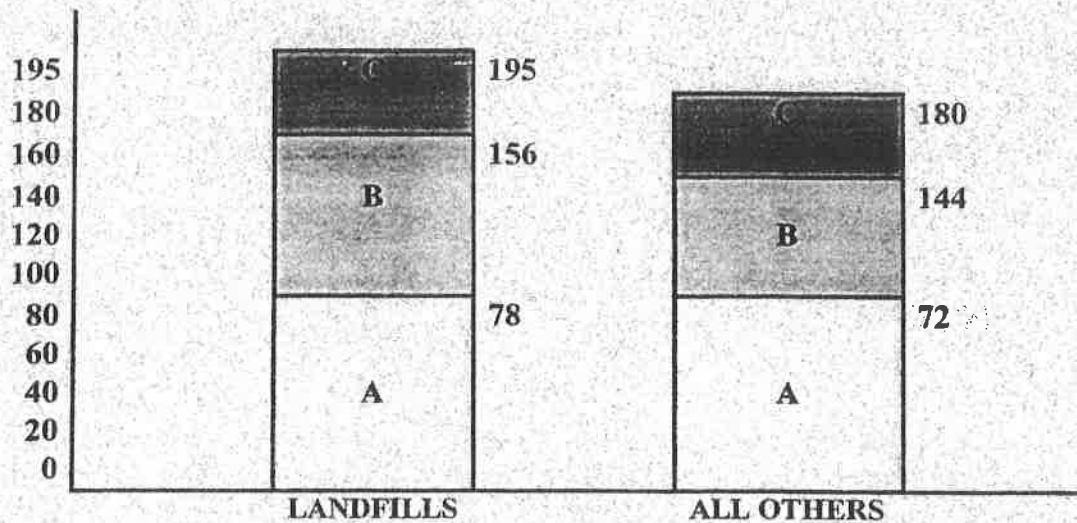
HOW TO USE THIS MATRIX:

1. Refer to Land Use Compatibility Matrix Instructions
2. Multiply factor weight and the sum of the impact rating minus mitigation potential to figure weighted value
3. Add weighted value to figure total
4. Compare total with Figure 2- Land Use Compatibility Rating Chart

FACTOR	FACTOR WEIGHT	IMPACT RATING -	MITIGATION POTENTIAL	WEIGHTED VALUE	NOTES
Proximity to sensitive uses	10 existing uses; 8 planned				Score of 45 or higher will exclude potential site from future consideration
Access through sensitive areas	8 existing uses; 6 planned uses				
Proximity to major arterials	6				
Size of facility	5		0		
Expected lifetime	5		0		
After use potential	3				Use for review of landfills only
Waste generation area	2		0		

Total **minimum 12** **Max. 195** **landfills**
 minimum 12 **Max. 180** **all others**

**FIGURE 2
LAND USE COMPATIBILITY RATING CHART**



- A. Acceptable: no significant impact on adjacent uses.
- B. Acceptable with conditions: proposals in this category will have some significant impacts on the City of Irvine. Approval of sites should be contingent on circumstances that would add benefits to the city to offset some of the impacts. This higher rating indicates the more severe impacts, therefore the benefits should also rise proportionally.
- C. Not acceptable: significant impacts on adjacent uses. Site should be removed from further consideration.