

CRITERION 2:

“the facility is so designed, located, and proposed to be operated that the public health, safety, and welfare will be protected”

415 ILCS 5/39.2(a)(ii)

DRAFT

- Receipt, solidification and transfer of hydro excavation wastes;
- Receipt and transfer of source-separated recyclables (referred to as “SSR” or more generally as “recyclables”); and
- Drop-off area for West Chicago residents’ electrical/electronic devices; and
- Drop-off area for recyclables generated by residents and small businesses.

Loads of MSW from collection vehicles will be consolidated into larger loads for transport to an area landfill for disposal. Loads of hydro excavation wastes will be solidified and then transported to an area landfill for disposal. Electronic waste from West Chicago citizens will be consolidated and transported to recovery facility. Loads of recyclables from collection vehicles (and recyclables from residents) will be consolidated into larger loads for transport to a material recovery facility (MRF), such as LRS’s MRF in Forest View, for re-use as a commodity. The proposed operations at the West DuPage RTS will allow for more efficient processing and/or transportation of these materials to a MRF or disposal facility (landfill). In addition, the expanded operations at the facility will allow for more improved recycling of the C&D.

West DuPage RTS is a unique facility due its desirable location, relatively large size, and diversity of operations, and will be a premier waste management and recycling facility in the State of Illinois.

Subject to Illinois Environmental Protection Agency (IEPA) permitting, West DuPage RTS is anticipated to accept up to 2,300 tons per day of MSW, hydro excavation wastes, C&D and SSR, of which up to 1,000 tons per day may be MSW.

- Extend rip-rap around west pond - The rip-rap that is currently surrounding the west pond is preventing birds, such as waterfowl, from walking into or out of the pond. This feature will be extended further into the grass, widening the buffer between the water and grass.
- Monitor wildlife with game cameras - Wildlife at the ponds will be monitored with game cameras. This will capture any wildlife utilizing the ponds. Trained staff can mitigate the hazards as needed. Installation of game cameras will allow for monitoring when employees are unavailable. Checking the cameras periodically will give an idea of what and when wildlife are using the ponds.
- Vary harassment - To keep the birds from becoming accustomed to harassment tactics, the site will designate an employee or employees to periodically patrol the west and east ponds and harass any birds observed.
- Maintain grass height - The current tall grass around the east pond poses a high risk to hide wildlife. The grass around the east pond will be maintained at a height that affords an easy sight picture. Grass maintenance at the east pond will allow for easy inspection of the pond so that any wildlife may be harassed to leave the area. Grass will be maintained around 12 inches in height. The shortened grass height will deter many species from utilizing it, such as Canada geese. Trained facility staff will visually inspect the pond for birds that may be attempting to hide.
- Remove cottonwood tree - A large cottonwood tree is present to the east of the east pond. The tree is being used as a roosting location for a few great egrets (*Ardea alba*). While some of the trees on the eastern property edge will serve as a visual blocker, this large tree will be removed.
- Install grid-wire system - A grid-wire system will be installed on the east and west ponds to keep most waterfowl and wading birds from utilizing the pond. To keep larger birds from using the water, a checkerboard pattern is recommended. This involves running cables from one side to another in one direction (north to south) and then running a second set of wires perpendicular.

2.4.17 SITE THROUGHPUT CAPACITY

West DuPage RTS is anticipated to receive and efficiently manage up to 2,300 tons per day of MSW, hydro excavation wastes, C&D and SSR, of which up to 1,000 tons per day would be MSW. Smaller volumes are anticipated to be typically received. The typical amount of material accepted is anticipated to be approximately 1,500 tons per day with an approximate breakdown of 650 tons per day MSW, 100 tons per day hydro excavation wastes, 600 tons per day general construction and demolition debris and 150 tons per day SSR.

The site and operating features that determine the daily throughput capacity of a transfer station are the following:

- Incoming waste flow;
- The available capacity to queue incoming waste vehicles;
- The time needed for collection vehicles to empty their loads and exit the facility;
- The time needed to load a transfer trailer;
- The tipping floor size and stockpiling capacity; and
- The operating hours of the facility.

2.4.18 DAILY OPERATING CAPACITY AND THROUGHPUT CAPACITY DESIGN

The following summarizes our evaluation of site features that are determinative of daily operating capacity and throughput capacity, relative to the anticipated acceptance volumes. The assumptions discussed below are typical estimates and may vary.

2.4.18.1 Incoming Waste Flow

This evaluation utilizes a summary of the anticipated collection and transportation times based on the following:

- The current route schedules MSW and SSR collection vehicles of West DuPage RTS, which times are not expected to substantially change with the operation of West DuPage RTS.
- The current incoming C&D collection vehicle times at the site.
- The incoming hydro excavation waste acceptance times at LRS's facility in Forest View.

The information indicates the following:

- Minor amounts of MSW and SSR will be accepted prior to 9:00 a.m.
- The peak hours of MSW and SSR acceptance will be between 10:00 a.m. and 12:00 p.m., and then again between 2:00 p.m. and 4:00 p.m.
- Waste and SSR acceptance volumes will decrease after 5:00 p.m.
- The C&D waste acceptance is relatively evenly distributed throughout the day, but, to provide a conservative evaluation, peak C&D waste acceptance hours will be assumed to coincide with the peak waste acceptance hours as the MSW and SSR.
- The hydro excavation waste is unloaded in a separate building so the acceptance of these materials do not affect the throughput evaluation for the C&D, MSW and SSR.

Based on the above, the facility has the capacity to load up to 7.5 transfer trailers per hour of MSW and/or SSR (or approximately 192 tons per hour of MSW and/or SSR).

2.4.18.4 C&D Transfer and Processing Rate

The C&D transfer and processing procedures vary by the type of material accepted. Source separated materials (e.g., shingles, broken concrete) are not processed through the screener and sorting line. These types of loads are much heavier than mixed C&D loads so typically comprise a significant percentage of the general C&D accepted on a weight basis.

Mixed loads of C&D are processed through the screener and sorting line to remove as much recyclable material as practical. Materials separated by the screener are transported via conveyor to the cover building. Materials separated by the sorting line are dropped into storage bunkers. Non-recyclable materials from the sorting line proceed through the sorting line and are deposited in a separate storage bunker for subsequent transfer through the MSW and SSR transfer building loading pit.

Based on historical operations, the site can manage (separate, transport and/or distribute into storage bays for subsequent recycling) approximately 60 tons per hour. The load out of recyclable material is not required every day so is not a limiting factor in the throughput evaluation. The amount of non-recyclable material required to be loaded out via the MSW and SSR transfer building loading pit is 250 tons per day (25% of 1,000 tons per day of C&D). The load out of the non-recyclable material is included in the evaluation of the load out of the MSW.

The storage capacity of the C&D transfer/screening building is at least 250 tons (100 feet long by 35 feet wide by 12 feet high by 0.8 slope factor) so provides ample storage capacity to accommodate processing.

2.4.18.5 Tipping Floor Size and Stockpiling Capacity

The tipping floor for the MSW and SSR transfer building is approximately 17,100 square feet (90 feet by 190 feet). Waste and SSR will be unloaded in separate locations. Waste and SSR cannot occupy the entire tipping floor as adequate maneuvering space is needed for the loader and the disposal vehicles. The MSW waste is anticipated to be staged on the south portion of the tipping floor (both east and west of the loading pit), which have a combined area of approximately 3,970 feet (2,430 square feet in southwest area + 1,540 square feet in southeast area). Assuming a 12-foot average height and 0.8 slope loss factor, the waste storage capacity in this area is approximately 1,410 cubic yards (or approximately 282 tons assuming a waste density of 400 pounds per cubic yard).

**Table 2-3
West DuPage Recycling and Transfer Station
Projected Material Processing and Traffic Volume
1,000 Tons Per Day Municipal Solid Waste**

Time (Hour Beginning)	LRS Collection Vehicle Distribution		Municipal Solid Waste Delivered									Outgoing MSW			Municipal Solid Waste Transferred			Required Tip Floor Storage		
	Hour Incoming		Hour Incoming				Total Hourly Incoming			Cumulative Incoming		from C&D	from SSR	MSW	Hourly Transferred			Hourly Truck Volumes		
	Packer (trucks)	Roll-off (trucks)	Packer (trucks)	Packer (tons)	Roll-off (trucks)	Roll-off (tons)	Trucks	Tons	yd ³	Tons	yd ³	Tons	Tons	Tons	Trucks	Tons	yd ³	(trucks)	Tons	yd ³
12:00 AM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0.0%	2.0%	0	0	3	12	3	12	62	12	62	5	0	12	0	0	0	3	17	87
6:00 AM	0.0%	4.0%	0	0	6	25	6	25	125	37	187	25	0	37	2	48	240	8	14	72
7:00 AM	2.0%	4.0%	3	25	6	25	9	50	250	87	437	45	1	87	2	48	240	11	37	187
8:00 AM	5.0%	4.0%	8	62	6	25	14	87	437	175	874	65	2	175	5	120	600	19	26	130
9:00 AM	5.0%	4.0%	8	62	6	25	14	87	437	262	1310	85	3	262	5	120	600	19	14	72
10:00 AM	10.0%	4.0%	16	125	6	25	22	150	749	412	2059	110	6	412	5	120	600	27	71	357
11:00 AM	10.0%	4.0%	16	125	6	25	22	150	749	562	2808	135	8	562	6	144	720	28	104	522
12:00 PM	3.0%	4.0%	5	37	6	25	11	62	312	624	3120	155	9	624	6	144	720	17	44	218
1:00 PM	3.0%	4.0%	5	37	6	25	11	62	312	686	3432	175	10	686	4	96	480	15	31	155
2:00 PM	10.0%	2.0%	16	125	3	12	19	137	686	824	4118	200	12	824	6	144	720	25	52	258
3:00 PM	10.0%	2.0%	16	125	3	12	19	137	686	961	4805	225	14	961	6	144	720	25	72	360
4:00 PM	2.0%	2.0%	3	25	3	12	6	37	187	998	4992	245	15	998	4	96	480	10	34	171
5:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	1.63	39.12	195.6	2	0	0
6:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
7:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
8:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
9:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
10:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
11:00 PM			0	0	0	0	0	0	0	998	4992	250	15	998	0	0	0	0	0	0
DAILY TOTALS	60%	40%	94	749	62	250	156	998	4992	998	4992	250	15	998	52.63	1263	6316	209	MAX 104	MAX 522

Assumptions:

- 156 Total Collection Vehicles per Day
- 1,000 Tons = Approximate Daily Throughput of Municipal Solid Waste (MSW)
- 8 tons = Average MSW Packer Truck Load
- 4 tons = Average MSW Roll-Off Truck Load
- 24 tons = Average MSW Transfer Trailer Load
- 1 ton MSW = 5 Cubic Yards on tipping floor (or 400 pounds/cubic yard)