



Civil & Environmental Consultants, Inc.

# West DuPage Recycling and Transfer Station Local Siting Hearing Overview and Evaluation of Criterion 1

Presented By  
Civil & Environmental Consultants, Inc.

January 2023

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## John Hock, P. E.

- Over 35 years of experience in the solid waste business, both in industry and consulting
- Have been involved with the development of a variety of solid waste management facilities with an expertise in the design and permitting of transfer stations
- Was the principal engineering witness at the local siting hearing for three other transfer stations
- B.S., Chemical Engineering from the Ohio State University
- Professional Engineer in six States, including Illinois



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EXHIBIT

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## John Hock, P. E. (cont.)

- Currently Vice President of Civil & Environmental Consultants, Inc. (CEC)
- CEC has been in operation over 33 years and currently consists of about 1,250+ employees in 26 cities
- Have served as the solid waste practice lead for CEC and office lead for CEC's Naperville office
- Member of National Waste and Recycling Association



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## The Applicant – Lakeshore Recycling Systems, LLC (LRS)

- Founded over 20 years ago in Morton Grove, IL
- Began with local recycling and hauling operations
- Currently has over 2,000 employees at approx. 60 locations in the Midwest
- Employs approx. 125 personnel at West Chicago facility
- Remains privately owned

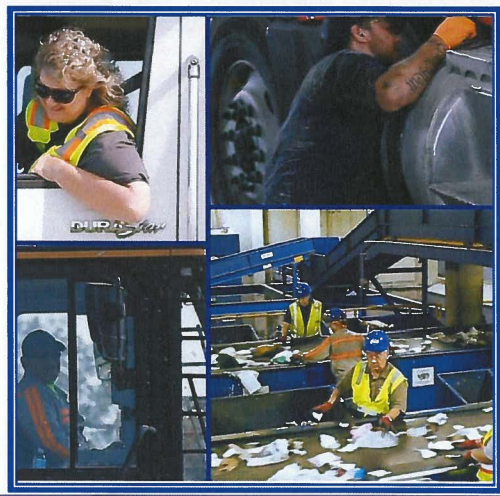


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# LRS Services

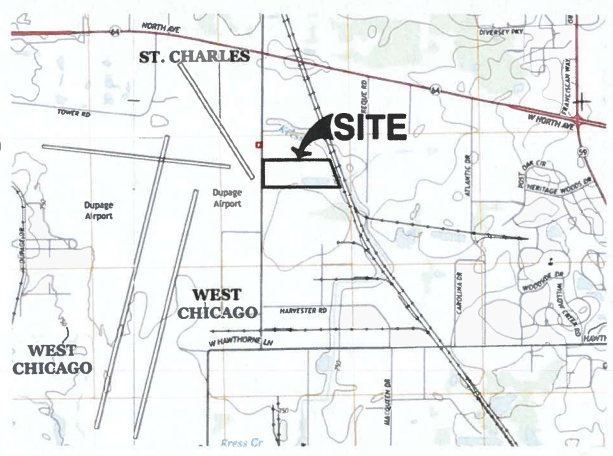
- Residential and commercial waste collection and transfer
- Construction & demolition debris (C&D) recycling
- Portable restroom services
- Street sweeping services
- Single-stream recyclable processing
- Hydro excavation waste solidification
- Solid waste disposal



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# The Site – West DuPage Recycling and Transfer Station

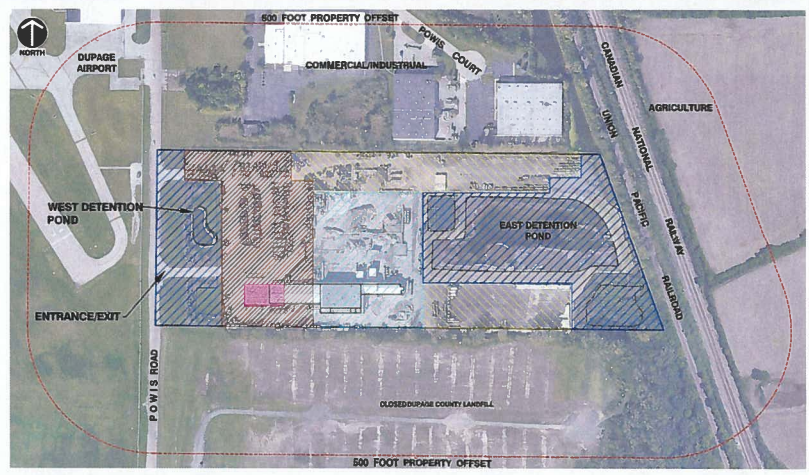
- Located on an approximately 27.66-acre parcel on the east side of Powis Road, within the corporate limits of West Chicago
- Unique facility due to its:
  - relatively large size
  - diversity of operations



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# Existing Operations

- Recycling and transfer of C&D with 75% of incoming material recycled or re-purposed
- Parking and maintenance of vehicles
- Staging and maintenance of containers, totes, and portable restrooms
- Dispatch and customer service (call center).
- Stormwater controls and buffer

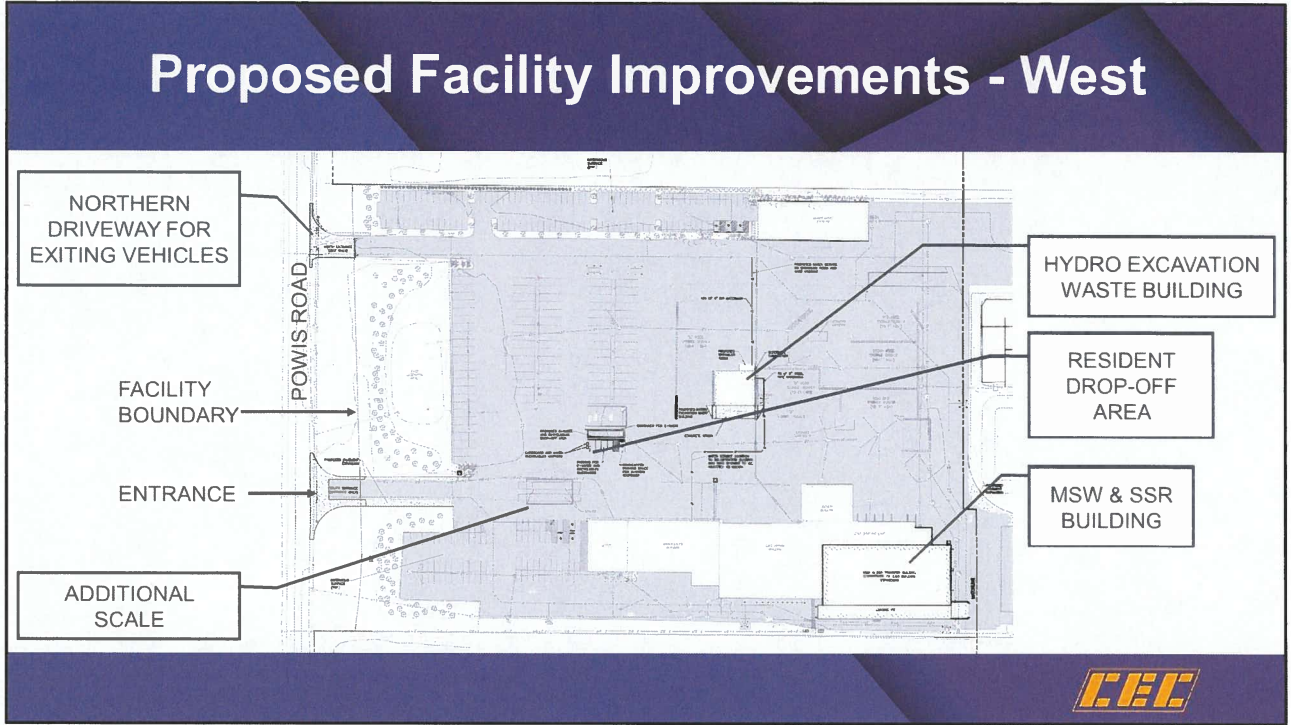


# Proposed Facility Improvements

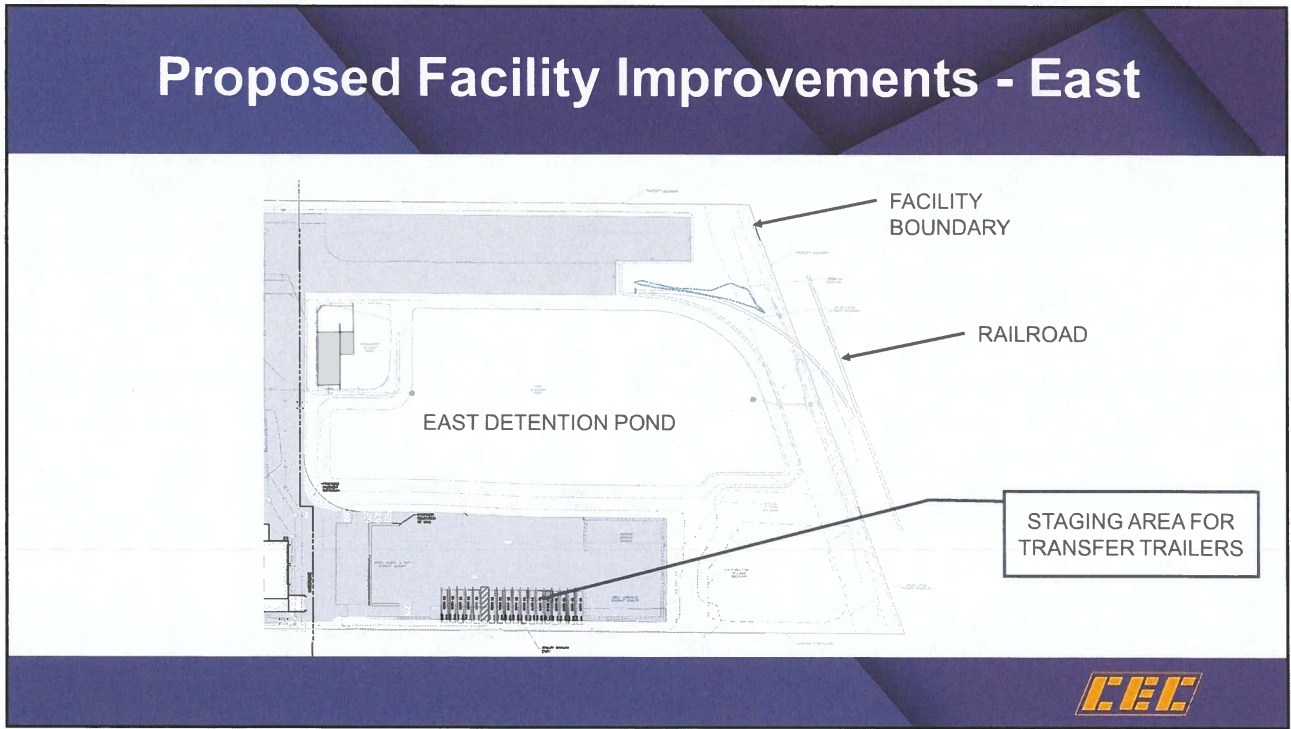
- Building to transfer municipal solid waste (MSW) and single-stream recyclables (SSR)
- Building for the solidification and transfer of hydro excavation wastes
- Second scale for weighing vehicles
- Improvements to northern driveway for the exiting of vehicles
- Resident drop off area for electronic wastes and recyclables
- Related infrastructure (e.g., utilities)







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## Acceptable Materials

- Construction and Demolition Debris (C&D) - Uncontaminated materials (e.g., wood, concrete, shingles, metal) resulting from the construction, remodeling, repair, and demolition of utilities, structures, and roads
- Municipal Solid Waste (MSW) - Garbage, general household and commercial waste
- Hydro excavation wastes – “mud” created through a combination of pressurized water and air vacuum system
- Single-stream recyclables (SSR) – Various recyclables (e.g., paper, cardboard, bottles, cans) that are mixed together in a single bin/ container (e.g., from a household)



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## Hydro Excavation Waste

- Hydro excavation wastes are a solid/liquid waste created through a combination of pressurized water and air vacuum system
- Generally used for construction or maintenance services, such as trenching near utilities, potholing to expose utilities, installation of utility poles, installation of piers/footings, and clean out of storm sewers.
- The system cuts through soils/materials, breaks them up, and lifts the slurry from the excavation area into a debris tank.



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## Hydro Excavation Equipment and Applications



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## The Operation

- All existing operations would continue (e.g., C&D recycling, vehicle parking, container storage, customer service and dispatch)
- Loads of MSW from collection vehicles will be consolidated into larger loads for transport to an area landfill for disposal
  - All waste handling will occur indoors
  - Three to four incoming collection vehicles = one larger load
  - Waste on-site for a only a short time (e.g., first-in, first-out)
  - Effective controls for odors and blowing litter



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## The Operation (cont.)

- Loads of hydro excavation wastes (a.k.a. “mud”) will be solidified and then transported to an area landfill for disposal
  - Absorption of excess water by solid material such as wood chips
  - Wood chips already generated by C&D recycling operations
  - Two parts hydro excavation waste + one part wood chips = Properly solidified material for landfilling
  - Well-established pre-approval, acceptance, inspection and record keeping protocols



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## The Operation (cont.)

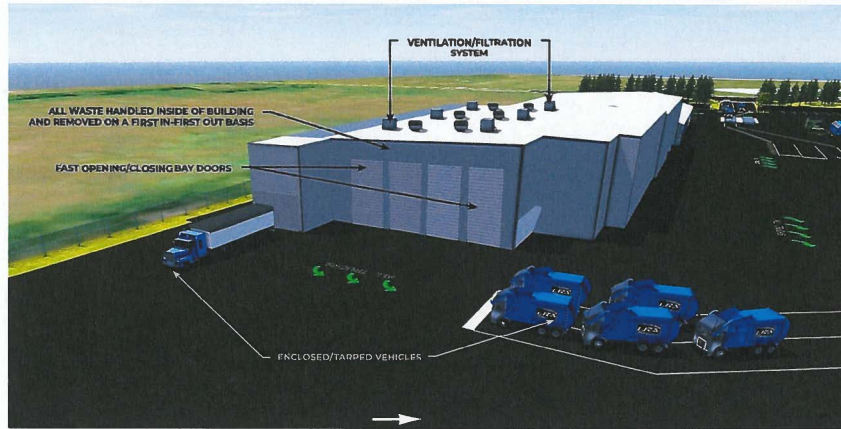
- Electronic waste (e-waste) from local residents will be consolidated and transported to a recovery facility
- Loads of recyclables from collection vehicles (and recyclables from resident drop off area) will be consolidated into larger loads for transport to a material recovery facility (MRF), such as LRS's MRF in Forest View, for separation and re-use as a commodity



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# MSW and SSR Transfer Building



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## Section 39.2 of the Act : Criterion 1

- “the facility is necessary to accommodate the waste needs of the area it is intended to serve”



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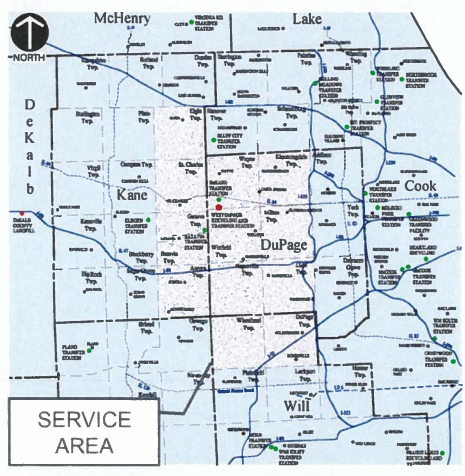
# Methodology

- Define West DuPage RTS Service Area
- Evaluate waste generation and disposal volume trends
- Evaluate trends in the waste disposal system
- Evaluate benefits of the West DuPage RTS



# West DuPage RTS Service Area

- Western two thirds of DuPage County (generally west of I-355)
- Eastern portion of Kane County (generally east of the Fox River)
- Far northern portion of Will County (generally communities partially within or directly adjacent to southern boundary of DuPage County)





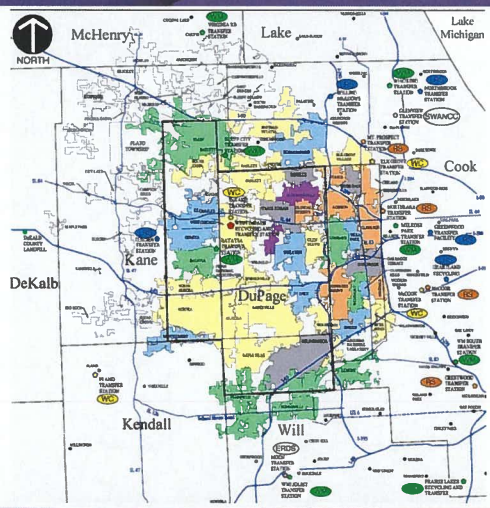
# Waste Disposal System and Shortfall/ Need

- Service Area estimated to generate 2,985 tons per day as of 2020
- Estimated to increase to 3,569 tons per day by 2040
- No landfills in Service Area
- Only two active MSW transfer stations in Service Area (DuKane Transfer Station in DuPage County and Batavia Transfer Station in Kane County)
- Estimated 1,300 tons per day of MSW currently being managed by transfer stations not located in the Service Area (i.e., shortfall/ need)



# Waste Disposal System – Companies Serving Various Municipalities

| Hauling Company               | Population of Municipalities Served in Service Area |
|-------------------------------|---|
| Waste Connections/ Groot (WC) | 552,954   |
| Waste Management (WM)         | 215,022   |
| URS                           | 151,906   |
| Flood Brothers                | 136,673   |
| Republic Services (RS)        | 33,176  |
| SBC Waste Solutions           | 32,217  |



## Trends in the Waste Disposal System – Landfills

- Decreasing number of landfills located farther from higher population areas
- Number of active landfills in Illinois decreased by nearly 40% since 1995
- Only three remaining active MSW landfills in nine county northeast Illinois region (two in Lake County and one in Will County)
- Two busiest landfills in Illinois located near Rockford



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## Trends in the Waste Disposal System – Transfer Stations

- Increasing number of transfer stations in or proximate to the Service Area
- In 1995, DuPage County had no transfer stations, and the only transfer stations proximate to the Service Area were one in Kane County (Elburn Transfer Station) and eight in Cook County (mostly northeast of the Service Area).
- As of 2020, fourteen additional transfer stations are permitted in or proximate to the Service Area:
  - One each in DuPage, Kane, Kendall and McHenry Counties
  - Two in Will County
  - One in Cook County north of the Service Area
  - Seven in Cook County east/southeast of the Service Area

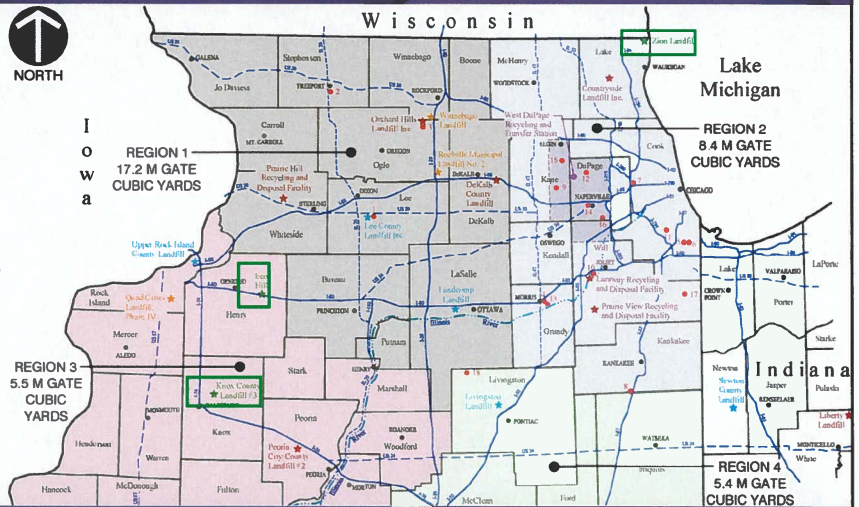


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# Trends in the Waste Disposal System Consolidation of Landfill Ownership

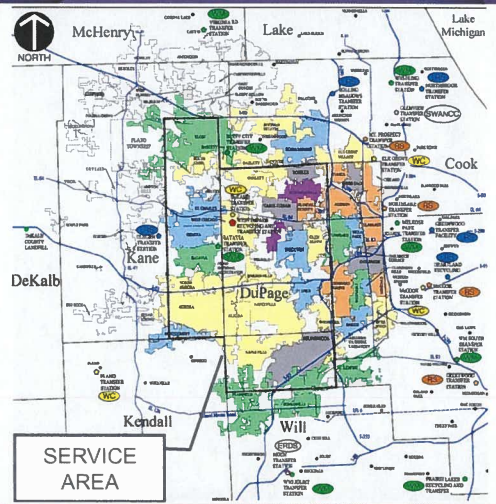
- All landfills in Illinois north of Peoria are operated by **WM**, **WC** or **RS** except for **Zion, Knox County and Eco Hill**
- The three publicly traded companies control approx. 97% of the capacity in Regions 1 and 2
- This trend has reduced competition



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# Trends in the Waste Disposal System Consolidation of Transfer Station Ownership

- Seventeen of the twenty-three listed transfer stations in or proximate to the Service Area are operated by one of the three publicly traded companies (eight by WM, five by WC, and four by RS).
- The remaining transfer stations are operated by LRS or ERDS.
- This trend has reduced competition.



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## Trends in the Waste Disposal System – Importance of Vertical Integration

- The MSW waste disposal system in the Service Area includes:
  - Driving the collection vehicle from the parked location to the collection route
  - Collecting the waste from the generation location (e.g., homes, businesses)
  - Driving the collection vehicle to and off-loading the MSW at a transfer station
  - Transferring the MSW into larger vehicles
  - Transporting the MSW to a landfill and disposal
  - Disposing the waste at the landfill



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## Trends in the Waste Disposal System – Importance of Vertical Integration

- Most of the waste collected by the publicly traded companies is disposed in their own landfills
- Vertical integration has a number of advantages in the waste industry, including control of transfer and disposal pricing.
- Hauling contracts predominantly include disposal in the pricing so, if a company is unable to establish their own disposal pricing, they are at a significant competitive disadvantage



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## Example of Importance of Vertical Integration

- LRS currently performs hauling and owns/operates one of the few remaining MSW landfill (in Atkinson) not owned by one of the three publicly traded companies
- However, LRS does not currently own or operate a MSW transfer station in the Service Area so is not vertically integrated in the Service Area
- From June 2018 to the end of 2020, LRS had been delivering nearly all of the MSW waste it collects in the Service Area to Advanced Disposal's Batavia Transfer Station. The MSW waste was then transported to Advanced Disposal's Orchard Hills Landfill for disposal



## Example of Importance of Vertical Integration (cont.)

- After the merger between Advanced Disposal and WM, WM increased the rates at the Batavia Transfer Station by approximately 10%, and was further increased by another 10% per ton beginning in April 2022
- WM raised the rates at the Orchard Hills Landfill by approximately 33% (for waste from other LRS transfer stations)
- WC/ Groot quoted LRS a price for waste acceptance that is approximately 25% per ton higher than the price that was being paid at the Batavia Transfer Station



## Example of Importance of Vertical Integration

- These price increases and related factors are substantial and caused LRS to divert the majority of the MSW and recyclables it collects to the Elburn Transfer Station
- In addition, the disposal has now been diverted to Eco Hill in Atkinson
- These changes both add substantial hauling distance and time, which is a significant competitive disadvantage for LRS in the market



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## Example of Importance of Vertical Integration (cont.)

- LRS and other non-publicly owned companies in the Service Area must pay fees to other companies (which are competitors), which reduces their margins and improves the competitor's margins
- The inability for LRS and other non-publicly owned companies in the Service Area to control all of their costs:
  - Creates a significant unknown cost factor when bidding on municipal hauling contracts (which are typically five years)
  - Creates hurdles for making capital investments
  - Causes operational inefficiencies (e.g., trucks must drive from the transfer station back to the origination location at the end of the day versus parking at the same location, trucks must travel extra miles to deliver loads within the transfer station operating hours)



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## Benefit 1 – Increase Competition and Transfer Capacity

- The Service Area is almost entirely served by transfer stations as available landfills are too distant for MSW to be direct hauled
- The landfills located closest to the Service Area are predominantly owned/operated by two of the three publicly traded companies: WM and Waste Connections/ Groot
- Not surprisingly, the MSW collection in the Service Area is predominantly provided by the same two companies (WM and Waste Connections/ Groot)



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## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- The design capacity of the Service Area transfer stations is adequate to manage the MSW generated in the Service Area, if negative economic and environmental impacts are not considered
- Companies collect waste from municipalities in the general direction of their transfer stations within or proximate to the Service Area due to the various advantages of vertical integration
- The available capacity in the Service Area can vary at the discretion of the pricing and operational approach of companies that control the waste management network



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## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- WM and WC/ Groot have sufficient control of the pricing in the market to effectively diminish competition from non-vertically integrated companies in the Service Area
- Letters of support were provided by the following due to concerns about the need for recycling and disposal options given the industry consolidation
  - Eleven waste haulers
  - Four municipalities
  - Twenty-one waste contractors/ demolition companies
  - Over 100 citizens



## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- Roy Strom Companies sold their company to LRS in December 2020
- George Strom provided a letter of support explaining their rationale for selling - diminishing ability to compete in the market due to rising disposal costs caused by a lack of competition





## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- WC/ Groot held the refuse, yard waste, and recyclable materials contract with West Chicago from July 1, 2012 to December 31, 2019
- Based on just the potential development of the West DuPage RTS, LRS submitted a proposal for the residential waste service program that forced WC/ Groot to offer significant improvements to the rate structure and overall program relative to the current contract
- WC/ Groot was awarded the new waste hauling contract for the City of West Chicago



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## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- Tangible benefits to West Chicago and its residents of the new waste hauling contract include:
  - Cost Savings - Five-year savings of approximately \$1,700,000 compared to the previous contract (or approximately \$300 for each of the approximately 5,700 single-family units within the City of West Chicago)
  - Other benefits regarding Organics Services, Electronics Waste, Gratis Roll-off Service, Organics/Pumpkin Seasonal Service, Gratis Waste and Recycling Services at City Facilities, Gratis Holiday Light Collection, and Amnesty Collection Event



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## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- Other communities in the Service Area for which LRS provides services have realized similar savings
  - Village of Lisle
  - City of Wheaton
  - City of St. Charles
- The benefits discussed above generally reflect LRS’s anticipation of being able to vertically integrate in the Service Area and eventually recognizing all of the associated benefits/advantages
- If LRS does not receive approval of the West DuPage RTS, LRS’s ability to compete on a long-term basis will be seriously jeopardized and all of the above listed benefits may eventually disappear



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## Benefit 1 – Increase Competition and Transfer Capacity (cont.)

- The same economic factors (i.e., multiple potential transfer/ disposal locations that are incentivized to want and bid on the hauling volume) result in the continued operation of a much denser number of MSW transfer stations in suburban Cook County than in the Service Area

|                       | Area (square miles) | Population (persons) | Number of MSW Transfer Stations |
|-----------------------|---------------------|----------------------|---------------------------------|
| Service Area          | 640                 | 1.087 million        | 2                               |
| Suburban Cook County  | 1,400               | 2.499 million        | 21                              |
| Percentage Difference | 45%                 | 43%                  | 10%                             |



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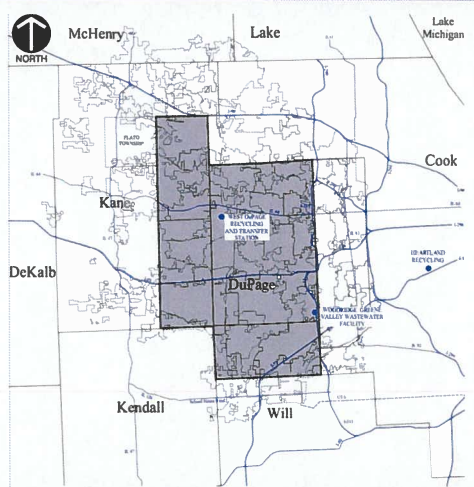
## Benefit 2 – Additional Operational Flexibility

- West DuPage RTS will have longer operation hours than the other transfer stations in the Service Area
- The limited operating hours at the Batavia Transfer Station caused some LRS collection vehicles to routinely need to cease pick up without a full load, and essentially cause extra trip(s) to be made
- CEC is familiar with other instances where a transfer station owner/operator allowed longer operating hours for internal collection vehicles but not third party haulers
- The West DuPage RTS will allow more operational flexibility and efficient hauling operations by providing extended operating hours, and provide an option to other privately owned haulers



## Trends in the Waste Disposal System – Hydro Excavation Waste Facilities

- The only known facility within 10 miles of the Service Area which is known to be permitted to accept hydro excavation and similar low-solids waste is the Woodridge-Greene Valley Wastewater Facility
- LRS’s Heartland Recycling facility in Forest View is approximately 40 miles from the West DuPage RTS (by vehicle) and approximately 15 miles (by distance) from the Service Area



## Woodridge-Greene Valley Wastewater Facility

- The hydrovac wastes accepted are primarily storm sewer cleanings from municipalities such as Naperville and Woodridge, which generally have less solids than hydro excavation wastes.
- The Wastewater Facility does not accept hydrovac wastes after 3:00 p.m.
- The Wastewater Facility accepts only limited volumes and does not appear to have the capability to manage a significant volume of hydro excavation waste.



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## Substantial Travel Distances

- Badger Daylighting (Badger) appears to be the largest company providing hydro excavation and related services in northern Illinois
- Badger's fleet in northern Illinois includes approximately fifty hydrovac vehicles, and they stage/park its fleet of vehicles in multiple locations to try to minimize drive times and better serve its customers
- Badger routinely uses LRS's facility in Forest View to manage its hydro excavation and related wastes generated from locations across the Chicagoland area
- The limited operating hours preclude their use of the Wastewater Facility



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## Increasing Demand

- Underground Contractor's Association of Illinois provided a letter of support indicating that hydro excavation services have grown exponentially in recent years and is anticipated to continue to increase in demand.
- Badger indicated that the demand for hydrovac services (and thus the generation of hydro excavation wastes) has been growing and is anticipated to continue to increase over time
- Utility companies (Nicor, ComEd) indicate increasing need for hydrovac services



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## Benefit 3 – Transportation Efficiencies for Hydro Excavation Wastes (cont.)

- Badger indicated the following:
  - Their anticipated benefit is primarily transportation logistics
  - The decreased drive time would save approximately two hours for each load, which would increase Badger's productivity (i.e., more time providing services versus driving)
  - Approximately 40% of the work Badger performs is located more convenient to West Chicago than Forest View
  - The extended operating hours (i.e., open past 3:00 p.m.) at the proposed West DuPage RTS would be desirable



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## Benefit 4 – Reduce Environmental Impacts

|                             | Reduced Miles (per year) | Reduced Miles (over 20 year operating period) | Reduced Fuel Usage (gallons over 20 year operating period) | Reduced Emissions (pound of CO2 over 20 year operating period) |
|-----------------------------|--------------------------|---|--|--|
| LRS MSW Collection Vehicles | 75,000                   | 1.5 million                                   | 425,000  | 9.51 million   |
| Other Collection Vehicles   | 40,000                   | 800,000                                       | 230,000  | 5.15 million   |
| Hydro Excavation Vehicles   | 685,000                  | 13.7 million                                  | 3.914 million  | 87.60 million  |
| <b>Total</b>                | <b>800,000</b>           | <b>16.0 million</b>                           | <b>4.569 million</b>                                       | <b>102.26 million</b>  |



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## Trends in the Waste Disposal System - Recycling Challenges from DuPage County SWMP

- Recycling has seen a significant amount of change over the last decade with volatile market values, contamination issues, and shrinking end users
- Due to its volume in the waste stream, C&D debris recycling is an option to reduce landfilled waste
- Certain electronics products were banned from landfills as of January 1, 2012. The program to work with electronic recyclers has struggled to remain sustainable



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## Trends in the Waste Disposal System - Recycling Challenges from Kane County SWMP

- Recycling has seen a significant amount of change over the last decade with volatile market values, contamination issues, and shrinking end users
- The residential diversion rate in Kane County has been slowly declining from 2015 to 2019
- The continued diversion of construction and deconstruction-related materials is recommended
- *The greatest need is to ensure sufficient competition for both waste transfer and landfilling in the private sector*
- *Competition serves to control price increases, and also maintains a high quality of service in both the residential and commercial sectors*



## Benefit 5 – Facilitate Recycling in the Service Area

- Allowing additional investments in C&D recycling infrastructure (e.g., screens, conveyors) to minimize the generation of screening fines and improve recycling of C&D
- Operation of a courtesy drop-off for electronic wastes from local residents
- Operation of a courtesy drop-off for recyclables for area residents
- Recycling of loads which are predominantly recyclable material but are not classified as C&D (and thus not acceptable under the current site permit)
- Receipt and transfer of SSR to LRS sorting facility to better manage and improve efficiencies



## Benefit 6 – Direct Benefits to West Chicago

- Host benefit fee of \$2.45 for each ton of MSW or hydro excavation waste received - If only 600 tons per day of MSW and hydro excavation waste per day are accepted, this will result in over \$420,000 per year of revenues to the City of West Chicago
- “Most favored nation” rates for waste generated within West Chicago
- Free disposal of up to 2,500 tons of waste generated by West Chicago



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## Benefit 6 – Direct Benefits to West Chicago (cont.)

- Free use of up to a total of twenty 1.5-cubic yard dumpsters or sixty 90-gallon carts annually for one-time pick up each at special events and/or West Chicago use
- Preference to suitably skilled applicants residing in West Chicago for work at the West DuPage RTS
- Establishment of a courtesy drop-off area for West Chicago residents of electrical/electronic devices



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## Benefit 7 – Direct Benefits to DuPage County

- DuPage County only disposes of approximately 30% of the waste generated within the county at the one transfer station within the county (the DuKane Transfer Station) so DuPage County is not collecting the host fees from the other 70% of waste which its residents and businesses generate, which is lost revenue of almost \$400,000 per year
- Host benefit fee of \$0.58 for each ton of MSW or hydro excavation waste received, which will result in approximately \$100,000 per year of revenues to DuPage County



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## Benefit 7 – Direct Benefits to DuPage County (cont.)

- Establishment of a drop-off area for recyclables (e.g., bottles, cans, cardboard, and paper) generated by residents and small businesses at no cost to the resident
- Partnering with DuPage County on an application(s) to the IEPA for the funding of household hazardous waste collection(s) at the site at the request of DuPage County



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## Summary

- The West DuPage RTS will increase competition and available transfer capacity in the service area, which has been clearly recognized to help control price increases and maintain a high quality of service in both the residential and commercial sectors
- The West DuPage RTS will provide additional operational flexibility for the service area through extended operating hours
- The West DuPage RTS will provide a necessary and conveniently located facility to manage hydro excavation wastes, which will result in significant transportation efficiencies



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## Summary

- The West DuPage RTS will reduce environmental impacts to the City of West Chicago and the area by decreasing the travel distance of MSW and hydro excavation collection vehicles
- The West DuPage RTS will facilitate recycling in the service area by expanding its service offerings and allowing additional investments in site infrastructure and operational improvements



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## Summary

- The West DuPage RTS will provide direct benefits to the City of West Chicago as detailed in the Host Community Benefit Agreement with West Chicago
- The West DuPage RTS will provide direct benefits to DuPage County as detailed in the Secondary Host Community Benefit Agreement with DuPage County
- Waste quantities in the service area are projected to increase in the future as a result of the continued population and employment growth



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## Opinion – Criterion 1

- It is my professional opinion that the West DuPage Recycling and Transfer Station meets the requirements of Criterion 1 as it is “necessary to accommodate the waste needs of the area it is intended to serve.”



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