

Groot Industries, Inc. Lake Transfer Station

LAKE TRANSFER STATION LOCAL SITING HEARING



CHRISTINA M. SEIBERT

- Solid Waste Planner for Shaw Environmental, Inc., a CB&I Company
- Approximately 13 years of experience
- B.S., Environmental Science, University of Iowa
- Prepared or assisted in preparation of needs assessments for 20 solid waste facilities in Illinois
 - Expert witness testimony at 8 local siting hearings
- Worked on permit applications for more than 10 transfer stations in northern Illinois
- Consultant to industry and government clients
- Professional association memberships:
 - Solid Waste Association of North America, Land of Lincoln Chapter – board member

SECTION 39.2 CRITERION 1 NEED

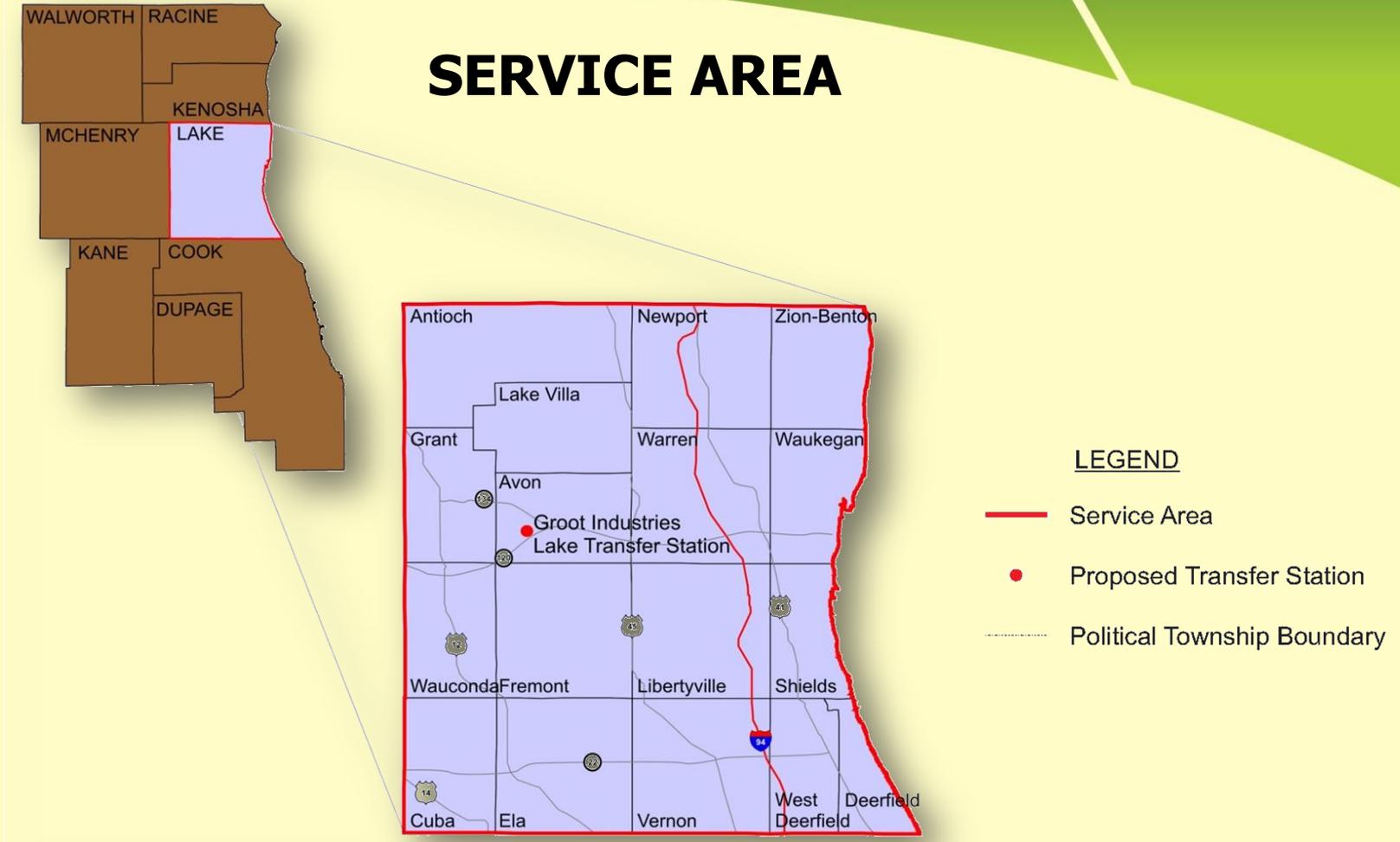
"The facility is necessary to accommodate the waste needs of the area it is intended to serve."

OVERVIEW

- Definition of the service area
- Disposal trends in the service area
- Calculation of the waste disposed by the service area
- Capacity available to the service area
- Economic factors

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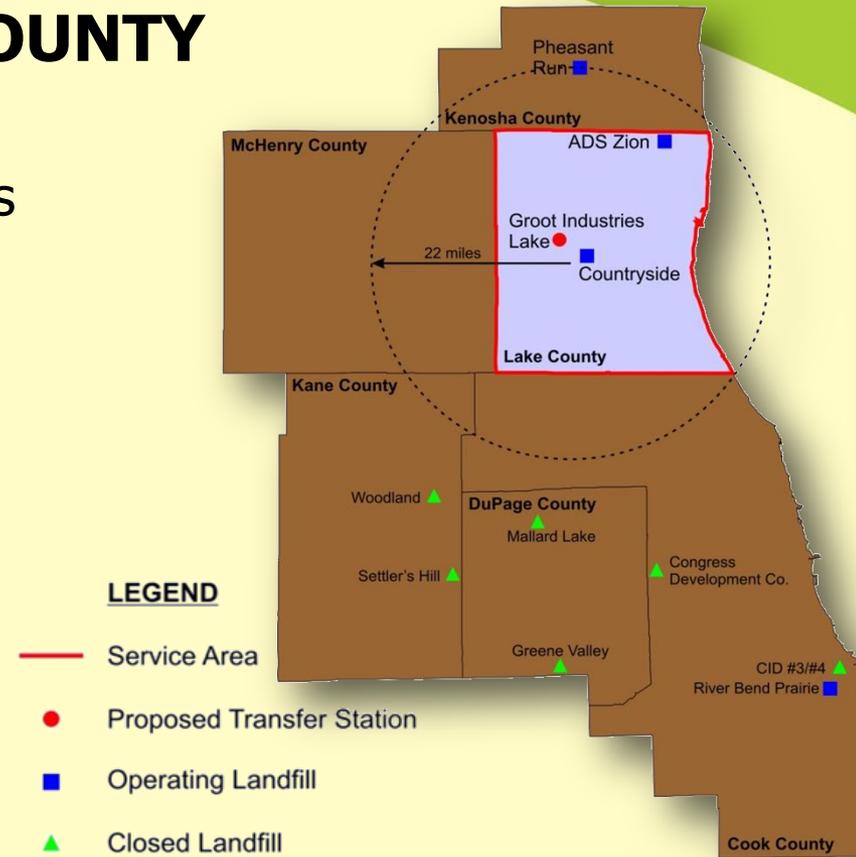
SERVICE AREA



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CURRENT WASTE MANAGEMENT SYSTEM IN LAKE COUNTY

- Landfill-based system, with landfills located within 22 miles of the County's centroid
 - Zion (Lake Co.)
 - Countryside (Lake Co.)
 - Pheasant Run (Kenosha Co., WI)
- Landfills are local, primarily accessed by direct haul from Lake County
 - They also serve as regional landfills and accept waste from the broader metro area



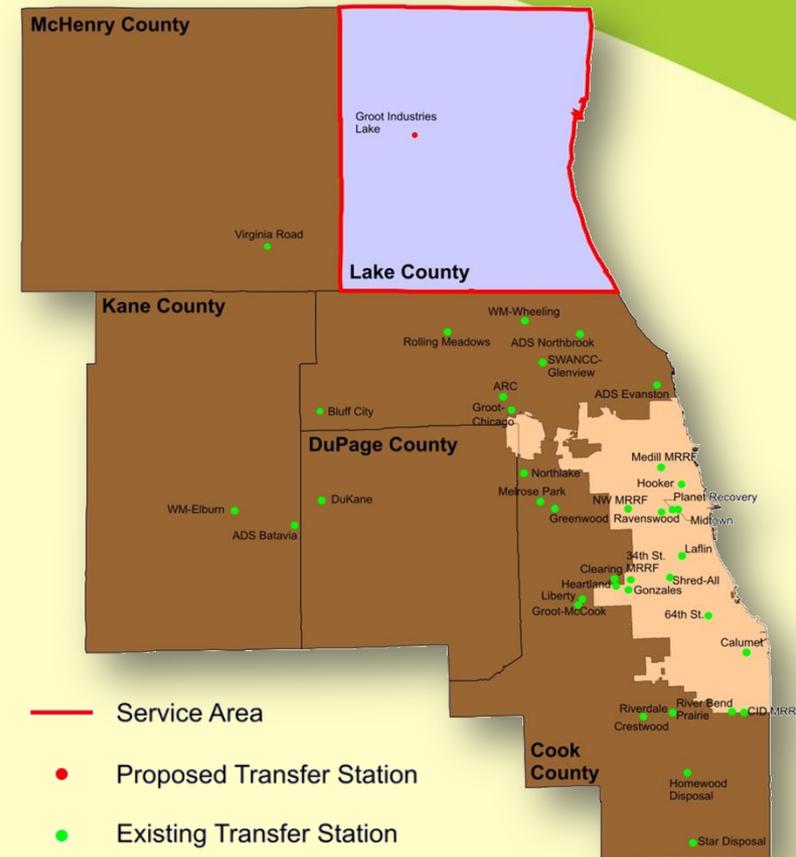
WASTE DISPOSAL SYSTEM TRENDS

- Consistent with requirements of the Solid Waste Planning and Recycling Act, Lake County historically sought 20 years of guaranteed disposal capacity for waste generated in its borders
 - Disposal commitments with Countryside Landfill and ADS Zion Landfill have been exhausted
 - ADS Zion Landfill received an IEPA permit for an expansion in 2011 and committed to providing a maximum of 6 years of guaranteed disposal capacity to the County, through 2017
- Capacity at in-county, regional landfills is limited, with 12 years of life or less remaining when the Lake Transfer Station begins operating
 - Landfills in Lake County have taken 9 or more years to site, permit, and develop capacity
 - Expansion potential is limited, particularly in developed or developing areas
- As existing landfills close, waste will be increasingly exported from the service area for disposal

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WASTE DISPOSAL SYSTEM TRENDS

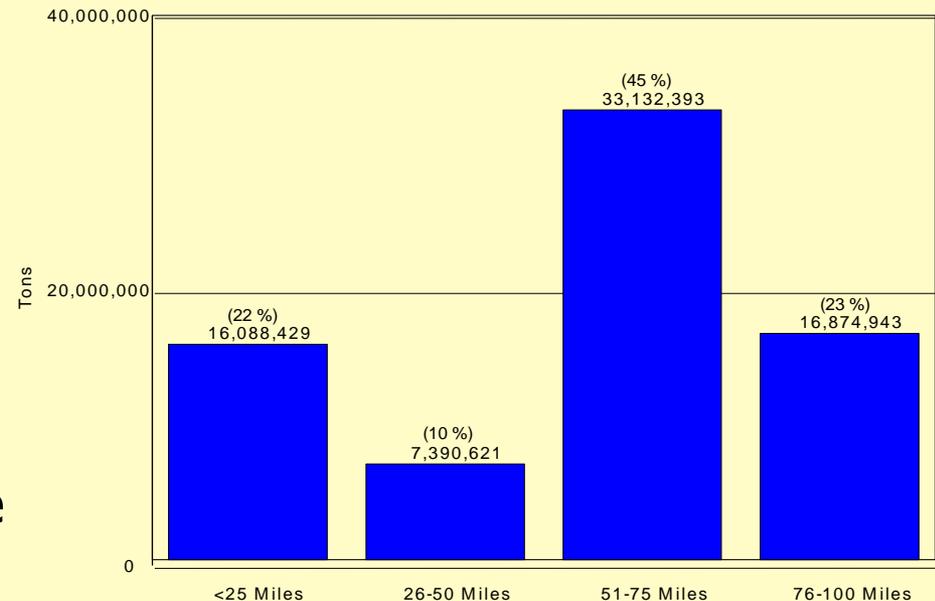
- The Lake County Solid Waste Management Plan identifies the need to develop facilities to replace in-County landfills
 - The Plan expressly recognizes transfer stations as an option for its long-term waste management system
 - The Plan urges development of new facilities prior to closure of existing facilities
- Transfer stations are relied upon by surrounding counties to provide a cost-effective and efficient method to access distant landfills
 - Planning for the Lake Transfer Station began in 2008, resulting in a development timeframe of 7 years or more



DISTANCES TO NEAREST LANDFILLS

- The landfills historically utilized by Lake County were located an average of 14 miles from the centroid of the service area
- Now, the majority (68%) of landfill capacity is located more than 50 miles from the centroid, more than three times the average distance to the disposal facilities historically serving Lake County

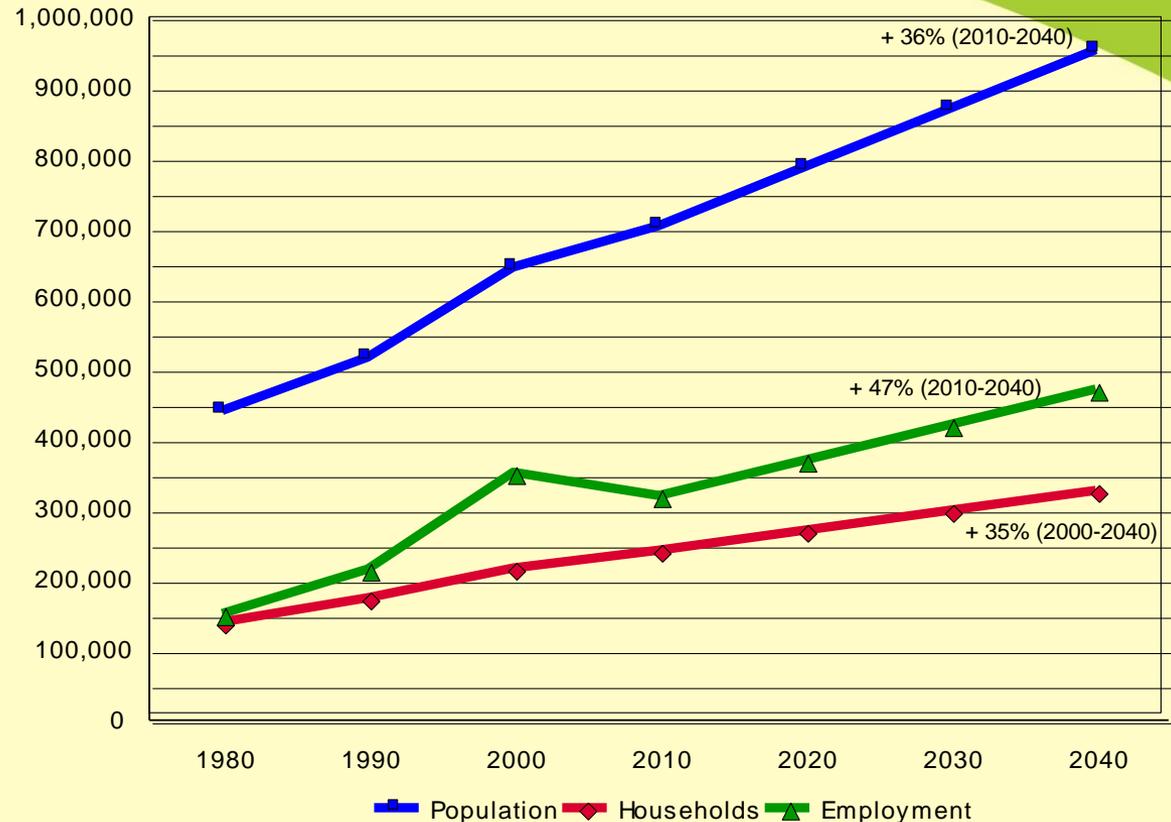
LANDFILL CAPACITY VS DISTANCE FROM SERVICE AREA



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DEMOGRAPHIC TRENDS IN THE SERVICE AREA

- Service area population is projected to grow 1% per year
 - By comparison, Illinois's statewide population growth = 0.7% per year
- Growth in population, households, and employment will increase waste quantities to be managed



SERVICE AREA DISPOSAL PROJECTIONS

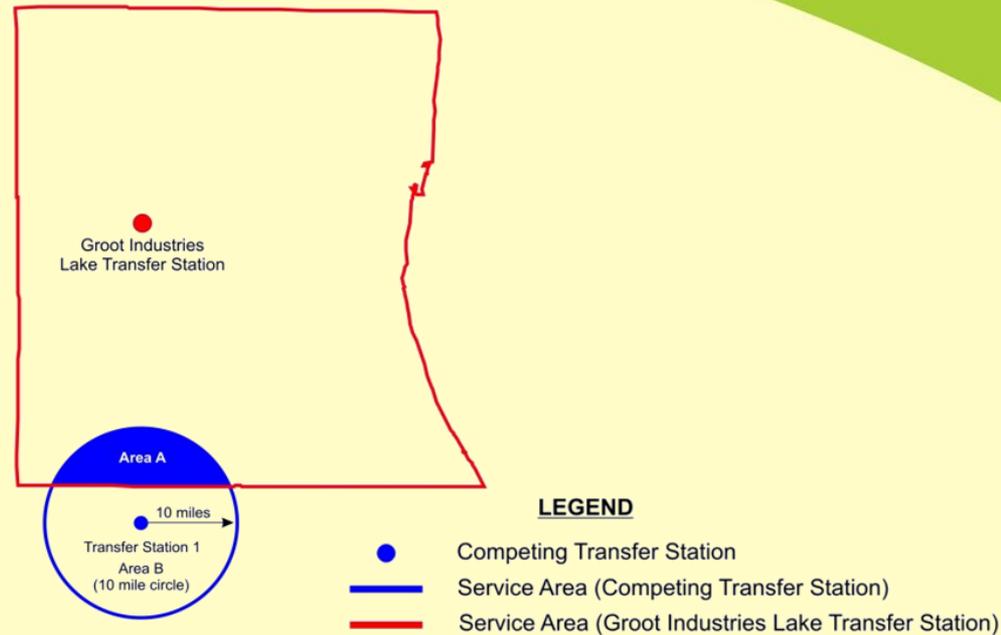
- Lake Transfer Station will accept municipal solid waste from residential, commercial and light industrial sources
- Disposal rates in pounds per capita per day (pcd):
 - Average, 1996-2011 = 7.2 pcd
 - Peak, 1996-2011 = 7.9 pcd
 - Most recent, 2011 = 6.1 pcd
- Projected daily waste disposal in tons per day (tpd):

– 2011 rate (6.1 pcd):	– Average rate (7.2 pcd):
» 2015 = 2,899 tpd	» 2015 = 3,422 tpd
» 2035 = 3,550 tpd	» 2035 = 4,191 tpd

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TRANSFER STATION CAPACITY ANALYSIS: METHOD

- Service areas of existing transfer stations were reviewed to identify facilities that may serve Lake County
- Existing transfer stations with service areas that overlap Lake County were considered

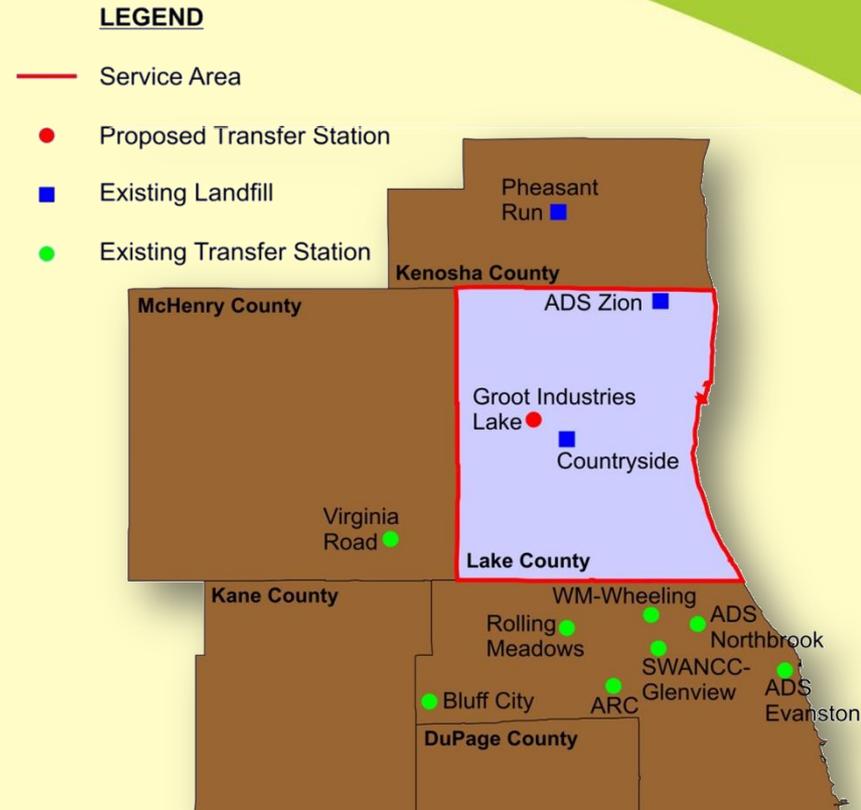


$$\text{Service area capacity} = \frac{\text{Population in area of overlap}}{\text{Population of existing transfer station service area}} \times \text{Total capacity}$$

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TRANSFER CAPACITY AVAILABLE TO THE SERVICE AREA

- 8 transfer stations may provide capacity to the service area
- Estimated existing transfer capacity = 719 tpd
 - This capacity includes recyclable materials and landscape wastes at some facilities, so capacity for waste is likely less than 719 tpd
- Only a portion of Lake County's waste needs can be served by existing transfer stations



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IMMEDIATE AND FUTURE TRANSFER CAPACITY DEFICIT

	Tons Per Day (tpd)	
	2015	2035
Transfer Capacity at Existing Facilities	719	
Waste Requiring Disposal		
2011 Disposal Rate (6.1 pcd)	2,899	3,550
Average Disposal Rate (7.2 pcd)	3,422	4,191
Transfer Capacity Deficit		
2011 Disposal Rate (6.1 pcd)	2,180	2,831
Average Disposal Rate (7.2 pcd)	2,703	3,472

- Lake Transfer Station will provide 750 tpd of capacity, a portion of which may be allocated to recyclable materials and landscape waste
- The facility will meet only a fraction of Lake County's waste needs

REMAINING LANDFILL CAPACITY

- A transfer station is not a permanent disposal facility
- In-county landfills will not provide long-term disposal capacity to the proposed service area
 - Countryside Landfill will have less than 5 years of capacity remaining when Lake Transfer Station begins operating
 - ADS Zion Landfill's capacity commitment to Lake County will expire in 2017; the facility is projected to close within 12 years of the Lake Transfer Station opening
- Pheasant Run Recycling and Disposal Facility will not provide significant disposal capacity for Illinois-generated waste in the future
 - State-imposed tipping fees increased in 2009, causing the quantity of Illinois waste disposed at the landfill to drop significantly
 - Received less than 100 tons per day from Illinois, on average, in 2011 and 2012

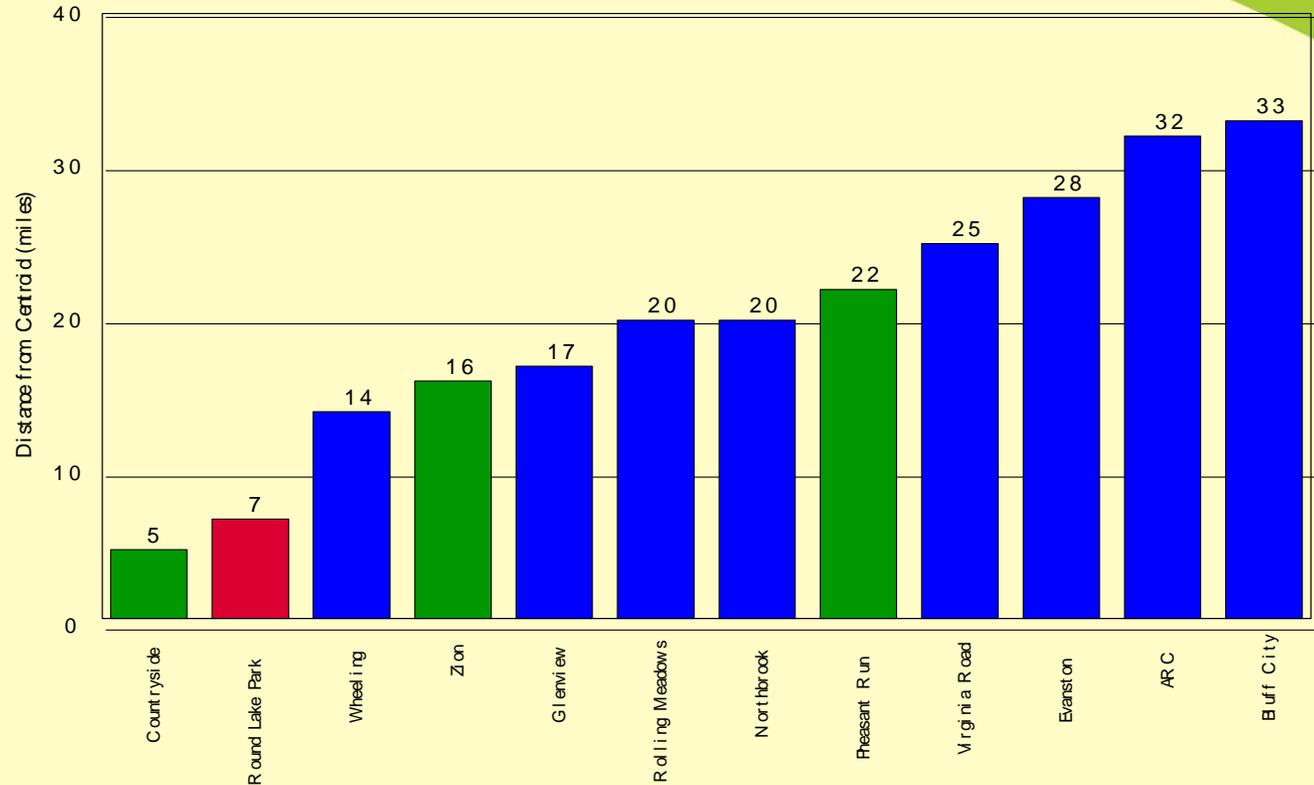
ECONOMIC BENEFITS

- Economic benefits result from the operation of transfer stations such as the proposed Groot Industries Lake Transfer Station:
 - Increased efficiency of the collection and disposal system
 - » Location efficiency
 - » Cost efficiency
 - Enhanced competition for transfer and disposal services

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COLLECTION AND DISPOSAL SYSTEM EFFICIENCY: DISTANCES TO NEAREST LANDFILLS AND TRANSFER STATIONS

- Lake Transfer Station is the closest transfer facility to the waste centroid
 - 2-3 times closer than existing transfer stations
 - Comparable to the distance to Countryside Landfill



COLLECTION AND DISPOSAL SYSTEM EFFICIENCY: LOCATION CONSIDERATIONS

- Facility will be located near waste generators
 - Waste centroid is approximately 7 miles from facility
 - Lake Transfer Station is the nearest transfer facility to the waste centroid
- Existing transfer capacity is located 14 miles or more from centroid
- Location will minimize travel time from point of collection to transfer station
- Convenient location will result in long-term cost savings for residents and businesses because collection will be more efficient:
 - 10% efficiency increase for residential packer collection vehicles
 - 20-25% efficiency increase for commercial and roll-off vehicles

COLLECTION AND DISPOSAL SYSTEM EFFICIENCY: COST CONSIDERATIONS

- Transfer hauling waste reduces system costs compared to direct haul
 - Transfer vehicles are more fuel efficient and accommodate larger payloads than collection vehicles
 - Transfer vehicles are less expensive than collection vehicles which can cost \$240,000 or more
 - Fleet maintenance costs are reduced
- Transfer hauling waste provides greater flexibility in selecting disposal sites

MIDWEST DIESEL FUEL PRICES



COMPETITION

- Waste management services in Lake County are almost exclusively provided by the private sector
- An additional facility will promote lower, competitive prices and higher quality service
- Competition for waste collection and disposal services was identified as a key reason for developing transfer stations in Lake County, as stated in Lake County's 2002 transfer station feasibility study

OPINION

The facility is necessary to accommodate the waste needs of the area it is intended to serve



BASIS OF OPINION

- Lake County is projected to experience continued growth in population, households and employment, resulting in increased quantities of waste to be managed
- In-county landfills will not provide needed 20 years of capacity for Lake County waste
- New landfill capacity is being developed further from the service area
- Lake County has stated a need to develop new facilities, which may include transfer stations, to provide long-term waste management for the County
- Lake County desires new facilities to be developed prior to closure of existing facilities

BASIS OF OPINION

- No transfer stations are currently operating in Lake County
- The service area faces an imminent transfer capacity deficit well in excess of the proposed capacity of the Groot Industries Lake Transfer Station
- The Groot Industries Lake Transfer Station will be conveniently located to waste generators and waste haulers within the service area, resulting in reduced transportation costs and increased collection efficiency compared to existing transfer stations