

# Groot Industries, Inc. Lake Transfer Station

## LAKE TRANSFER STATION LOCAL SITING HEARING



# Groot Industries, Inc. Lake Transfer Station

## **DEVIN A. MOOSE, P.E., DEE**

- National Director of Solid Waste Consulting for Shaw Environmental, Inc., a CB&I Company
- Civil Engineering Degree from University of Missouri – Rolla
- Registered Professional Engineer in 9 States, including Illinois
- Diplomat of the American Academy of Environmental Engineers
- Approximately 30 years of experience in all aspects of solid waste
- Lead engineer for 17 Illinois transfer station siting proceedings, representing both the public and private sectors
- Reviewing engineer for 9 Illinois transfer station siting applications
- Permitted 22 transfer stations within the State of Illinois

## **SECTION 39.2 CRITERION 8 PLAN CONSISTENCY**

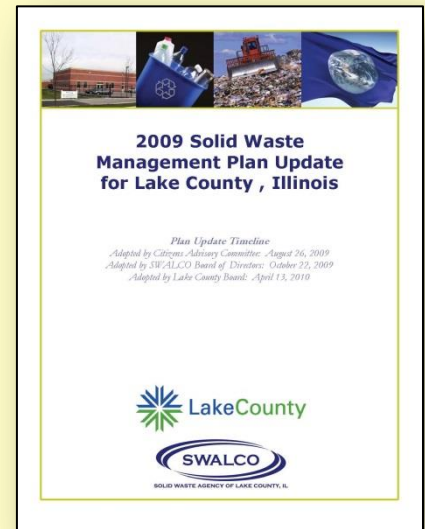
*"If the facility is to be located in a county where the county board has adopted a solid waste management plan consistent with the planning requirements of the Local Solid Waste Disposal Act or the Solid Waste Planning and Recycling Act, the facility is consistent with that plan."*

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## SOLID WASTE PLAN TIMELINE

- September 1989 – Original Solid Waste Management Plan
- September 1994 – 1<sup>st</sup> Five Year Update Adopted
- September 1999 – 2<sup>nd</sup> Five Year Update Adopted
- November 2004 – 3<sup>rd</sup> Five Year Update Adopted
- April 2010 – 4<sup>th</sup> Five Year Update Adopted

The Village of Round Lake Park adopted the updated Lake County Solid Waste Management Plan by reference on August 6, 2013.



## SOLID WASTE MANAGEMENT TRENDS

- Lake County and its municipalities have historically relied upon in-County and other locally-available landfills to manage waste.
- These landfills are nearing capacity and will not provide long-term disposal capacity to Lake County.
- “Lake County needs to start **SERIOUSLY** considering long-term options for managing its waste requiring disposal.” (SWALCO, 2010, p. 4-1) (emphasis added)

## PLAN SUMMARY

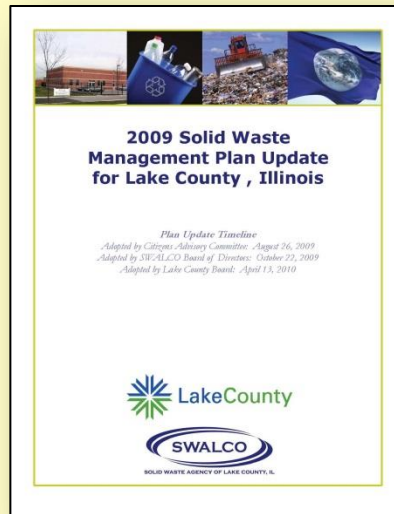
- Identifies the need to consider alternatives to in-county landfill disposal for the long-term management of the County's waste.
- Identifies a desire to "...manage as much Lake County waste requiring disposal as feasible within the borders of Lake County..." (SWALCO, 2010, p. 4-1)
- Identifies three options for consideration:
  - Landfills
  - Transfer stations
  - Alternative technologies

## PLAN SUMMARY

- Does not contain a definitive recommendation for the type of facility or facilities that should be developed, leaving this determination instead to private developers and units of local government
- Does not put forth a schedule for implementation other than to say, "One of the primary purposes of the planning process is to make sure new facilities and/or programs are in place prior to existing facilities closing." (SWALCO, 2010, p. 4-1)

## CONSISTENCY WITH THE PLAN

- Solid waste transfer stations, if developed in accordance with the applicable requirements of Recommendations T.2 through T.6 of the Lake County Solid Waste Management Plan, will be considered consistent with the Plan.





## PLAN RECOMMENDATION T.2

- Transfer station should be large enough to safely manage anticipated waste volume, provide adequate buffering and screening, stormwater management, safe traffic flow, and other proposed functions.
  - Facility is adequately sized
  - Proposed transfer station building is adequately sized
  - Can accommodate efficient transfer of up to 900 tons of waste per day
  - Operations will be screened from view
  - Stormwater management will be provided in accordance with the Lake County Stormwater Ordinance
  - Designed on-site traffic flow patterns promote safe traffic flow

## PLAN RECOMMENDATION T.3

- Waste transfer operations must be located within a portion of the transfer station that can be completely enclosed and developers are strongly encouraged to incorporate green/sustainable building principles.
  - The transfer station building is designed as a pull-through facility
  - All waste handling operations will occur within the transfer station building
  - The building is able to be completely enclosed
  - Access to the building is provided by overhead access doors which can be closed as needed during the operating day and during periods the facility is not operating
  - The facility has been designed to provide daylighting, minimizing the use of artificial lighting
  - Stormwater management on the site will incorporate a bioswale to provide natural treatment and slow the discharge of stormwater
  - Additional sustainable building principles may be incorporated into the facility during the development of final construction plans

## PLAN RECOMMENDATION T.4

- Transfer station developers must include in the design and operation of the facility the transfer of recyclables and landscape waste.
  - The facility is proposed to accept source-separated recyclables and landscape waste for transfer to recycling processing facilities and permitted or registered landscape waste management facilities.
- Transfer station developers are encouraged to evaluate processing of the solid waste into a renewable resource that could be transported to off-site markets.
  - Groot has evaluated the feasibility of processing solid waste into a renewable resource and none is planned at this time.

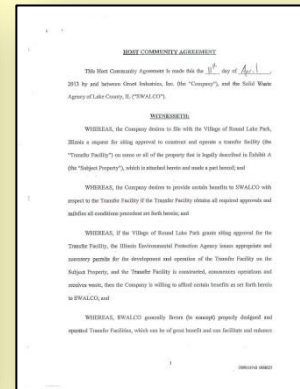
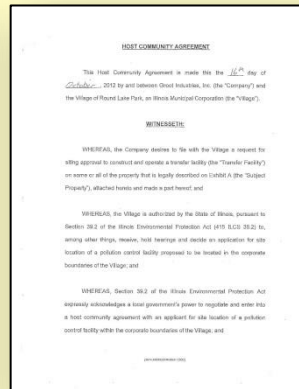
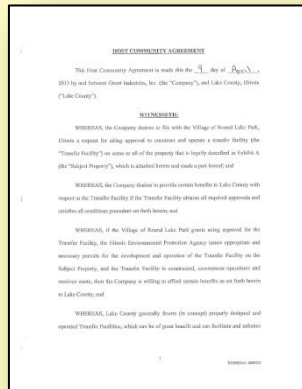
## PLAN RECOMMENDATION T.5

- SWALCO and the Siting Authority will evaluate transfer stations by ensuring that they utilize proven technology, minimize emissions, and avoid large economic risks. They have required a number of questions to be answered within the Plan Consistency portion of the siting application regarding the following categories:
  - Facility Requirements
  - Siting
  - Economics
  - Technical Feasibility
  - Ability to Implement
  - Environmental Impacts
  - Permitting
  - Safety Issues
  - Health Risk Assessment
  - Financing
  - Life Cycle Assessment
- This recommendation was amended by the host agreements executed with Lake County and SWALCO to allow the information requested to be provided within any section of the Application.
- Table 8-1 within the Plan Consistency section of the Siting Application summarizes this information.

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## PLAN RECOMMENDATION T.6

- Any proposed transfer station facility must enter into host agreements with the local siting authority (the Village), Lake County, and SWALCO.
  - Groot Industries has entered into Host Community Agreements with the Village, the County and SWALCO.



## **PLAN RECOMMENDATION A.1 (REFERENCED IN RECOMMENDATION T.6)**

- Prior to entering into the host agreements, required an analysis of the life cycle environmental impacts of the proposed transfer and disposal system compared to the current disposal system using the USEPA's MSW DST Life Cycle Assessment Model.
  - Net annual energy consumption
  - Sulfur oxides emissions
  - Nitrogen oxides emissions
  - Carbon dioxide emissions
- A life-cycle assessment was prepared that demonstrates development of the proposed transfer station will result in a waste disposal system that is superior to the current disposal system.

## PLAN RECOMMENDATION T.6 LIFE CYCLE ASSESSMENT (CONTINUED)

- The life-cycle assessment was posted on the SWALCO website and was presented in a meeting hosted by Round Lake Park on March 6, 2013.
  - SWALCO and Lake County were invited.
  - SWALCO found that the assessment model met the requirements of Recommendation T.6

“SWALCO finds that [the] life cycle assessment model and this Agreement fulfill the requirements of Recommendation T.6 and Recommendation A.1 of the 2009 Solid Waste Management Plan Update for Lake County, Illinois, and the proposed transfer facility is therefore consistent with Recommendation T.6 and A.1 of the Lake County Solid Waste Management Plan.”

ordinances relating to the operation of the Transfer Facility. The Company shall provide digital or hard copies of any records at its cost if requested by SWALCO.

#### 8. ENVIRONMENTAL BENEFITS

The Transfer Facility will reduce the amount of emissions otherwise generated by packer trucks by reducing the number of miles packer trucks need to travel within and around Lake County transporting waste for ultimate disposal. Reduced packer truck miles will also result in less wear and tear on Lake County roads, and also reduce the overall traffic impact and environmental impact of packer trucks within Lake County.

#### 9. LAKE COUNTY SOLID WASTE MANAGEMENT PLAN

The 2009 *Solid Waste Management Plan Update for Lake County, Illinois* sets forth recommendations related to the development of transfer stations. For purposes of the Application for the Transfer Facility, the questions identified in Recommendation T.5 may be addressed by the Company in any section of the Application, provided that a table of reference is also included in the Plan Consistency portion of the Application.

SWALCO has reviewed the life cycle assessment model prepared on behalf of the company and attended and participated in the public meeting hosted by the Village of

Round Lake Park on March 6, 2013. SWALCO finds that the life cycle assessment model and this Agreement fulfill the requirements of Recommendation T.6 and Recommendation A.1 of the 2009 *Solid Waste Management Plan Update for Lake County, Illinois*, and the proposed Transfer Facility is therefore consistent with Recommendation T.6 and Recommendation A.1 of the Lake County Solid Waste Management Plan.

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## **OPINION**

The Facility is consistent with the Lake County Solid Waste Management Plan.