FABYAN UTILIZATION STUDY
SETTLER'S HILL END USE PLAN

JULY 10, 2012
MEMORANDUM

Date: August 22, 2012

To: Michael J. Donahue, Chairman- Fabyan Utilization Study Committee

From: Lannert Group, County Staff and consultants

Re: Next Steps and Proposed Phasing

Next Steps

- **August**
  - Initiate fiscal impact study
  - Conduct public hearings on Master Plan

- **September**
  - Revise draft plan to incorporate public comments, staff and board input
  - Present final draft to County Board Development Committee, Forest Preserve, and Utilization Committee

- **October**
  - County Board and Forest Preserve approval of master plan

- **November**
  - Modify existing Post-closure Plan within facility’s IEPA Permit (IEPA-BOL)
    - Submit Modification Permit application
    - Address Post-closure requirements under 35IAC 811-812;
      - Final slopes blend and complement surrounding topography;
      - Drainage structures designed to handle storm event;
      - Minimize the need for further maintenance.

- **Winter 2012-2013**
  - Develop Master Operating Agreement/ IGA between County Board and Forest Preserve.
    - Includes: Budget; Financing; and Implementation strategies from fiscal impact study

- **Spring 2013 Engineering/ Environmental Studies (as required by KCFPD, DNR & IEPA)**
  - Air space management & safety
  - Cultural/ Architectural resources
  - Geological/ soil resources
  - Natural/ biological resources
  - Air quality
  - Noise
  - Health and safety
  - Transportation/ traffic/ infrastructure
  - Vegetation, quality & condition survey
  - Wetland assessment
  - Water quality evaluation
Stormwater Permits
  - Kane County Stormwater Management Permit

Project overview: Stormwater submittal; Flood & wetland submittal; and Plan set
  - NPDES Permit
    - NOI and SWPPP

**Summer 2013 Engineering for Phase I Improvements**
  - Process for improvement plans
    - Grading plans
    - Cut/ fill analysis
    - Construction drawings & Spec's
    - County review
    - Submittal bids
    - Contractor selection

**Proposed Phasing**

**Phase 1: Fall 2013**
- Stormwater Management System
- Cross-Country trails
- Multi-purpose trails

**Phase 2: 2014**
- Mountain bike trails
- Winter recreation area
- Event access area
- Pedestrian promenade

**Phase 3: 2015**
- Sports fitness and training facilities
- Overlook observatory
- Features

**Phase 4: Implementation timing to be Market/ Need driven**
- Internal access roads
- Historical settlement
- Music venue
- Golf course expansion
- First Tee program
- Conference center/ Resort complex
August 23, 2012

To: Fabyan Property Utilization Committee Members

Fr: Mike Donahue, Committee Chairman

Re: Public Hearing and Adoption Schedule for the Fabyan/Settler's Hill Master Plan

c.c: Kane County Board Chairman Karen McConnaughay
    Kane County Forest Preserve President John Hoscheit
    Kane County Board and Forest Preserve Commissioners

Ladies and Gentlemen:

I would like to take this opportunity to thank you for all your efforts in developing the Fabyan/Settler’s Hill Master Plan. There has been a tremendous amount of public participation to get us to the point where we are ready to outline a schedule for public hearings and adoption of the Plan.

First, there are four attachments for your review and consideration:

- The agenda for the next Fabyan Property Utilization Committee, which is scheduled for 11:00am on Wednesday, September 12, 2012 in the Kane County Board Room.
- A letter from Waste Management dated August 13, 2012 titled Settler’s Hill RDF Proposed End-Use Redevelopment Plan. As you know, Waste Management maintains the environmental responsibility for both the Settler’s Hill and Midway landfills. This letter outlines Waste Management’s positions on the plan.
- A memorandum from Chris Lannert dated August 22, 2012 titled Next Steps and Proposed Phasing. This letter outlines next steps and phasing. We will discuss and revise this as you see fit at the meeting.

Below is our proposed schedule for the public hearing and adoption of the plan:

September 10, 5:00pm - 9:00p.m., Open House and Public Hearing, Kane County Randall Road Facility (530 Randall Road, the Circuit Clerk/Traffic Court Room) to be held jointly by the Kane County Board and
Kane County Forest Preserve District. Open house format from 5:00 to 7:00 p.m. followed by a formal public hearing at 7:00 p.m.

September 12- 11:00am. Fabyan Property Utilization Subcommittee meeting, Kane County Board Room – Review public hearing comments, recommend final revisions and final draft plan document.

September 18- 9:00am. Kane County Development Committee review and recommendation for approval of the final plan.

September 27- 9:00am. Kane County Forest Preserve District Planning and Utilization Committee review and recommendation for approval of the final plan

October 3- 9:00am. Kane County Board Executive Committee
October 5- 9:00am. Kane County Forest Preserve District Executive Committee

October 9- 9:00am. Kane County Forest Preserve District approval.
October 9- 9:45am. Kane County Board approval.

If this schedule is maintained and the plan is formally adopted in October this will not mark the end of the process, but the beginning of the implementation of the Master Plan. Environmental and engineering studies are planned for next Spring and construction of the first phase of the plan could commence by next Fall.
I am excited to see this plan adopted and implemented in the weeks and months ahead. You can all be proud of your good work in this process.

If you have any questions, please contact me.
August 13, 2012

Mr. Timothy A. Harbaugh, P.E., DEE
Executive Director
County of Kane
Department of Facilities, Development and Environmental Resources
719 Batavia Avenue
Geneva, Illinois 60134

Re: Settler’s Hill RDF
Proposed End-Use Redevelopment Plan

Dear Tim:

On behalf of Waste Management of Illinois, Inc. (WMIL), I would like to thank you and the County Board for sharing the proposed end-use plan for the Settler’s Hill RDF and Midway Landfill complex, and affording WMIL an opportunity to provide some preliminary comments. While WMIL has been aware of the County’s recreational development goals for some time, as these efforts come closer to fruition, WMIL is prepared to address issues of mutual concern that may arise as the County advances its plan.

As we have discussed previously, WMIL is concerned about how the redevelopment of the Settler’s Hill landfill will affect the shared obligations of WMIL and the County with respect to the facility’s various permit and regulatory compliance requirements during the remainder of the facility’s post-closure care period. As you are aware, the duration of WMIL’s obligations are predicated, in part, on the period of time that the facility continues to generate landfill gas. Therefore, WMIL will be concerned about how the end-use redevelopment plan may affect methane production, monitoring, collection and control, as well as other operational concerns as described more fully below.

Upon receipt of the County’s conceptual plan, WMIL asked Weaver Boos Consultants, an experienced solid waste consulting firm, to evaluate the County’s proposed end-use redevelopment plans and identify areas of potential conflict between the post-closure care obligations and the County’s proposed redevelopment plans. The following is a summary of their initial findings, although this is not intended to represent all of the issues that the County may encounter during the facility’s redevelopment. We have broken this out by key site/environmental management areas.
Leachate Management / Collection System

- Proposed plan elements should be located away from underground storage tanks (UST), leachate risers and manholes, and leachate force mains (please refer to enclosed site diagram).
- Proposed plan elements should allow for year-round service vehicle and tanker truck access to pump the leachate USTs, and perform periodic maintenance.
- Excavation near USTs may require additional efforts to protect the structural integrity of the USTs and associated piping, and to safeguard the cathodic protection systems.
- Modification or relocation of any leachate UST, collection point, or force main will require IEPA permit modification.
- Location and access to any UST must be kept secured with access limited to maintenance personnel only.

Gas Collection & Control System / GCCS Monitoring

- Proposed plan elements should be located away from gas collection and control system (GCCS) headers and laterals, where possible (please refer to enclosed site diagram).
- Proposed plan elements should allow for year-round service vehicle access to the GCCS and landfill gas monitoring probes.
- Periodic access must be available for drill rigs and haul trucks to drill gas extraction wells, move waste offsite, and deliver well construction materials.
- All aboveground GCCS components (extraction wells, valves, risers, sumps, etc.) must be enclosed within aboveground protective structures or in belowground vaults, and locked to maintain security. These structures may require periodic resetting as the landfill settles.
- Periodic re-grading of landfill gas piping may be necessary due to settling, and will require accommodations for deep and shallow excavation throughout the project area.
- Careful planning will be necessary to avoid conflicts between the proposed new access road and existing GCCS piping installed along the east edge of the landfill.
- Gas monitoring probes may need to be cut to ground level and flush-mounted. Some gas monitoring probes may have to be relocated to accommodate some plan elements. Relocation will require an IEPA permit modification.
- Permit-required periodic surface emission monitoring is required and must be performed on a pre-defined grid pattern across the landfill footprint, within the proposed plan area.
- Periodic and future decommissioning of gas extraction wells will require excavation across the landfill footprint, within the proposed plan area.
- Controlled access must be maintained to and around the Gas-to-Energy facility, and safety and noise setbacks may be necessary around the power plant.
- A security plan to protect all GCCS and monitoring system features will need to be developed as the public is allowed access to the facility.
Groundwater Monitoring

- Proposed plan elements should be located away from groundwater monitoring wells. Relocating ground monitoring wells will require EPA permit modification.
- Year-round access to groundwater monitoring wells must be maintained for service vehicles, drill rigs and water trucks, to perform periodic monitoring and maintenance.
- Decommissioning of groundwater monitoring wells will require excavation within the proposed plan area.

Surface Water Management System

- Enlargement of ponds and construction of water quality features will require further study to determine any limitations due to permits, proximity to waste boundaries, or impacts to facility surfacewater and groundwater management systems, as well as hydrogeologic conditions. Any modification of the dam along the northern edge of the northwest pond will require a professional engineer sign-off and likely require DNR approval.
- Redirecting and/or incorporation of the Elfstrom Sports Complex stormwater management system onto the Settler’s Hill facility will require an EPA permit modification.
- Construction of an underground stormwater control system may be required in order to implement the Fishing and Ice Skating Ponds.
- The surfacewater management system must be constructed and maintained in compliance with the EPA-issued RCRA and NDPES stormwater permit.
- All proposed surface water features in close proximity to the landfills must be engineered and lined to prevent water infiltration into the landfill.
- The northwest ponds proposed for redevelopment as Fishing Ponds are currently used as a source of irrigation water by the Golf Course. Consideration should be given to developing a plan to redirect effluent from the City of Geneva WWTP into this pond in order to expand its irrigation capacity, and utilize the pond to irrigate the Elfstrom Sports Complex as well.

Final Cover & Vegetation Management

- Any grade changes on the final cover must be accomplished by adding fill soil. No cuts (grade reduction) can be allowed on the landfills. When placement of fill is necessary, the existing topsoil must be removed and filling accomplished with fine-grained, cohesive soils. The topsoil can then be replaced and reused to establish the required vegetative cover.
- Due to the many complications and added expense that can arise from irrigating a golf course or other recreational features built on a landfill, irrigation should not be permitted over portions of the landfill not equipped with a geomembrane liner. Irrigating over a
geomembrane liner may be acceptable depending on site conditions such as topography, and thickness and nature of the protective and vegetative soil cover. Excessive or prolonged irrigation over a geomembrane can lead to slope failure. Experienced soils and solid waste facility design engineers must be consulted during the planning of irrigated features on the landfill cap.

- Rutting along Mountain Bike and Cross Country Trails may encourage channeling of surface water and subsequent erosion. Adequate design elements must be incorporated to avoid need for ongoing maintenance and remediation. WM can provide an example where this end use is being implemented on a closed landfill.

- Planting of trees, bushes or other vegetation having deep or tap-roots cannot be permitted on the final cover of the landfill. Any plantings having significant root systems will need to be setback a minimum 75 feet from the edge of the landfill.

Site Access & Safety

- All-season access for emergency vehicles and equipment must be maintained at all times.
- Perimeter drainage, and ditches, swales or ground depressions of any type, may pose a danger to sledding. Adequate run out areas and ground maintenance should be incorporated to prevent sledders from entering such features at a high rate of speed.
- Steep grades on the landfill pose considerations for speed and balance and should be factored into the detailed planning of all proposed amenities.
- All roads should be constructed to accommodate the weight of 6,000-gallon 18-wheel tanker trucks, in addition to the standard requirements for fire and life safety vehicle access.
- Access to all areas of the landfill must be maintained to allow for the delivery of soil using 18-wheel dump trucks, to fill depressions caused by differential settlement of the waste.
- Slopes around all existing ponds and stormwater conveyance structures must be evaluated; water features must be designed to allow persons and animals to extract themselves from these water features.

General

- The integrity of the final cover system cannot be compromised in the construction of amenities atop the landfill. Provisions will need to be made for any structure or amenity to accommodate the potential for differential settlement.
- Structures or significant amenities planned for construction in close proximity to the landfill will likely require competent geotechnical investigation and foundation design.

This summary is not intended to represent all of the issues that may be encountered during the facility's redevelopment, but serves to highlight those than can be anticipated at this time and which should be considered as the plans and economics of site redevelopment are studied.
Mr. Timothy A. Harbaugh, P.E., DEE  
County of Kane  
August 13, 2012  
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Further. As a practical matter, the plan should strive to avoid potential conflicts to the greatest extent possible, and planners should be reminded to not overlook the unique conditions, requirements and restrictions associated with the care and management of closed landfills. Although WMIL is not in a position to approve or disapprove of the County’s redevelopment plans, we may have additional comments or input on future iterations of the end-use plan.

Kane County and WMIL have enjoyed success working together to serve the interests of the County, the Forest Preserve District, the communities of Batavia and Geneva, and the citizens of the county and surrounding area. In this spirit, it is important that all parties recognize the obligations and responsibilities that both the County and WMIL share to manage and maintain the closed landfill in a manner that will ensure public safety and health, as well as compliance with the permits and regulations that will remain in effect for decades to come.

WMIL looks forward to continuing to work with the County and its land planners to harmonize the post-closure and public safety obligations with the County’s proposed end use objectives.

Please feel free to call or email me if you have any questions.

Respectfully,
WASTE MANAGEMENT OF ILLINOIS, INC.

[Signature]

Roderic S. Stipe, CHMM, QEP  
District Manager  
Closed Site Management Group

Enclosure

cc: Jack Dowden