Prepared By: EA Engineering, Science, and Technology, Inc.
Final Prepared: 11/24/09

GUDE LANDFILL REMEDIATION

COMMUNITY MEETING (Meeting No. 4.1)

DATE: September 24, 2009
TIME: 7:30 PM to 9:00 PM
LOCATION: Candlewood Elementary School

ATTENDANCE: See attached sign-in sheet

The Meeting Agenda is included as Attachment 1.
Contact information for attendees is included as Attachment 2.

MINUTES:

1) Keith Ligon of Gude Landfill Concerned Citizens (GLCC) opened the meeting by stating the purpose of the meeting and advising those present that the allotted time would be from 7:30 to 9:00 pm. Keith asked that attendees hold their questions until after the presentation. He then introduced the three Community Association Presidents, the GLCC members present, and County and EA Engineering personnel.

2) Keith recounted the 1983 M-NCPPC plan for reuse of Gude Landfill, which has not been realized, largely due to the constant settlement of the landfill.

3) Keith reviewed recent activities and issues concerning the landfill and explained the genesis of GLCC. He stated that the bus depot initiative had been stopped, the yard trim facility project had been put on hold, the landfill gas-to-energy project had been completed and was operational, and the men's shelter expansion had been completed. Keith also described the positive working relationship between GLCC and DEP.

4) Dean Dozier of GLCC then provided background on the structure of regulations that govern municipal solid waste landfills, explained the potential environmental impacts associated with closed landfills, presented historical information about groundwater contamination at the site, and presented a preliminary schedule of activities related to assessment and remediation of the landfill site.

5) Steve Lezinski of DEP then reviewed current operations at the landfill, including maintenance of vegetative cover, management of storm water, control of leachate seeps, and collection and control of landfill gas.

6) David Lake of DEP presented information about the groundwater and surface water monitoring program at the landfill. He showed the sampling locations and discussed some of the statistics since sampling began in 1984.

7) Barb Roeper of EA Engineering presented a discussion about aspects of closed landfills that can have risks for people and ecosystems. She discussed the conceptual site model – a graphic representation of subsurface information; explained risk pathways and stated that only complete pathways, from the environment to the receptor, pose a potential risk; described how risks are evaluated; and how decisions on site remediation are evaluated and made.

8) Bob Day of GLCC presented ideas about how the site could be reused after it is remediated. He explained that the more complex the reuse scenario, the more complex, expensive, and lengthy the remediation cycle will be. Some of the low impact options discussed included hiking and biking trails, and archery ranges.

9) Keith Ligon then closed the presentation, thanked the attendees for coming, and opened the floor for questions and comments.

10) One citizen asked about the relationship between the work at the Gude Landfill and neighboring Inter-County Connector (ICC) activities, including the construction of a storm water pond northwest of the landfill. GLCC and the County were unaware of any connection to the Remediation project. GLCC committed to investigate the issue further and report back to the Community.

11) A citizen commented that the promises made by the (Derwood Station) residential developer about the landfill being converted into a park adjoining the community had never been realized, and that he was angry with the County Government for allowing that to happen.

12) Several citizens asked about the risk to people and pets from incidental contact with the landfill or surface waters for which the Maximum Contaminant Level (MCL) had been exceeded. The County and EA reiterated that the MCLs are drinking water standards and that volatile organic compounds (VOCs) tend not to be present in surface water since they generally evaporate. EA also pointed out that personnel working on the landfill as part of the project routinely monitor for hazardous VOCs. Even when excavating, VOCs are not detected at a level that requires the workers to wear specific personal protective equipment.

13) The power point presentation is included as Attachment 3.

The above summation is the writer's interpretation of the items discussed at the meeting. Comments involving differences in understanding of any of the meeting items will be received for a period of thirty (30) days from the date of these meeting minutes. Clarifications will be made, as deemed necessary. If no comments are received within the specified time period, the minutes will remain as written.

ATTACHMENT 1

Gude Landfill Remediation
Gude Landfill Concerned Citizens & Derwood Station Community

Meeting No. 4.1

Meeting Agenda

1. Welcome (Keith Ligon, GLCC)	5 minutes
2. Contamination & Remediation (Dean Dozier, GLCC)	10 minutes
3. Current Landfill Operations (Stephen Lezinski, DEP)	10 minutes
4. Groundwater & Surface Water Monitoring (David Lake, DEP)	10 minutes
5. Risk (Barbara Roeper, EA Engineering)	10 minutes
6. Reuse Possibilities (Bob Day, GLCC)	10 minutes
7. Closing (Keith Ligon, GLCC)	5 minutes
8. Your Questions (Community)	30 minutes

Gude Landfill Remediation Webpage

http://www.montgomerycountymd.gov/swstmpl.asp?url=/content/dep/solidwaste/facilities/gude/index.asp

Candlewood Elementary School
September 24, 2009
7:30 PM – 9:30 PM

ATTACHMENT 2

Date	September 24, 2009
Time	7:30 -9:30 PM
Meeting	Gude Landfill Remediation: GLCC/DEP Community Meeting

Name	Affiliation	Phone	Email	Address
Ralph Architzel	DSHOA 2	301 9484116	Ralpharchitzel@yahoo.com	7335 Oskaloosa
DAVE PETERSON	DSHOA 1	301 921 6357	kmpdhp@hotmail.com	7612 Anamosa Way
KATHY PETERSON				Same
M.J. Markley	DSHOA 3	301-424-5431	mjanemarkley@comcast.net	
Mark Silverman	DSHOA 2	301 948-4979	PMAS@COMCAST.NET	15769 Buena Vista Dr.
Ann McCarthy	DSHOA 2	301-424-0573		7249 Wapello Dr.
John McCarthy	DSHOA 2	301-424-0573	JPMcom@Comcast.Net	Ditto
[illegible]	HOA 3	301-340-1475	Cmmann1@Comcast.net	
Sue Karacki	HOA 3	301-424-6594	SKarachi@AOL.com	7232 Grinnell Drive
JANIE GRIFFIN	HOA 3	301-340-3222	gjgrife yahoo.com	2 Manona Ct.
RICK TILLERY	HOA 3	301 915 4912	RICK.TILLERY@CMAIL.COM	15461 INDIANOLA DR
Susan Main	Resident	301-294-5359	amandelara@aol.com slmain29@aol.com	15504 Moravia Ct.
Keith Brooks	DSHOA 2	301 948-5593	KBrooks@VERIZON.NET	7336 Oskaloosa
Cindy Cennamo	HOA 2(3)	301-424-8421	cennalee@comcast.net	7324 Gold Ring Terr
Kevin Bennett	HOA 3	(301) 424-6636	KJBMAVERICK50@AOL.COM	5 GRINNELL CT.

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Date	September 24, 2009
Time	7:30 -9:30 PM
Meeting	Gude Landfill Remediation: GLCC/DEP Community Meeting

Name	Affiliation	Phone	Email	Address
Wendy Andalla	resident	301 249 6129	wendyandalla@gmail.com	7237 Wapello Dr Derwood MD 20855
Michael Edwards	resident	301-738-9577	mebp@bpwriter.com	7205 Bettendorf CT Rockville, MD 20855
Richard Tillery	Resident	301 251 6106	RLTillery@TWBNews	15461 Indiangola Drive Derwood, MD 20855
Alex Schultz	Resident	301-424-0705	alexeschultz@hotmail.com	7213 Bettendorf 20855
5 Marni Benavides	Resident	301-424-0306	Marni_Benavides@hotmail.	7304 Gold Ring Ter Derwood, MD 20855
Stephen Lezinski	DEP	240-777-~~6595~~ 6590	steve.lezinski@montgomerycountymd.gov	16101 Frederick Road Derwood, MD
Barb Roeper	EA Engineering	410.329.5150	broeper@eaest.com	15 Loveton Circle, Sparks, MD 21152
Mark Gutberlet	EA Engineering	410-771-4950	mg2@eaest.com	15 Loveton Circle Sparks, MD 21152

Date	September 24, 2009
Time	7:30 -9:30 PM
Meeting	Gude Landfill Remediation: GLCC/DEP Community Meeting

Name	Affiliation	Phone	Email	Address
Steve Schulin		301-762-6714	Steve@Mdaip.org	15609 Gold Ring Way
Jody Eccleston		301-762-8908	jody720@AOL.com	7205 Wapello Dr
Michael Postek		301-948-5515	mtpostek@comcast.net	7260 Titonka Way
Mary Herbers		301 838 9755	Johreiz@verizon.net	15521 Villisca Terrace
Wat Cochrane		240-477-4268	Watcochrane82@hotmail.com	1542 Ind. Dr.
LASZLO HARSANYI	DSH@A2	301-651-7596	LASZLOH@COMCAST.NET	7228 Titonka Way

Date	September 24, 2009
Time	7:30 -9:30 PM
Meeting	Gude Landfill Remediation: GLCC/DEP Community Meeting

Name	Affiliation	Phone	Email	Address
Phil Harvey	Resident	301.610.9203	philwjharvey@gmail.com	15455 Indianola Dr.
3 Jeanette Dexter	Resident	240-477-4353	jmdexter@hotmail.com	7240 Titonka Way
Peter Karasik	DEP/Solid Waste	240-777-6569	peter.karasik@montgomerycountymd.gov	16101 Frederick Rd. Derwood, MD 20855
John Kumm	EA Engineering	410-329-5411	jkumm@earsb.com	15 Longton Circle Sparks, MD 21152

ATTACHMENT 3

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Citizen's Forum

Gude Landfill

September 24, 2009

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Agenda

• Welcome	Keith Ligon	5 min
• Contamination & Remediation	Dean Dozier	10 min
• Current Operations	Steve Lezinski	10 min
• Groundwater/Surfacewater	David Lake	10 min
• Risk	Barbara Roeper	10 min
• Reuse possibilities	Bob Day	10 min
• Closing	Keith Ligon	5 min
• Your questions		30 min
		1 hour 30 min

We will answer every question

Who is Here Tonight

Homeowner's Associations

Dave Peterson, President HOA#1

Laszlo Harsanyi, President HOA #2

Nick Radonic, President HOA #3

Gude Landfill Concerned Citizens (GLCC)

Keith Ligon

Julia Tillery

Bob Day

Dean Dozier

Montgomery County

Peter Karasik, Chief of Operations, DEP

Steve Lezinski, Ops Mgr, Gude Landfill, DEP

David Lake, Mgr, Water & Wastewater Policy Group, DEP

EA Engineering, Science & Technology

John Kumm, P.E.,

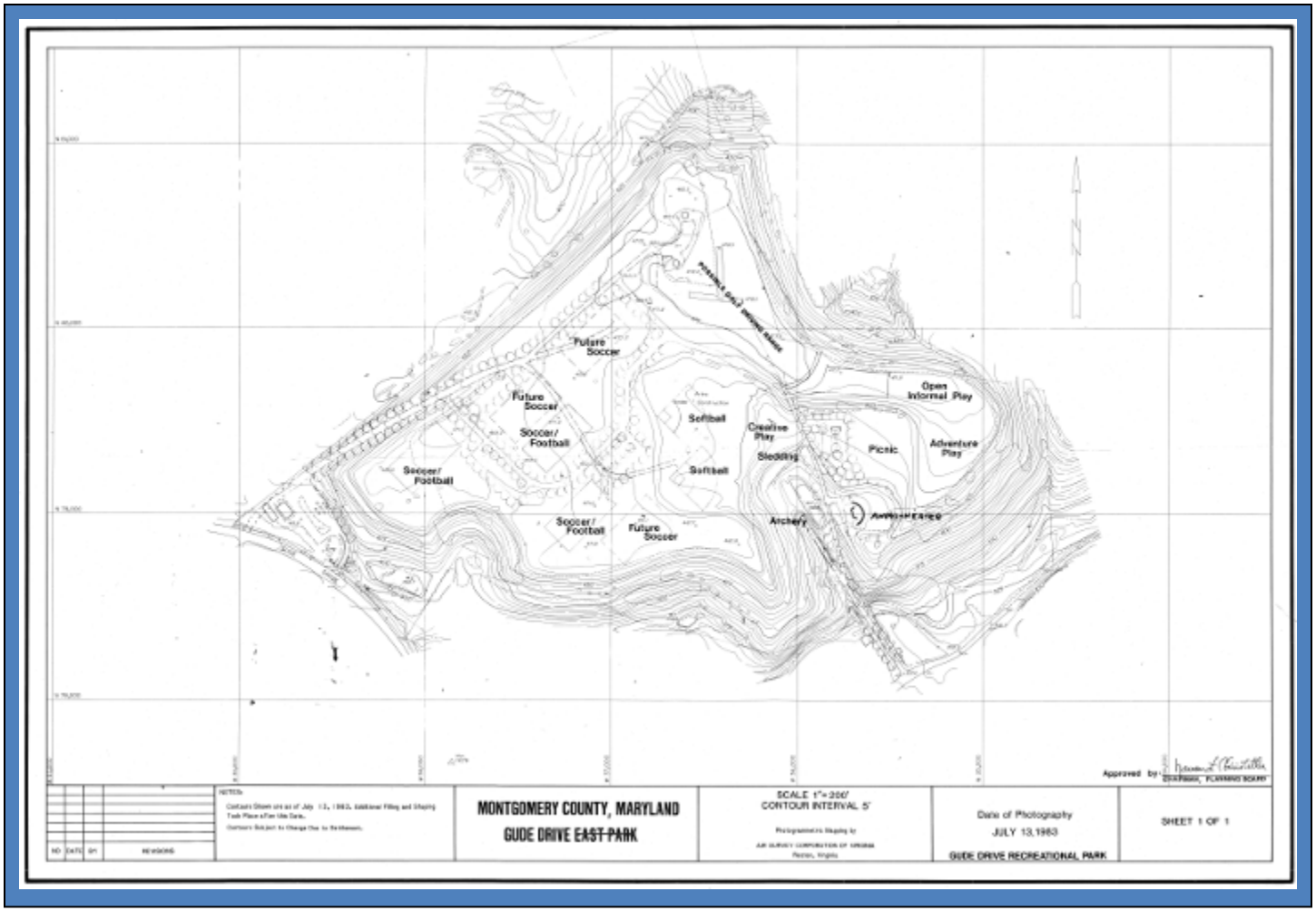
Mark Gutberlet, P.E.

Barbara Roeper, P.E.

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

1983 MNPPC Plan

Ligon



In 1983 the County was planning a park on the Gude Landfill - athletic fields, picnic areas, golf driving range, amphitheater,…

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

GLCC Objective

- **County data indicates contaminated groundwater may be moving off site**
- **Our concern is the <u>health and safety</u> of Derwood residents**
- **Gude Landfill (GLF) is a large tract of centrally located land that will continue to attract ideas about its reuse**
- **We oppose any use of the landfill prior to the completion of the remediation**

Our objective is a County funded program that will position the Gude Landfill as a good Derwood neighbor for the foreseeable future

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

County Use of Gude Landfill

Ligon

- **MCPS Bus Depot proposed by County Executive** — Stopped
- **Yard Trim Project proposed by DSW for collecting, grinding wood waste** — On Hold
- **Gas-to-Energy project proposed by DSW converts landfill gas to electricity** — Complete
- **Men's Shelter expansion/refurbishment proposed by County Human Services** — Complete

GLCC/DSW Meetings

- **Joint monthly meetings (2nd Thurs 7pm) between GLCC and the County's Dept of Solid Waste started June 2009**
  - **We are aligning our interests and objectives**
  - **We are seeking a win-win in our efforts**
  - **The meetings are open, candid, and business like**
  - **Minutes are posted on the County's GLF website**
- **DSW has responded to our request for transparency and data sharing**
  - **Modified County website and is posting all GLF data and reports**
  - **Offered access to engineering firm for questions and discussions**
  - **Responsive and accessible to our requests**

Science will tell us if there are risks to worry about

Contamination & Remediation

Dean Dozier - GLCC

Dozier

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Regulatory Framework

Resource Conservation and Recovery Act

↓

Code of Maryland Regulations
(COMAR Ch 26)
Solid waste regulations

↓

Montgomery County Code

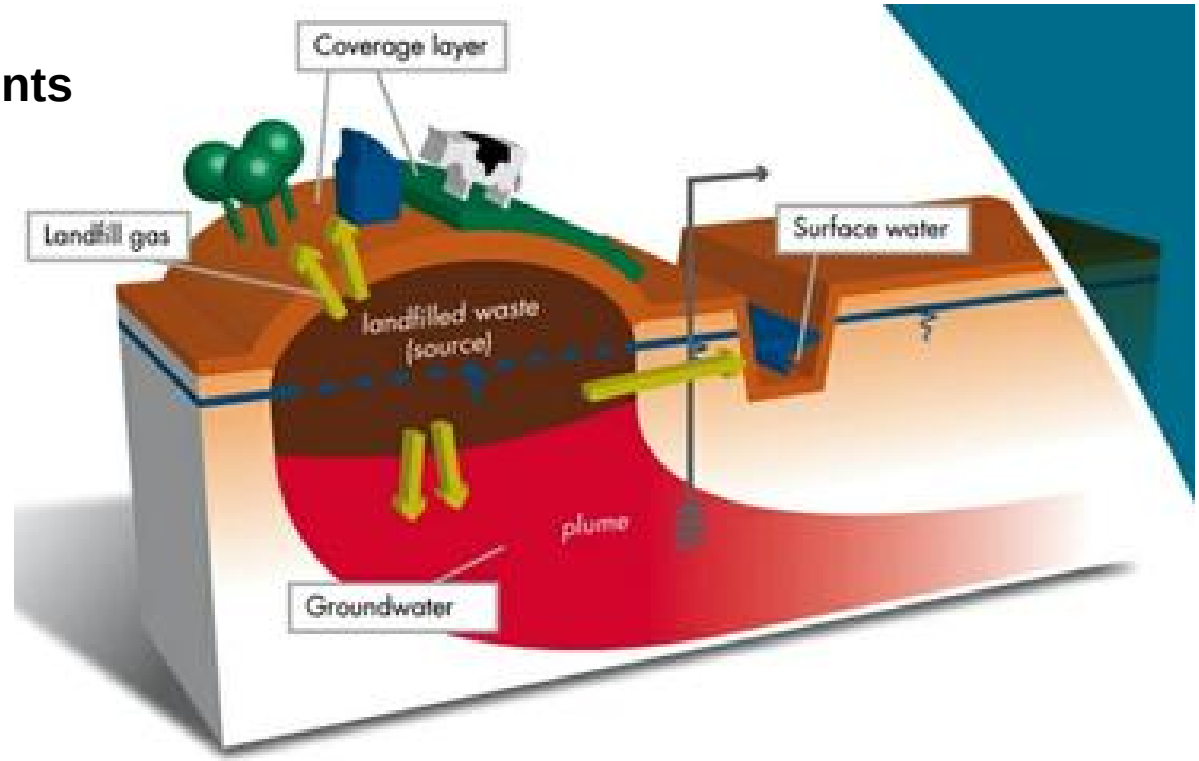
Regulatory Points

Landfill Gas

Landfill Cover

Surface Water

Groundwater



Activities

Digging – determine the extent of waste

Sampling- surface water and existing wells

Piezometer-shallow groundwater well

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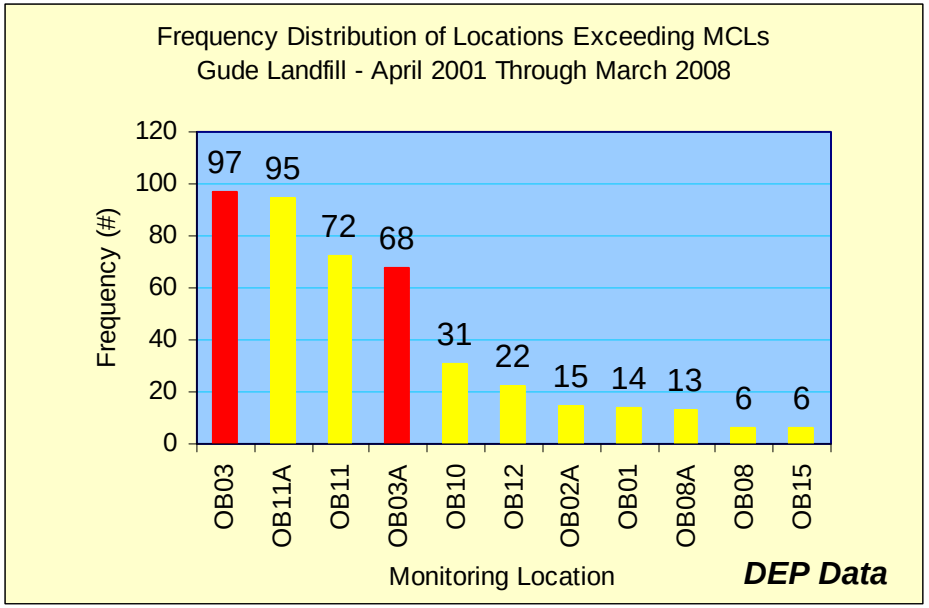
GLCC@hollybrooke.org

Groundwater Contamination

Dozier



- **Well OB-3/3A closest to Derwood houses**
- **OB-3 had 97 above EPA drinking water limits**
- **OB-3A had 68 above EPA drinking water limits**
- **Observed chemicals are contaminants in EPA's Clean Water Act and on Hazardous Waste List**

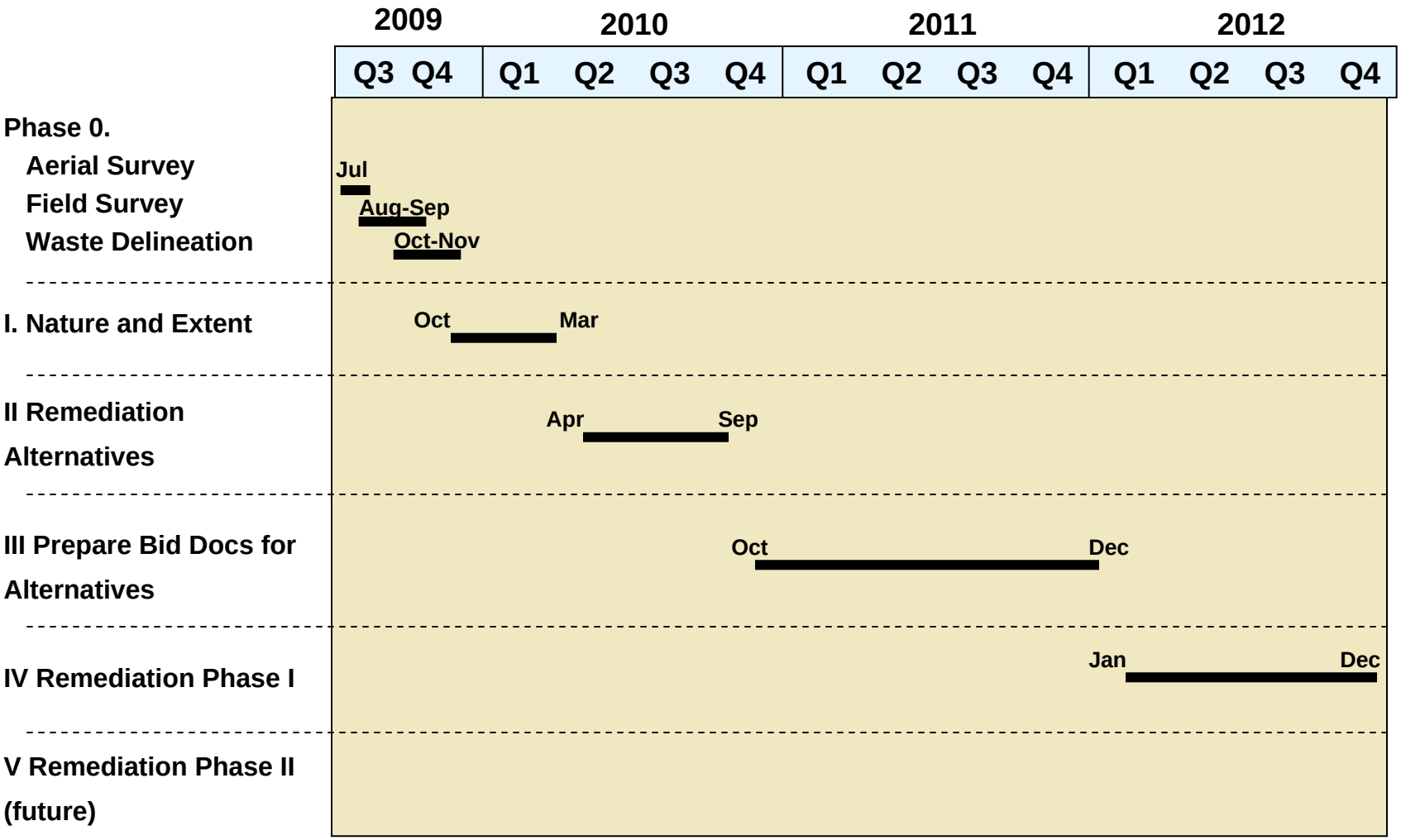
Chemicals Found in Samples

Trichloroethane
Dichloroethane
Vinyl Chloride
Benzene
Tetrachloroethene
Chlorobenzene
Toluene
Dichloropropane
Cyanide
Mercury
Lead
Chromium
Arsenic

DEP Data

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Remediation Approach



Current Operations at the Gude Landfill

Steve Lezinski - DEP

Gude Landfill Aerial View

DEP/Lezinski

Final Cover System – Well Vegetated

DEP/Lezinski

Maintenance - Stormwater Ponding

DEP/Lezinski

Maintenance - Stormwater Ponding

DEP/Lezinski

Maintenance - Leachate Seeps

DEP/Lezinski

Maintenance - Leachate Seep Repairs

DEP/Lezinski

Maintenance – Landfill Gas

DEP/Lezinski

Landfill Gas Collection System

DEP/Lezinski

Maintenance - Landfill Gas Flares

DEP/Lezinski

New Landfill Gas-to-Energy (Operational)

DEP/Lezinski

Ground Water & Surface Water

David Lake – DEP

Water Quality Monitoring Program

- **Montgomery County DEP has operated a water quality monitoring program since 1984**
- **20 groundwater wells routinely monitored**
- **5 Surface water locations routinely monitored**
- **Maximum Contaminant Level (MCL) – EPA <u>Regulatory Standard for Drinking Water Quality</u>**
- **No Drinking Water Wells Adjacent to Gude Landfill**

Gude Landfill and Monitoring Sites

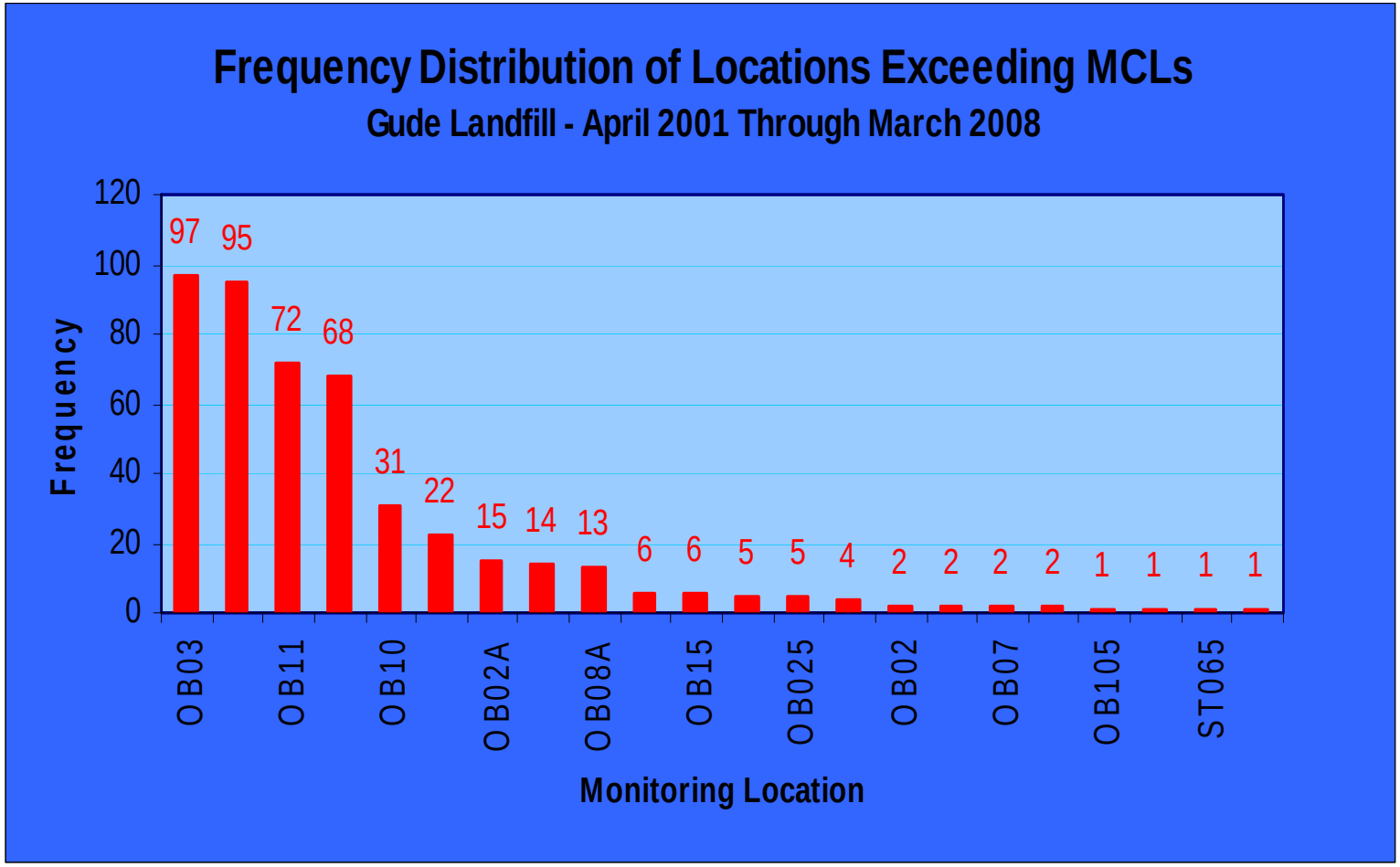
DEP/Lake

Monitoring Results

- **Groundwater**
  - **52,000 data points since 2001**
  - **< 1% (500+) exceed MCL established for drinking water**
  - **70% of samples exceeding MCLs were from wells OB03 and OB11**

- **Surface Water**
  - **6800 data points since 2001**
  - **Total of 7 data points (0.1%) have exceeded the MCL**

Sites Exceeding MCLs

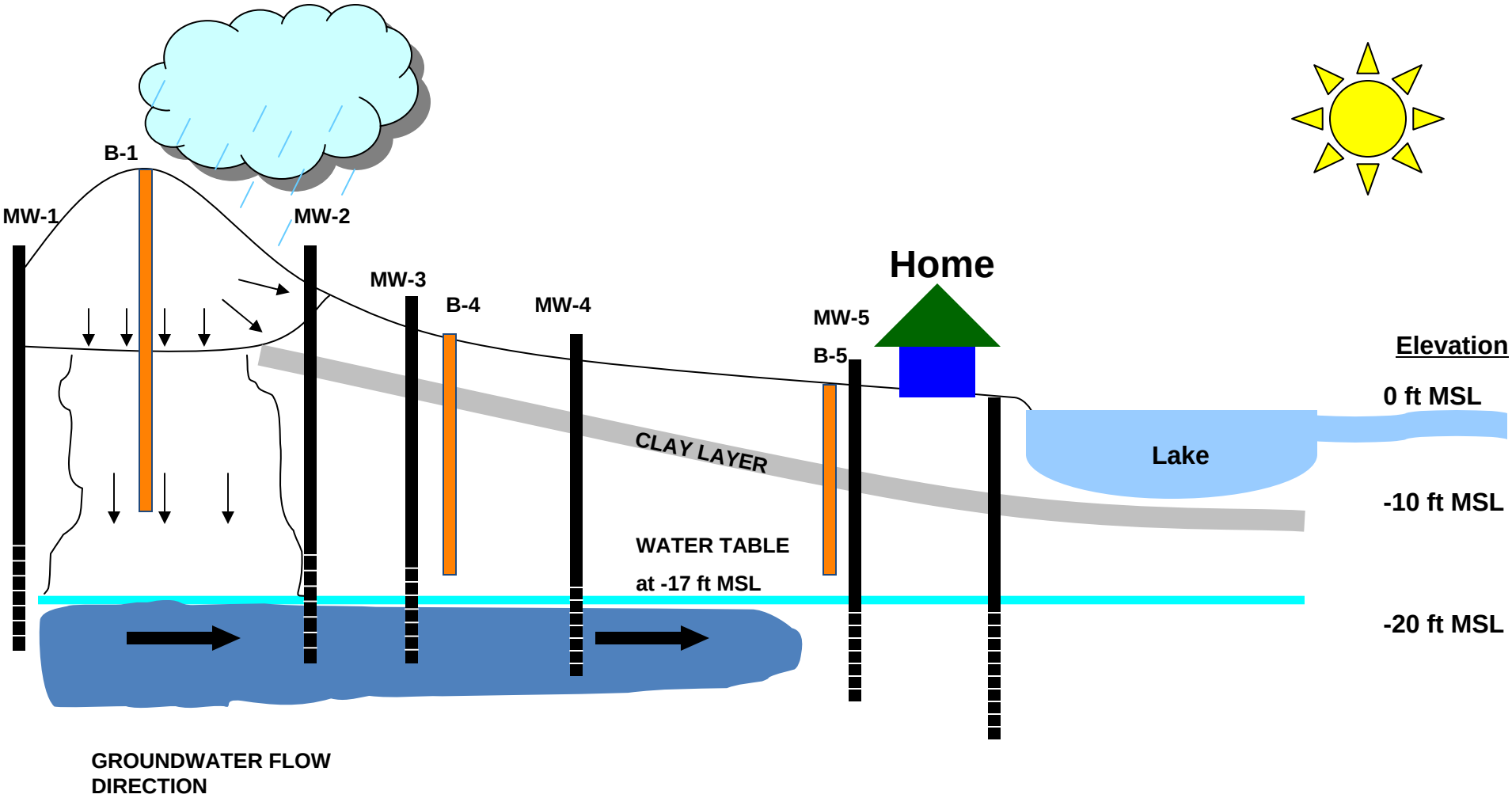


Risk

Barbara Roeper – EA Engineering

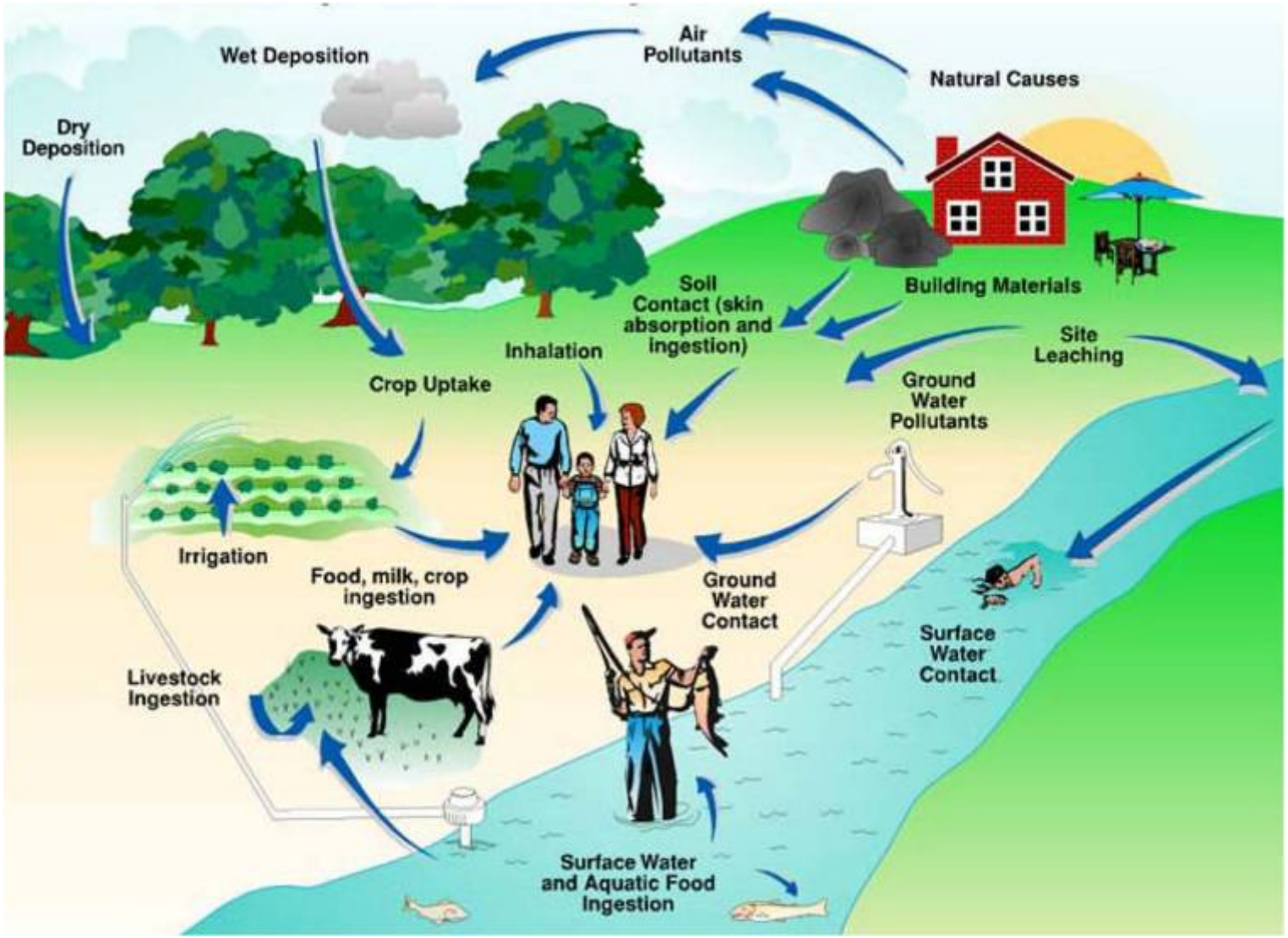
Conceptual Model

EA/Roeper



Risk Evaluation

EA/Roeper



Risk Evaluation

HAZARD ASSESSMENT

What was detected?

What are the reported concentrations?

EXPOSURE ASSESSMENT

Is anyone exposed?

How often?

How long?

How much?

TOXICITY ASSESSMENT

How harmful is it?

Carcinogenic or non-carcinogenic?

RISK CHARACTERIZATION

How much risk?

Risk Evaluation

- **The following must occur to have a complete exposure pathway:**
  - **chemical release**
  - **route of exposure**
  - **potential receptor (current and/or future)**

- **Incomplete exposure pathways do not result in exposure and are not included in the risk evaluation**

Remediation

- **Develop remedial action objectives based on nature and extent of impacts, potential risk, and proposed reuse**
- **Identify feasible alternatives, ranging from no action to full-scale remediation**

Reuse

Bob Day - GLCC

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Gude Landfill Characteristics

- **162 acres**
- **100 acres of settling waste, 50-100 ft deep**
- **Surface settles irregularly 1-2 ft/ year**
- **Generates 800-1000 cuft/minute of landfill gas for next 20-30 years**

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

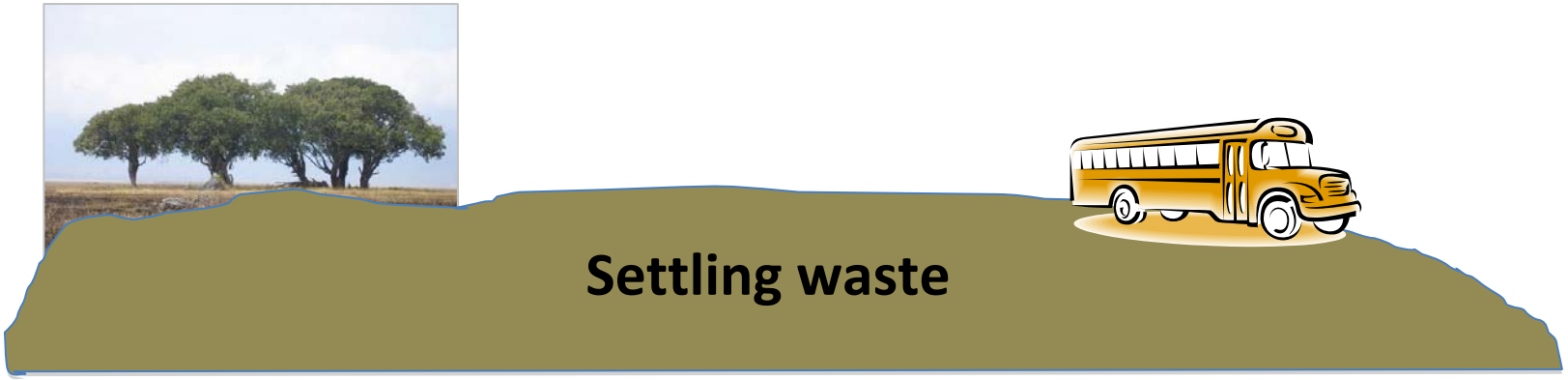
Landfill Gas Collection

- **84 vertical wells, connected by PVC pipes, collect the landfill gas**
- **Negative pressure system routes gas to generators where it is burned**
- **Extra wells installed in 2005 on NW side of landfill**
- **Pockets of gas can be explosive (>5% methane)**

Gude Landfill Concerned Citizens
GLCC@hollybrooke.org

Reuse of Gude Landfill

Day



Reuse Categories

None → Heavy Construction

Remediation Efforts

Simple	Complex
Not Expensive	Very Expensive
Months	Years

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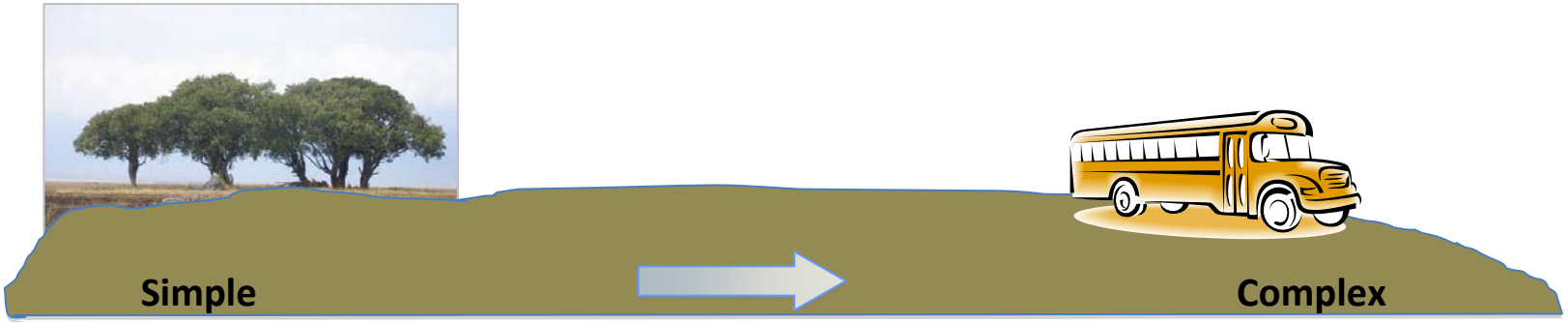
GLCC@hollybrooke.org

Reuse of Gude Landfill

Day



Walking Paths

Community Center

Archery Range

Soccer Fields

Baseball Fields

Swimming Pool

Dog Park

Toddler Playground

"Water Park"

Xtry Bike Paths

Solar Farm

Picnic Area

Running Trails

Tennis Courts

Kids Play Area

Model Acft

Community Vegetable Gardens

Tree Farm

Help us fill this in

Send your ideas: GLCC@Hollybrooke.org

Closing

Keith Ligon - GLCC

- **We need your ideas for re-use**
- **Your ideas are important, and your opinion counts**
- **Tell us what you would like on the Gude Landfill**
- **Contact any one of us – at any time**
- **Remediation will not be a quick process, so be patient**
- **We can make the Landfill into a good neighbor**
- **And limited reuse may be possible**