



**NRPB**  
NATIONAL RECOVERY  
PROGRAM BUREAU

***SINT MAARTEN – LANDFILL FIRE SUPPRESSION ACTIVITY  
STAKEHOLDER CONSULTATION***

25 June 2019



**NRPB**  
NATIONAL RECOVERY  
PROGRAM BUREAU

## INTRODUCTION OF PRESENTERS

NRPB Claret Connor, Thijn Laurensse, Hanneke Spaans

EE&G Tim Gipe, Kirk Smith, Jose Basulto, Erika  
Morales, Tadzio Bervoets,  
Christopher Teaf, PhD.



**NRPB**  
NATIONAL RECOVERY  
PROGRAM BUREAU





## KEY PARTIES

- **NRPB** – National Recovery Program Bureau as an agency responsible :
  - Implementation of Sint Maarten National Recovery Plan.
  - Overall management, supervision, and execution of project.
  - Establishment of a Grievance Redress Committee (GRC) to address stakeholders concerns throughout project implementation.
- **VROMI** – Ministry responsible for waste management
- **EE&G** – Preparing Environmental and Social Impact Assessment for fire suppression activity

3



## KEY PARTIES

**RINA** – Consultant performing census of community south of landfills

**World Bank** – Oversight management of Sint Maarten Trust Fund, that is financed by the Netherlands

**Stakeholders** – Members of communities that may be affected by fire suppression activities. Includes residents, employees and businesses.

4



## PURPOSE OF CONSULTATIONS

- Discuss upcoming Fire Suppression Activity
- Identify risks and impacts associated with Fire Suppression Activity
- Obtain feedback from stakeholders in community regarding project

5



## A WORD FROM THE DIRECTOR



6



## BACKGROUND



7



## Why is it necessary to suppress the fires?

HS1

- As long as the underground fires remain, surface fires could result.
- Smoke from the fires could present health risks for workers at the landfill.
- The smoke could present unpleasant odors for the community.
- Underground fires have underground voids that can cause landslides and new opportunities for smoke to escape.
- The eventual closure of the landfill will not be possible as long as the underground fires remain.

8





## BACKGROUND

### Surface and subsurface fires occurring on landfill and Irma debris site

- Landfill has reported fires for “Decades”
- Irma debris site has reported fires since November 2017
- Both landfill and Irma debris site have mixed waste (burnable and non-burnable) and garbage
- Irma debris site has vegetation, construction debris and other waste (appliances, boats, furniture, etc.)

9



## BACKGROUND

### Surface and subsurface fires occurring on landfill and Irma debris site

- Surface fires extinguished but smoke still observed on both
- Extent of fire below surfaces unknown
- Fires below surfaces and smoke likely will continue until extinguished
- New fires remain a concern – Improved landfill management is KEY



10



## BACKGROUND

Air quality testing has been performed

- Smoke/Fumes from landfill “vents” can contain chemicals of potential health concern
- Byproducts of waste burning or incineration and typical landfill gases



11



## BACKGROUND

Results of preliminary air monitoring

- Smoke/fumes on landfill at vents did contain chemicals
- Risk of potential exposure to chemicals in smoke/fumes may increase during fire suppression
- Odors are nuisances but may not correspond with health risks
- Perimeter monitoring by RIVM (Dutch Institute Environmental Agency) did not show levels of chemicals above health-based comparison criteria

12



## BACKGROUND

### Conclusions of preliminary air monitoring

- As long as fires remain, potential for smoke/fumes will continue
- Workers on landfill should minimize exposure to smoke/fumes and dust and wear protective equipment
- Air sampling results may not be the same during fire suppression activity – Perimeter/community levels may change

13



## ACTIVITY DESCRIPTION

### Fire Suppression Activity

- Extinguish burning waste, may use multiple approaches
  - Water
  - Foam
  - Grout
  - Oxygen starvation



14





## ACTIVITY DESCRIPTION

### Possible Fire Suppression Activities

- Excavation/quenching of smoldering wastes may be necessary
- Smoke/dust emissions control a priority – some approaches result in more or different emissions than others



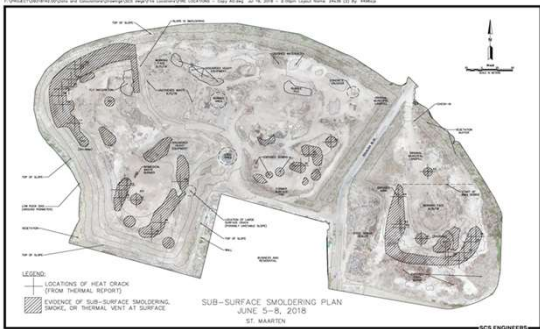
15



## ACTIVITY DESCRIPTION

### Fire suppression mitigation measures

- Air monitoring will be performed at boundaries of work zones
- Work will be stopped if air monitoring demonstrates risk offsite or wind direction warrants



16



## SCOPE OF THE ESIA

### Environmental and Social Impact Assessment (ESIA)

- How will project affect community and environment?
- Review existing conditions
- Evaluate potential impacts of fire suppression
- Recommend safety zones during work
- Recommend air monitoring program
  - Workers, landfill
  - Perimeter of work areas
  - Community, schools, hospital, government buildings

17



## ESH&S RISKS AND IMPACTS

### Environmental, social, health and safety risks – dust and chemicals of concern

- Emissions/Air Quality
- Storm Water and Runoff to Great Salt Pond
- Groundwater/Leachate/Surface Water/Sediment
- Impacts to Aquatic and Land Ecosystems
- Expected to Persist as Long as Fires Remain
- May Increase During Fire Suppression



18



## ESH&S RISKS AND IMPACTS

### Health and safety risks

- Worker (including salvagers and recyclers) Health & Safety – burns, struck by equipment, slips, trips and falls, exposure to constituents of concern, improper hygiene
- Community health risks - potential exposure from emissions/dust



19



## ESH&S RISKS AND IMPACTS

### Other environmental, social, health and safety risks and impacts:

- Mobilization of large equipment may affect traffic
- Fire suppression may temporarily affect waste acceptance at landfill and employees/salvagers work schedules
- Location and methods of fire suppression may impact adjacent communities (residents, employees and businesses) and relocation/evacuation may be considered



20



NRPB  
NATIONAL RECOVERY  
PROGRAM BUREAU

## PRELIMINARY AREA TO BE EVACUATED



21



NRPB  
NATIONAL RECOVERY  
PROGRAM BUREAU

## GROUP DISCUSSION

Questions to Consider :

1. What are your most significant concerns about the project?
2. Did we miss potential risks, other than those identified?
3. Suggestions on keeping stakeholders informed on project activities



## GROUP DISCUSSION

What will be done with your feedback:

- All feedback is recorded and taken into account
- Discuss with the project team: analysis: Applicability, Viability, and Adjust
- Inputs will be incorporated and discussed in second consultation (date to be decided). Second consultation will present mitigation measures and seek stakeholders input



## NEXT STEPS

Period for further feedback on the presentation is 2 weeks from Disclosure on Website. **Deadline:** 10 July 2019 12h00 AST

**How:**

- By Email To: [landfillproject@nrpbsxm.org](mailto:landfillproject@nrpbsxm.org)
- Drop Off Comments to Mailbox at NRPB Office, #57 W.A. Nisbeth Road, next Carl & Sons

NRPB Has Developed a Grievance Redress Mechanism (Complaint Procedure) available at [www.nrpbsxm.org](http://www.nrpbsxm.org)



NEXT STEPS

**THANK YOU FOR PARTICIPATING**

**YOUR INPUT IS GREATLY APPRECIATED!**