

# Environmental Compliance Update

## Francis Farm Landfill

### Haywood County, North Carolina

June 2017



October 2015 Aerial

# Landfill History

- ▶ Francis Farm Landfill (FFLF)  
Accepted Waste from 1973 to 1993 and was Closed in 1995
- ▶ County Required to Maintain Closed Landfill (Post Closure Care)

# What's Post Closure Care?

- ▶ Landfill Gas (Methane) Monitoring
- ▶ Groundwater & Surface Water Monitoring
- ▶ Facility Maintenance
  - ▶ Stormwater Management
  - ▶ Soil Cap (cover over waste)
  - ▶ Roads and Access
  - ▶ Sediment and Erosion Control

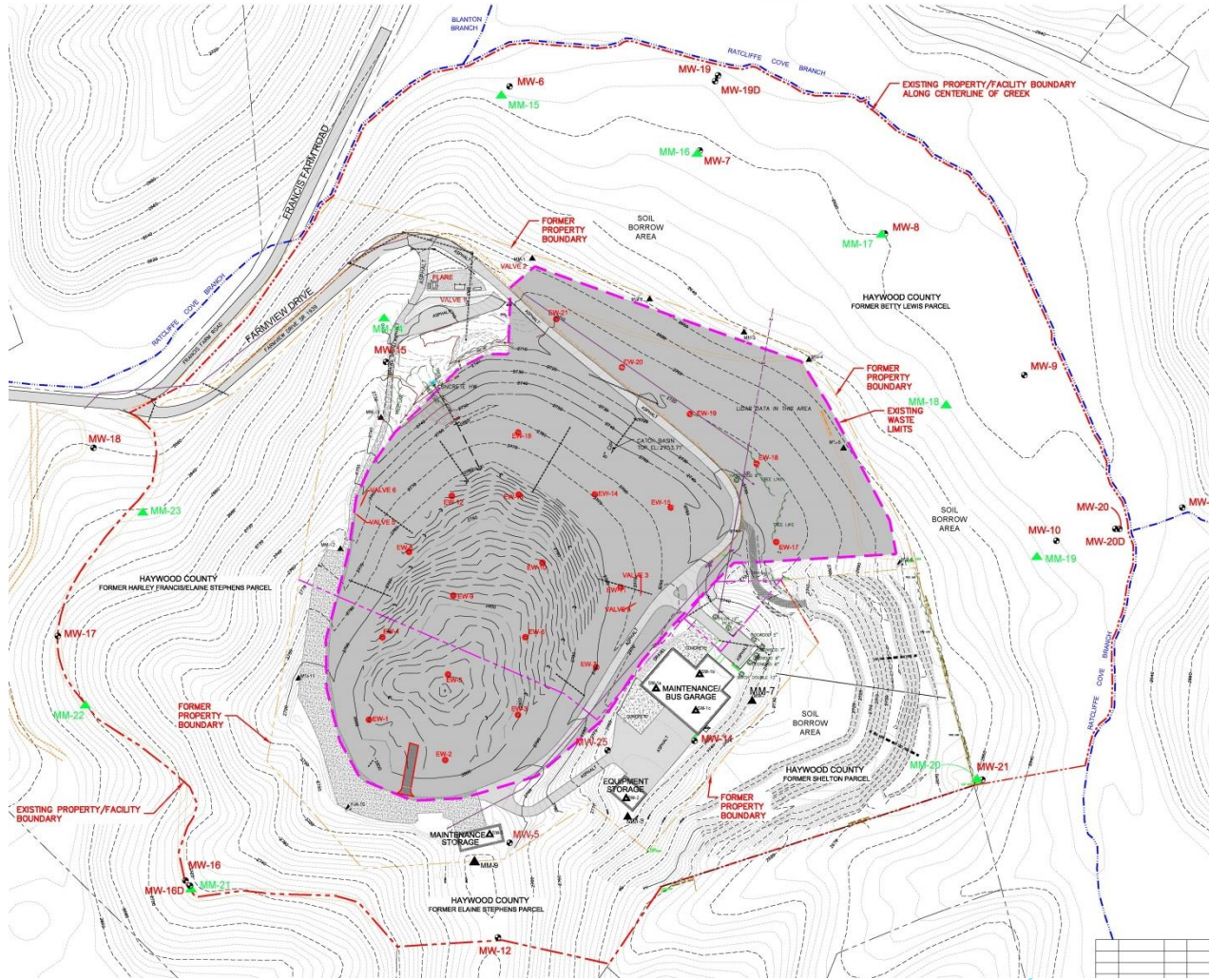
# What were/are the Environmental Compliance Problems?

- ▶ Landfill Gas Concentrations Exceed Limits under NCDEQ Rules
- ▶ Groundwater Contaminants Exceed Limits under NCDEQ Rules

# Landfill Gas Compliance

- ▶ Expand Facility Boundary by Purchase of Properties Surrounding Landfill
- ▶ New Landfill Gas Monitoring Plan Approved
- ▶ New Landfill Gas Monitoring Wells Installed
- ▶ Landfill Gas Recovery System Operational
- ▶ Facility is in Compliance for Landfill Gas

# New Facility Map



# Groundwater Compliance

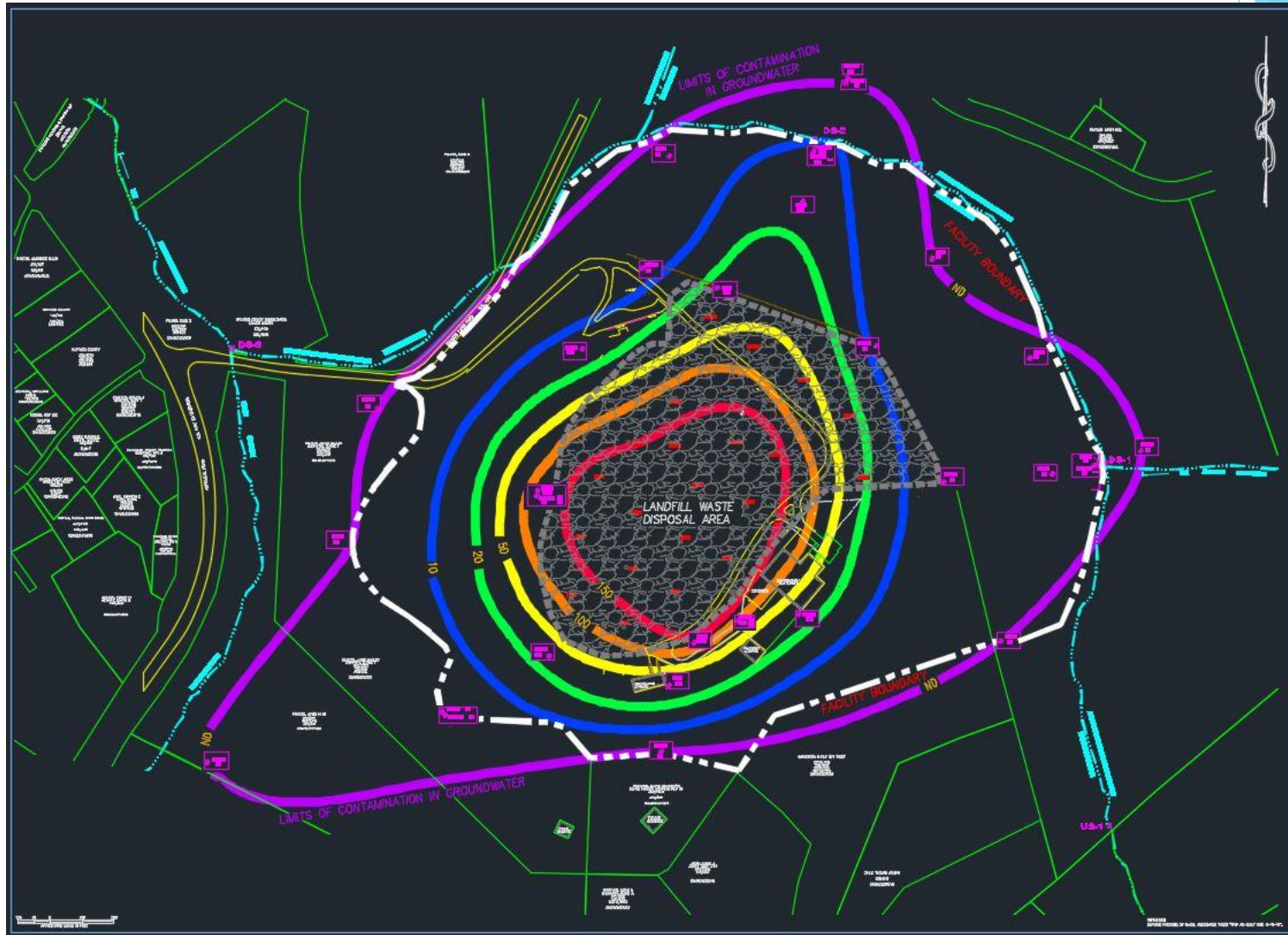
- ▶ Assess Extent of Groundwater Impacts
- ▶ Identify Remedies in a Report
- ▶ Public Meeting to Discuss the Report
- ▶ Select Remedies & Prepare a Plan
- ▶ Implement the Plan
- ▶ Facility Returns to Compliance for Groundwater

## Where Are We in the Process?

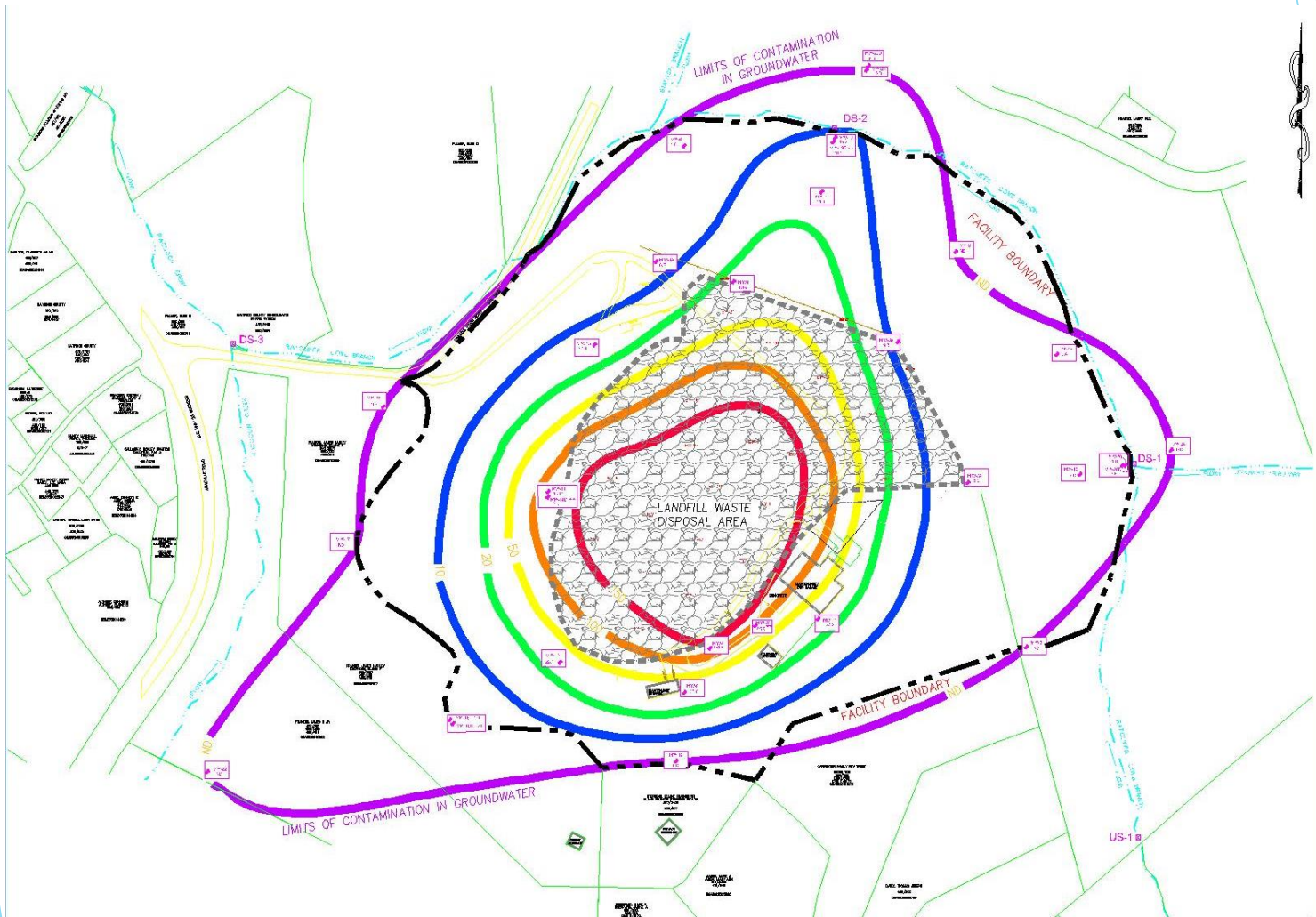
- ▶ Groundwater Assessment Complete
- ▶ Remedy Report Submitted & Conditionally Approved by NCDEQ
- ▶ Public Meeting (Pending)
- ▶ Select Remedies & Prepare a Plan (Pending)
- ▶ Implement the Plan (Pending)
- ▶ Return to Compliance (Pending)



# Groundwater Plume Map



# Groundwater Plume Map



# What “Remedies” are Proposed?

- ▶ Control of Contaminant Sources
  - ▶ Landfill Gas Mitigation (System)
  - ▶ Leachate Mitigation (Restrictive Cover)
- ▶ Natural Attenuation of Groundwater
- ▶ Active Groundwater Remediation as a Contingency Only

# What are Our Next Steps?

- ▶ Conduct Public Meeting
  - ▶ Modify Remedy Report (if needed)
  - ▶ Formally Select Remedies
- ▶ Prepare a Corrective Action Plan (CAP)
- ▶ Continue Landfill Gas and Groundwater & Surface Water Monitoring

# What's Included in the CAP?

- ▶ Design of Restrictive Cover
  - ▶ Geotechnical Engineering
  - ▶ Detailed Design Plan
- ▶ Technical Specifications
- ▶ Facility Monitoring Plan
- ▶ Schedule of Implementation
- ▶ Contingency Plan
- ▶ Compliance Plan

# What's after CAP Approval?

- ▶ Implementation of Remedies
  - ▶ Bid Package for Cover Installation
  - ▶ Select Contractor
  - ▶ Install Cover
  - ▶ Modify & Operate Gas System
  - ▶ Monitor Landfill Gas, Leachate, Groundwater & Surface Water
  - ▶ Evaluate Effectiveness

# What Contracts Need Approval?

- ▶ Services by McGill, BLE & Shealy
  - ▶ Public Meeting Assistance
  - ▶ Finalize Remedy Report and Formally Select Remedies
  - ▶ Prepare CAP for NCDEQ Approval
  - ▶ Prepare Bid Packages after CAP
  - ▶ Conduct Semi-Annual Sampling
  - ▶ Continue Compliance Reporting

# Schedule?

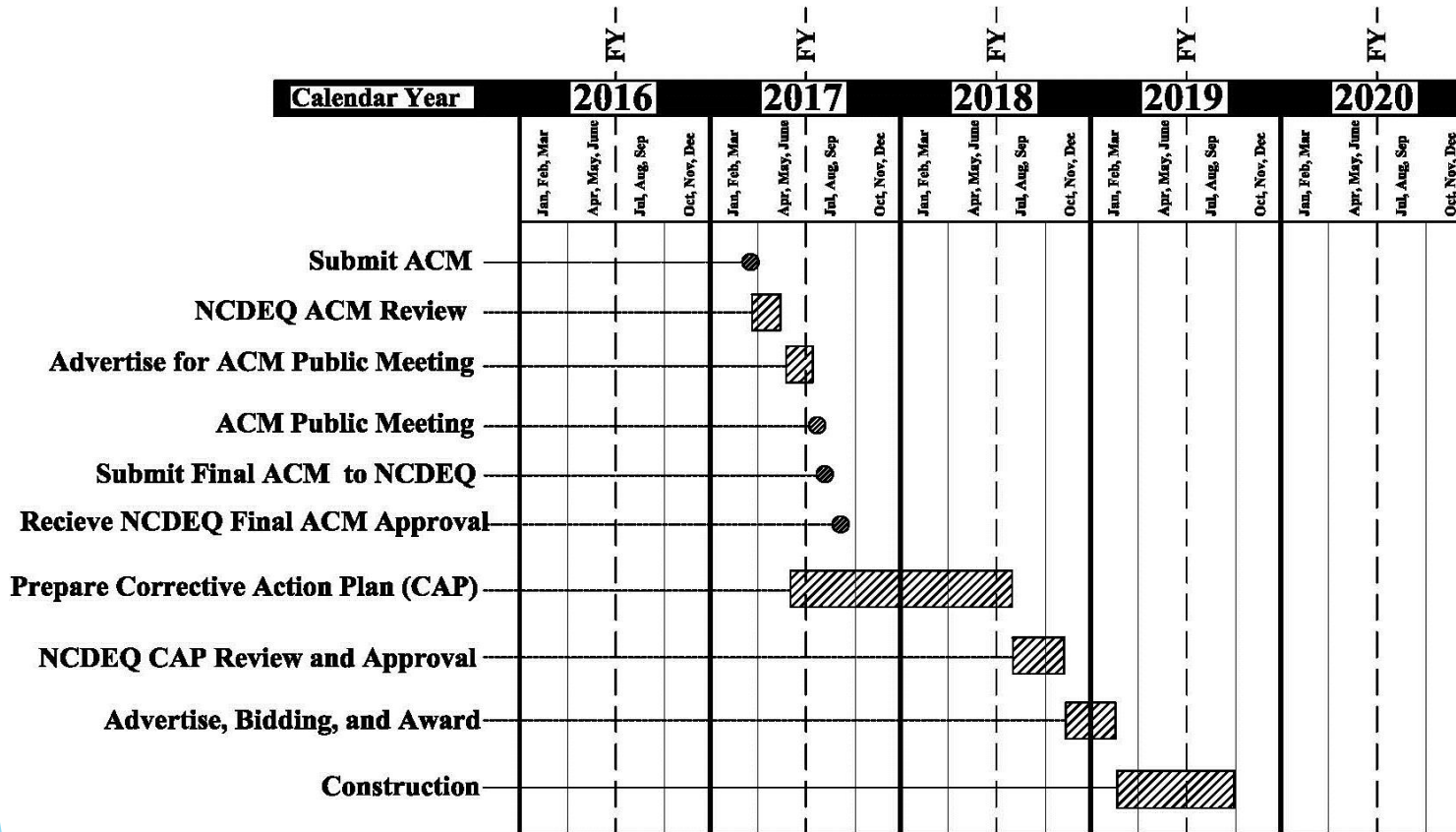
- ▶ Public Meeting Date
- ▶ Finalize Remedy Report
- ▶ and Formally Select Remedies
- ▶ Prepare CAP for NCDEQ Approval
- ▶ Prepare Bid Packages after CAP
- ▶ Conduct Semi-Annual Sampling
- ▶ Continue Compliance Reporting



## Cost and How is it Funded?

- ▶ \$5,000,000 projected cost
- ▶ Availability Fee was raised in 2015 in anticipation of beginning the project sometime in 2018 or 2019
- ▶ Funds will come from the Solid Waste Fund Balance

# CAP Implementation Schedule



# Conceptual Plan

