



Geotechnical findings for the South Magnolia CSO Control Project

Geotechnical investigations

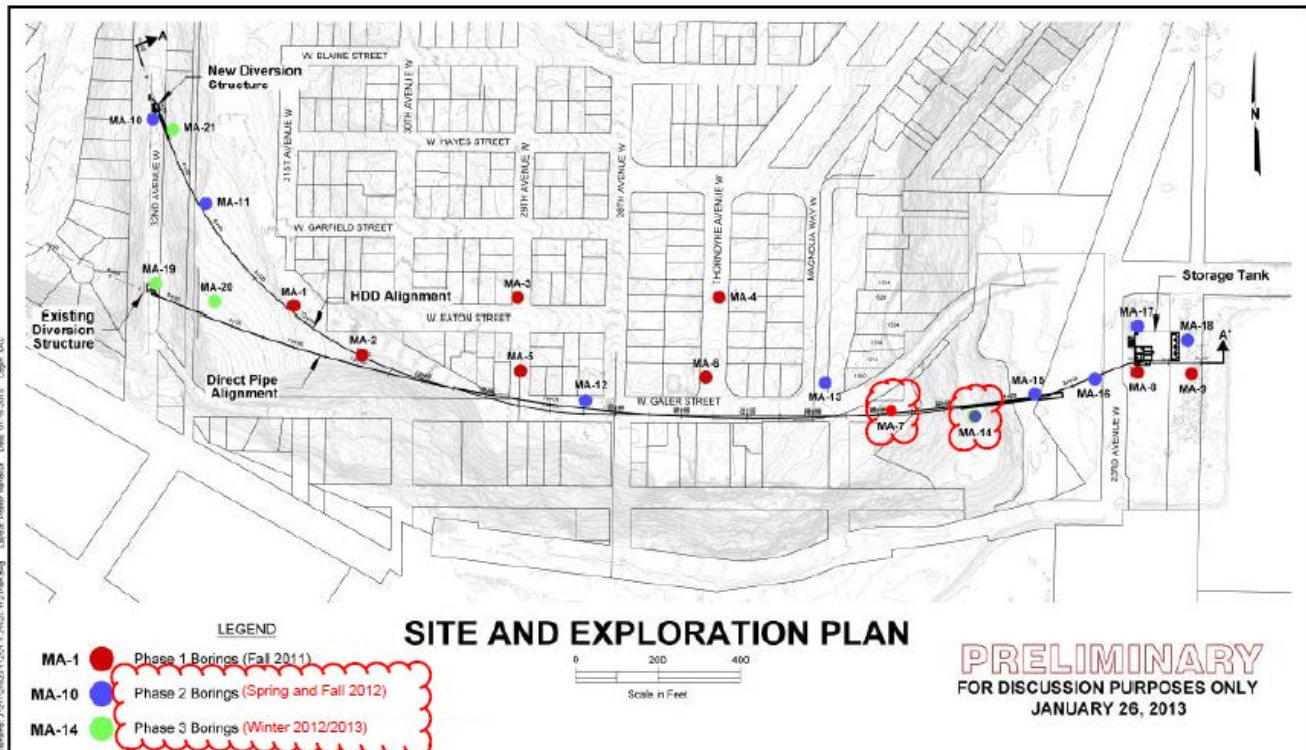
Starting in the fall of 2011, King County began conducting the first of three phases of geotechnical investigations as part of the South Magnolia CSO Control Project. Geotechnical conditions confirmed that soils are suitable for the proposed installation methods.

A total of twenty one borings have been drilled and sampled (see graphic below):

- Nine borings in the first phase
- Nine borings in the second phase
- Three borings in the third phase.

Information was also used from past geotechnical investigations, including:

- Magnolia bridge replacement
- Dames & Moore horizontal groundwater drains
- Evaluation of the 1968, 1969, 1983-1987, and 1997 landslides
- Information from residents



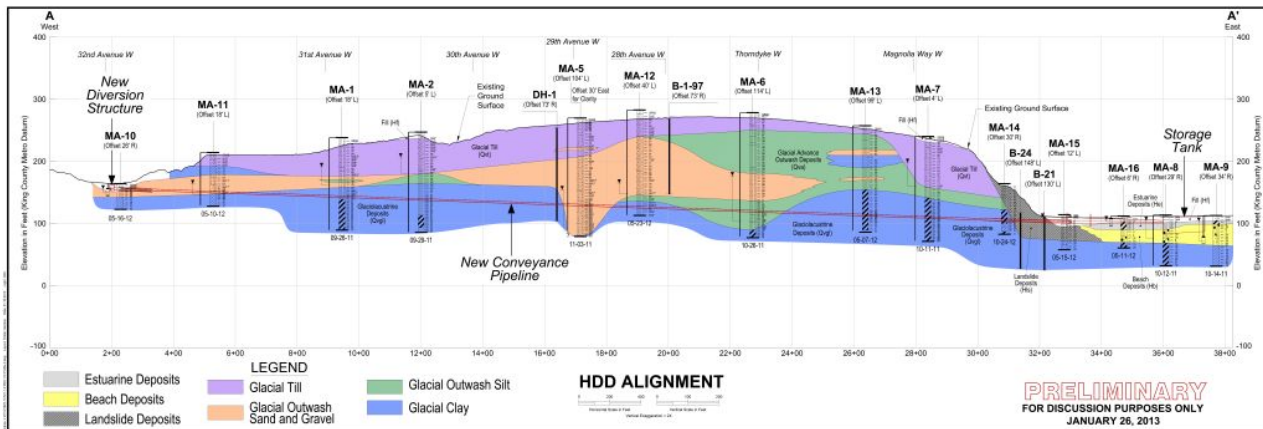


Results of geotechnical investigations

Results indicate that both alignments are suitable for pipeline installation (see graphics below for HDD alignment). Both alignments have:

- Very dense and hard, glacially consolidated materials
- Typical soils for this region , in which many utility pipelines have been installed
- Good soils for the proposed Horizontal Directional Drilling and Direct Pipe® methods

Many successful projects have been completed in these types of soils.



To view a larger version of the above graphic, visit the library page of the project website.

Geologic monitoring

King County is monitoring groundwater elevation and ground movement in the South Magnolia CSO Control Project area. Piezometers and inclinometers were installed at selected boring locations. Initial readings were taken in October 2011 through December 2012. Readings will be performed seasonally during design. Readings will be performed prior to, during and after pipeline installation.

For more information:

Visit the project website:

[www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnolia CSOStorage](http://www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnolia%20CSOStorage)

Hard copies available upon request.

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