

SOIL ASSOCIATIONS CROSSED BY SPARROWS POINT PROJECT

MARYLAND

SOIL ASSOCIATIONS

MAP UNIT ID	SOIL ASSOCIATION OR COMPLEX
MD002	BELTSVILLE-CROOM-LEONARDTOWN
MD005	OTHELLO-ELKTON-MATTAPEX
MD007	SUNNYSIDE-CHRISTIANA-MUIRKIRK
MD011	MANOR-GLENELG-CHESTER
MD029	NESHAMINY-LEHIGH-GLENELG
MD030	CHROME-CONOWINGO-NESHAMINY

PENNSYLVANIA

SOIL ASSOCIATIONS

MAP UNIT ID	SOIL ASSOCIATION OR COMPLEX
PA058	CHROME-CONOWINGO-NESHAMINY
PA061	CHESTER-GLENELG-MANOR
PA066	HAGERSTOWN-DUFFIELD-CLARKSBURG
PA086	EDGEMONT-HIGHFIELD-BUCHANAN

SUMMARY OF HIGHLY ERODIBLE LAND BY SOILS SERIES

BALTIMORE COUNTY

BtC2	Beltsville silt loam, 5 to 10 percent slopes, moderately eroded
CcC2	Chester silt loam, 8 to 15 percent slopes, moderately eroded
CkC2	Chillum-Neshaminy silt loams, 5 to 10 percent slopes, moderately eroded
CkD2	Chillum-Neshaminy gravelly silt loams, 10 to 15 percent slopes, moderately eroded
CmC2	Christiana loam, 5 to 10 percent slopes, moderately eroded
EsC2	Elsinboro loam, 8 to 15 percent slopes, moderately eroded
GaC	Galestown loamy sand, 5 to 10 percent slopes
JpB	Joppa gravelly sandy loam, 2 to 5 percent slopes
JpC2	Joppa gravelly sandy loam, 5 to 10 percent slopes, moderately eroded
LeB2	Legore silt loam, 3 to 8 percent slopes, moderately eroded
LeC2	Legore silt loam, 8 to 15 percent slopes, moderately eroded
LeD2	Legore silt loam, 15 to 25 percent slopes, moderately eroded
LfD	Legore very stony silt loam, 15 to 25 percent slopes
LfE	Legore very stony silt loam, 25 to 45 percent slopes
LgC3	Legore silty clay loam, 8 to 15 percent slopes, severely eroded
LgD3	Legore silty clay loam, 15 to 25 percent slopes, severely eroded
LnC3	Lenoir silty clay loam, 5 to 12 percent slopes, severely eroded
LyD	Loamy and clayey land, 5 to 15 percent slopes
LyE	Loamy and clayey land, 15 to 40 percent slopes
MkB	Matapeake silt loam, 2 to 5 percent slopes
MsB2	Montalto silt loam, 3 to 8 percent slopes, moderately eroded
NeB2	Neshaminy silt loam, 3 to 8 percent slopes, moderately eroded
NeC2	Neshaminy silt loam, 8 to 15 percent slopes, moderately eroded
ShC2	Sassafras sandy loam, 5 to 10 percent slopes, moderately eroded
ShC3	Sassafras sandy loam, 5 to 10 percent slopes, severely eroded
ShD2	Sassafras sandy loam, 10 to 15 percent slopes, moderately eroded
SiC2	Sassafras loam, 5 to 10 percent slopes, moderately eroded
SsE	Sassafras and Joppa soils, 15 to 30 percent slopes
St	Stony land, steep
WaB	Watchung silt loam, 3 to 8 percent slopes

CECIL COUNTY

CmC2	Chrome silt loam, 8 to 15 percent slopes, moderately eroded
CnD3	Chrome clay loam, 8 to 25 percent slopes, severely eroded
GnC2	Glenville silt loam, 8 to 15 percent slopes, moderately eroded
LeC2	Legore silt loam, 8 to 15 percent slopes, moderately eroded
LeD2	Legore silt loam, 15 to 25 percent slopes, moderately eroded
LgE3	Legore silty clay loam, 15 to 45 percent slopes, severely eroded
MtC2	Montalto silt loam, 8 to 15 percent slopes, moderately eroded
MyC3	Montalto silty clay loam, 8 to 15 percent slopes, severely eroded
NeC2	Neshaminy silt loam, 8 to 15 percent slopes, moderately eroded
St	Stony land

HARFORD COUNTY

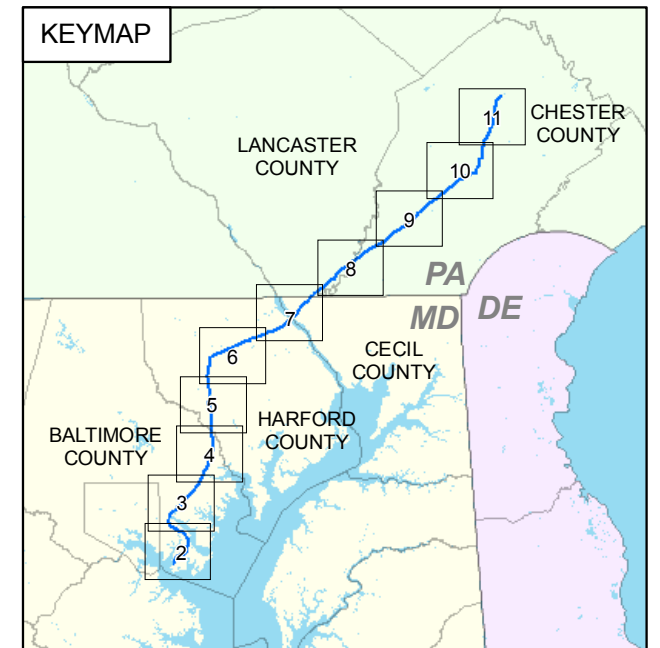
AdB	Aldino silt loam, 3 to 8 percent slopes
BrC2	Brandywine gravelly loam, 8 to 15 percent slopes, moderately eroded
BrD3	Brandywine gravelly loam, 15 to 25 percent slopes, severely eroded
BrE3	Brandywine gravelly loam, 25 to 45 percent slopes, severely eroded
CcB2	Chester silt loam, 3 to 8 percent slopes moderately eroded
CcC2	Chester silt loam, 8 to 15 percent slopes moderately eroded
CgB2	Chester gravelly silt loam, 3 to 8 percent slopes moderately eroded
CrE	Chrome channery silty clay loam, 15 to 45 percent slopes
DcB	Delanco silt loam, 3 to 8 percent slopes
EsC2	Elsinboro loam, 5 to 10 percent slopes, moderately eroded
GcC2	Glenelg loam, 8 to 15 percent slopes moderately eroded
GcD2	Glenelg loam, 15 to 25 percent slopes, moderately eroded
GgC2	Glenelg gravelly loam, 8 to 15 percent slopes, moderately eroded
GnB	Glenville silt loam, 3 to 8 percent slopes
KeB	Kelly silt loam, 3 to 8 percent slopes
KeC2	Kelly silt loam, 8 to 15 percent slopes, moderately eroded
LeB2	Legore silt loam, 3 to 8 percent slopes moderately eroded
LeC2	Legore silt loam, 8 to 15 percent slopes, moderately eroded
LeD2	Legore silt loam, 15 to 25 percent slopes, moderately eroded
LfD	Legore very stony silt loam, 15 to 25 percent slopes
LfE	Legore very stony silt loam, 25 to 45 percent slopes
LgC3	Legore silty clay loam, 8 to 15 percent slopes, severely eroded
LgD3	Legore silty clay loam 15 to 25 percent slopes, severely eroded
MbB2	Manor loam, 3 to 8 percent slopes, moderately eroded
MbC2	Manor loam, 8 to 15 percent slopes, moderately eroded
MbC3	Manor loam, 8 to 15 percent slopes, severely eroded
MbD2	Manor loam, 15 to 25 percent slopes, moderately eroded
MbD3	Manor loam, 15 to 25 percent slopes, severely eroded
McB2	Manor channery loam, 3 to 8 percent slopes moderately eroded
McC2	Manor channery loam, 8 to 15 percent slopes, moderately eroded
McD2	Manor channery loam, 15 to 25 percent slopes moderately eroded
McD3	Manor channery loam, 15 to 25 percent slopes, severely eroded
MeE	Manor very stony loam, 25 to 45 percent slopes
MfE	Manor soils, 25 to 45 percent slopes
MgD	Manor and Glenelg very stony loams, 15 to 25 percent slopes
MsB2	Montalto silt loam, 3 to 8 percent slopes, moderately eroded
MsC2	Montalto silt loam, 8 to 15 percent slopes, moderately eroded
NeB2	Neshaminy silt loam, 3 to 8 percent slopes, moderately eroded
NeC2	Neshaminy silt loam, 8 to 15 percent slopes, moderately eroded
NsD	Neshaminy and Montalto very stony silt loams, 15 to 25 percent slopes
NsE	Neshaminy and Montalto very stony silt loams, 25 to 45 percent slopes
WaB	Watchung silt loam, 3 to 8 percent slopes

LANCASTER COUNTY

CbC	Chester silt loam, 8 to 15 percent slopes
GbC	Glenelg silt loam, 8 to 15 percent slopes
GbD	Glenelg silt loam, 15 to 25 percent slopes
MaC	Manor silt loam, 8 to 15 percent slopes
MaD	Manor silt loam, 15 to 25 percent slopes
MbF	Manor very stony silt loam, 25 to 60 percent slopes

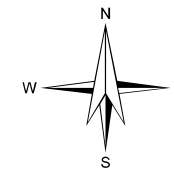
CHESTER COUNTY

CtC	Conestoga silt loam, 8 to 15 percent slopes
EdC	Edgemont channery loam, 8 to 15 percent slopes
EdD	Edgemont channery loam, 15 to 25 percent slopes
ExF	Edgemont channery sandy loam, 25 to 60 percent slopes, extremely stony
GdC	Gladstone gravelly silt loam, 8 to 15 percent slopes
GdD	Gladstone gravelly silt loam, 15 to 25 percent slopes
GfD	Gladstone gravelly silt loam, 8 to 25 percent slopes, very bouldery
GfF	Gladstone gravelly silt loam, 25 to 55 percent slopes, very bouldery
GgC	Glenelg silt loam, 8 to 15 percent slopes
GgD	Glenelg silt loam, 15 to 25 percent slopes



REFERENCES:

- STATE SOIL GEOGRAPHIC (STATSGO) DATABASE FOR MARYLAND, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1994.
- STATE SOIL GEOGRAPHIC (STATSGO) DATABASE FOR PENNSYLVANIA, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, 1994.
- SOIL SURVEY TABULAR DATABASE FOR BALTIMORE COUNTY, MARYLAND, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, DECEMBER 2005.
- SOIL SURVEY TABULAR DATABASE FOR HARFORD COUNTY AREA, MARYLAND, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, DECEMBER 2005.
- SOIL SURVEY TABULAR DATABASE FOR CECIL COUNTY, MARYLAND, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, DECEMBER 2005.
- SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR LANCASTER COUNTY, PENNSYLVANIA, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, APRIL 2004.
- SOIL SURVEY TABULAR DATABASE FOR CHESTER COUNTY, PENNSYLVANIA, UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, DECEMBER 2004.



ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERC SUBMITTAL PRE-FILING	H&A



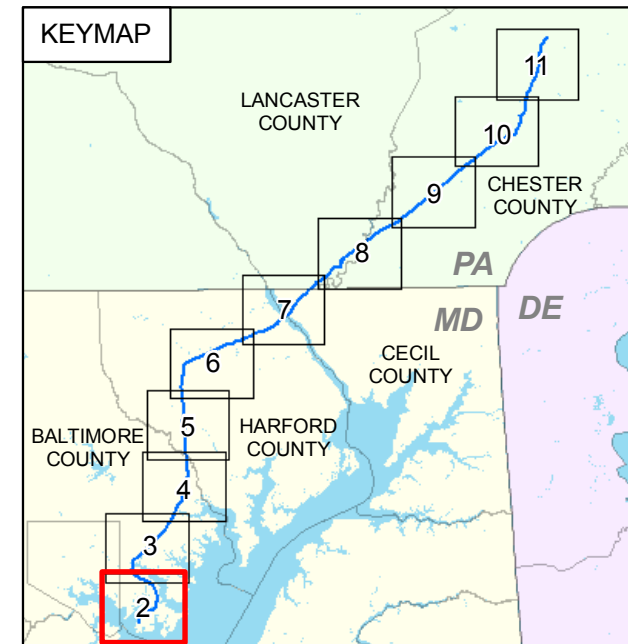
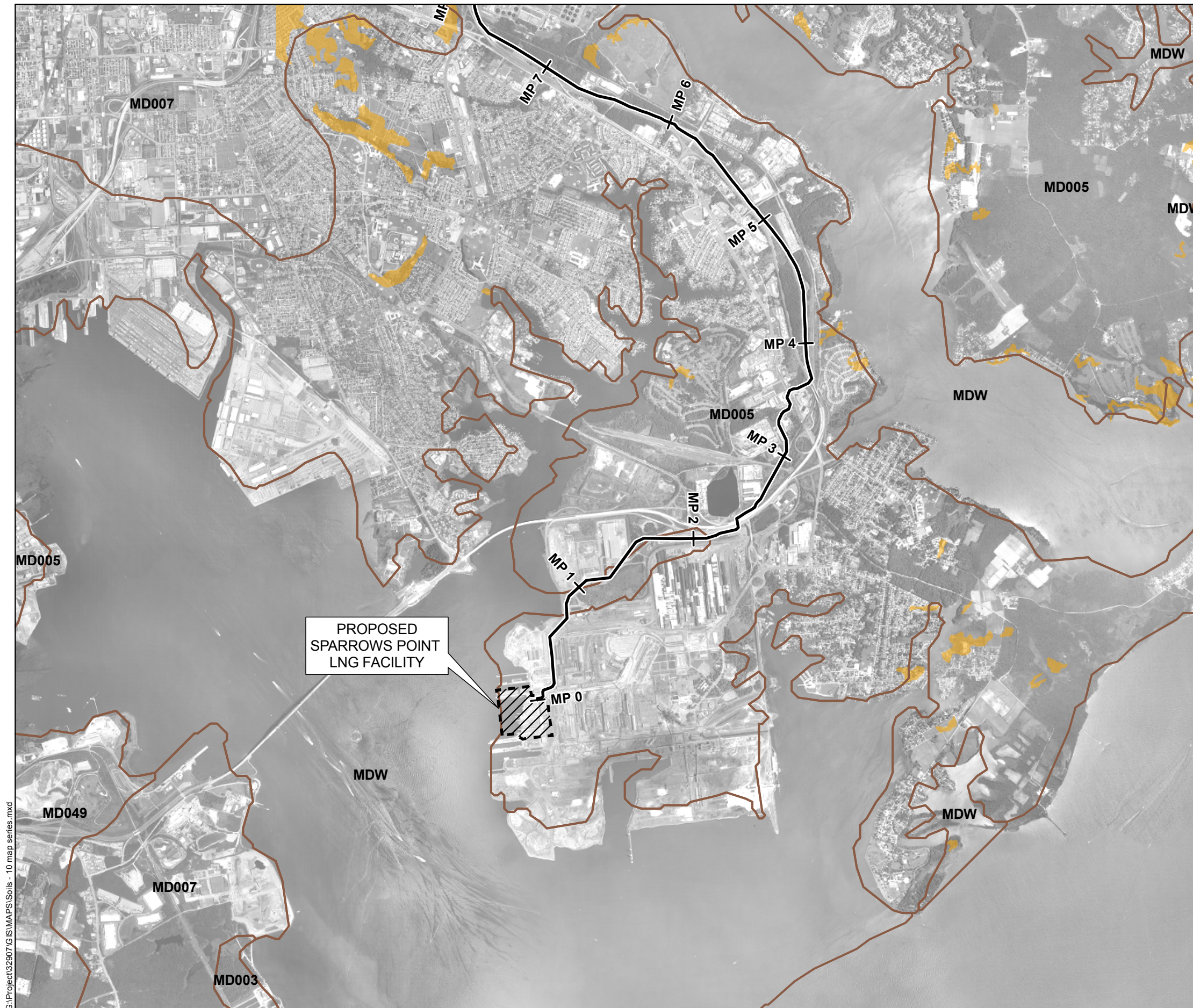
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 - 1

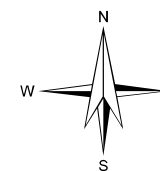


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



0 2,000 4,000 6,000 FEET

ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERCC SUBMITTAL PRE-FILING	H&A



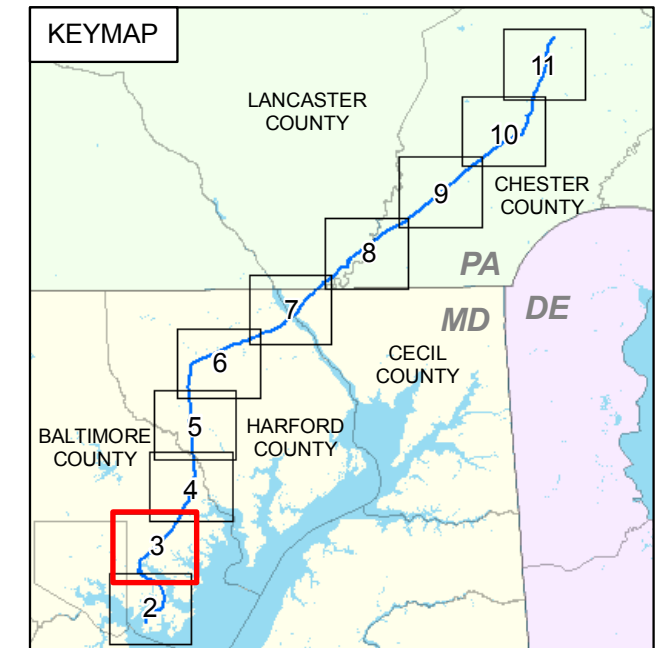
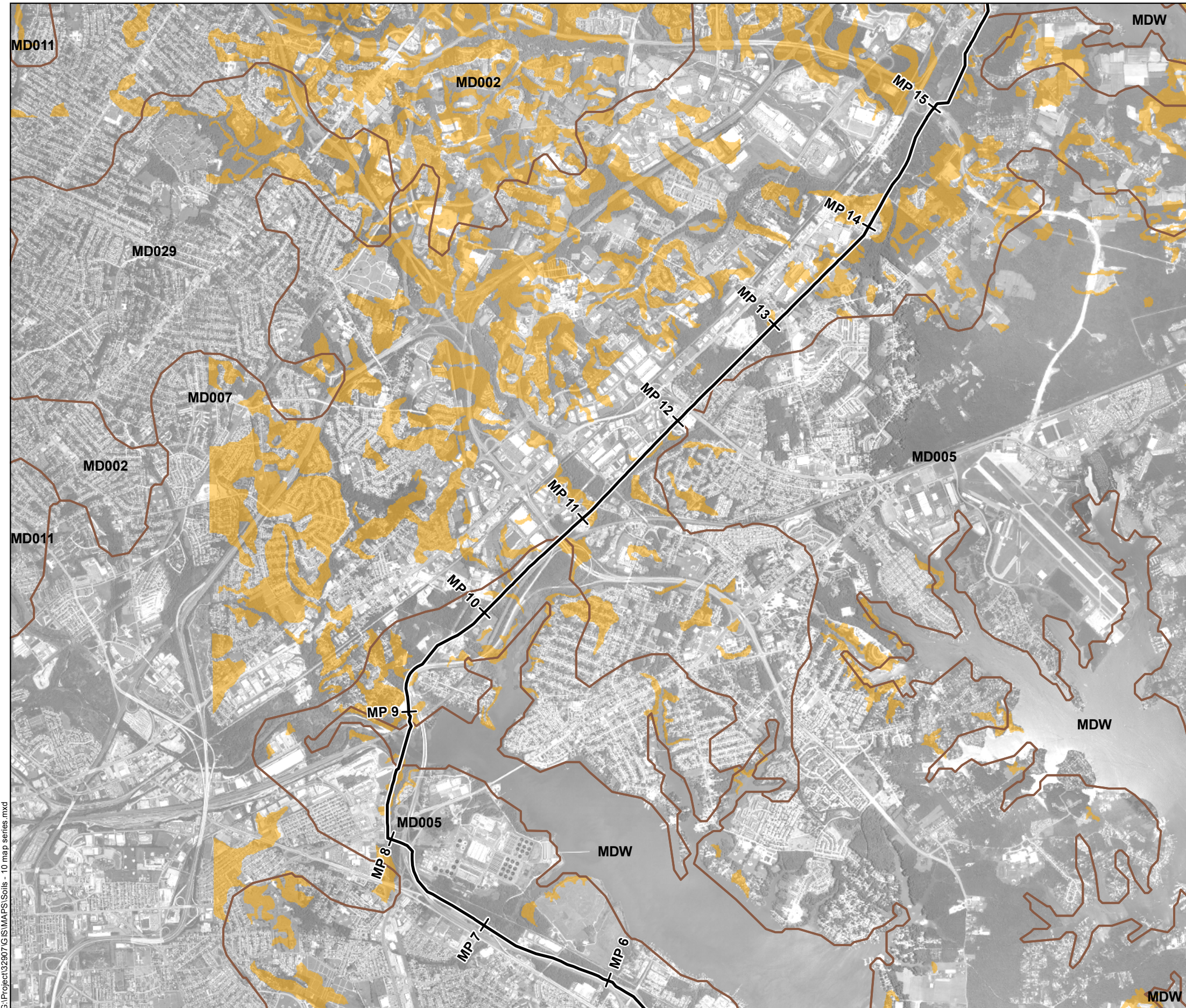
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT





PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

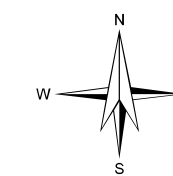


LEGEND

-  MID-ATLANTIC EXPRESS PIPELINE
-  MILEPOST MARKER
-  SOILS ASSOCIATION BOUNDARY
-  HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM:
NRCS, 2006.



0 2,000 4,000 6,000 FEET

ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERC SUBMITTAL PRE-FILING	H&A

G:\Project\32907 GIS\MAPS\Soils - 10 map series.mxd



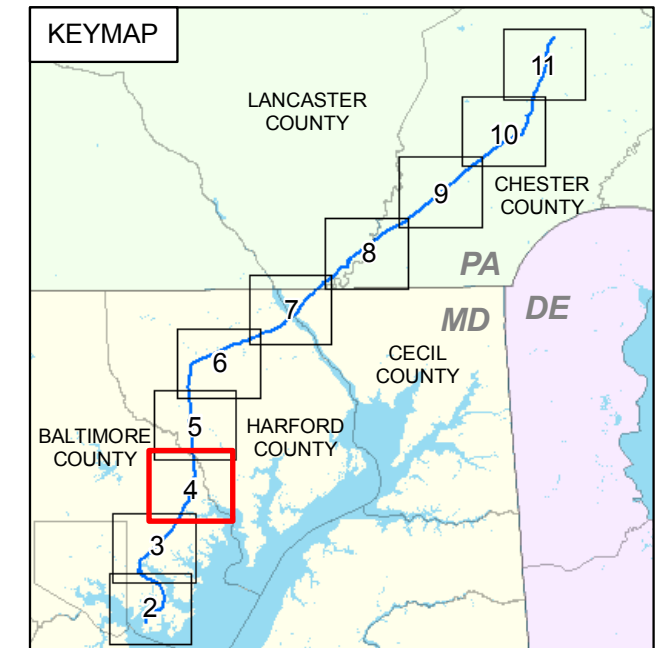
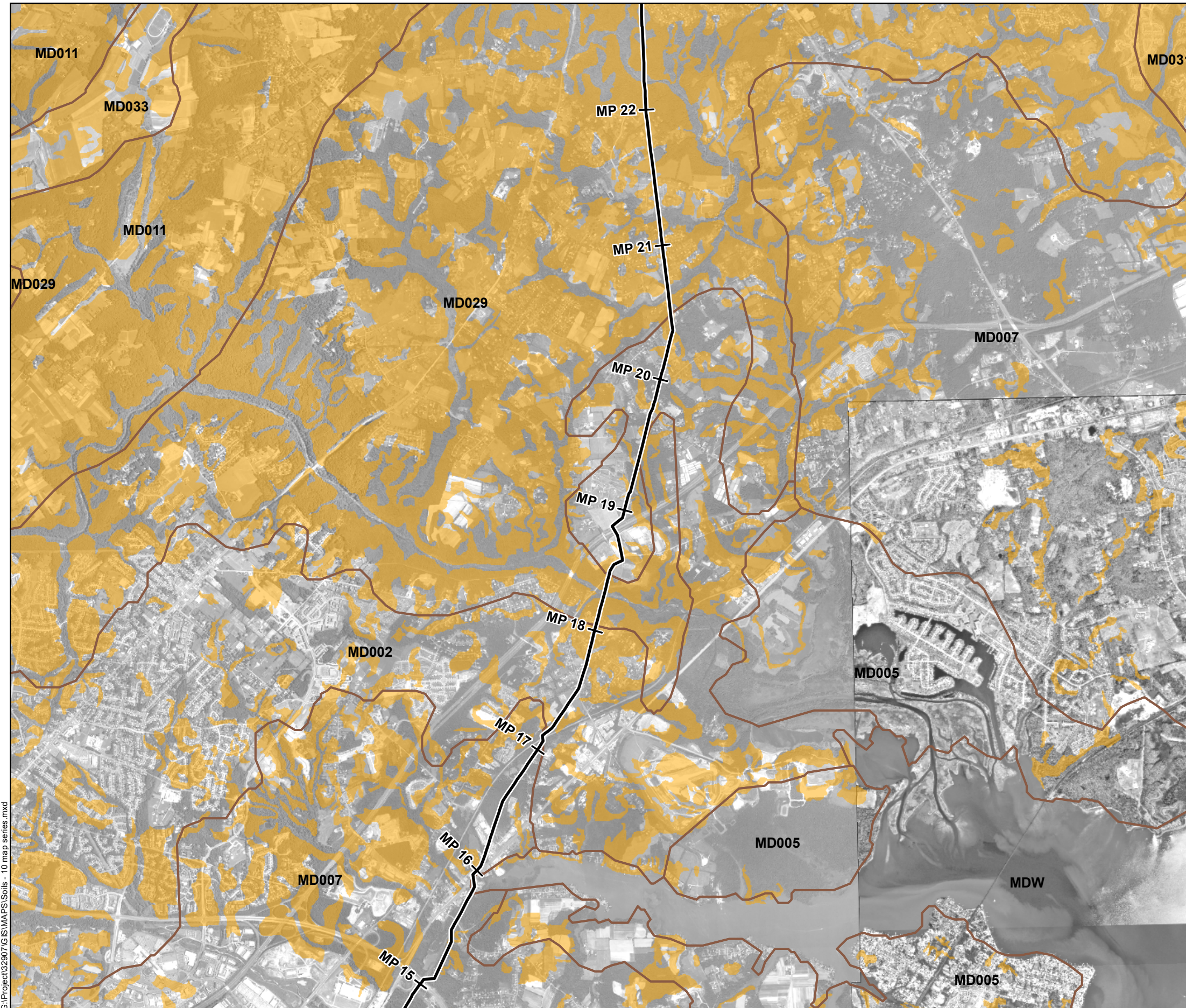
PREPARED BY:
HALEY & ALDRICH

MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

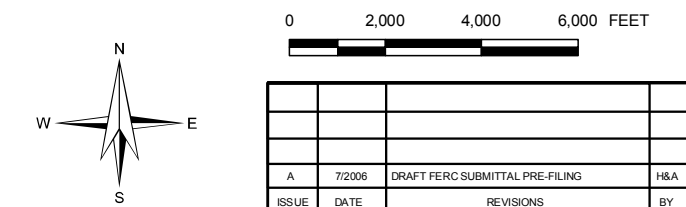


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

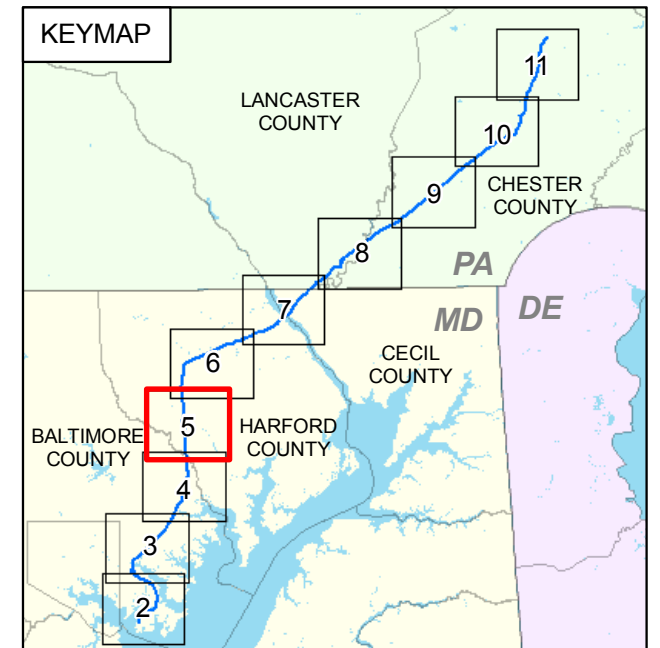
SOILS - SPARROWS POINT PROJECT

PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd

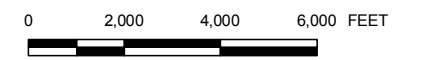
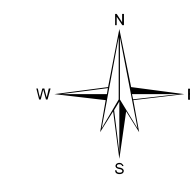


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERCC SUBMITTAL PRE-FILING	H&A



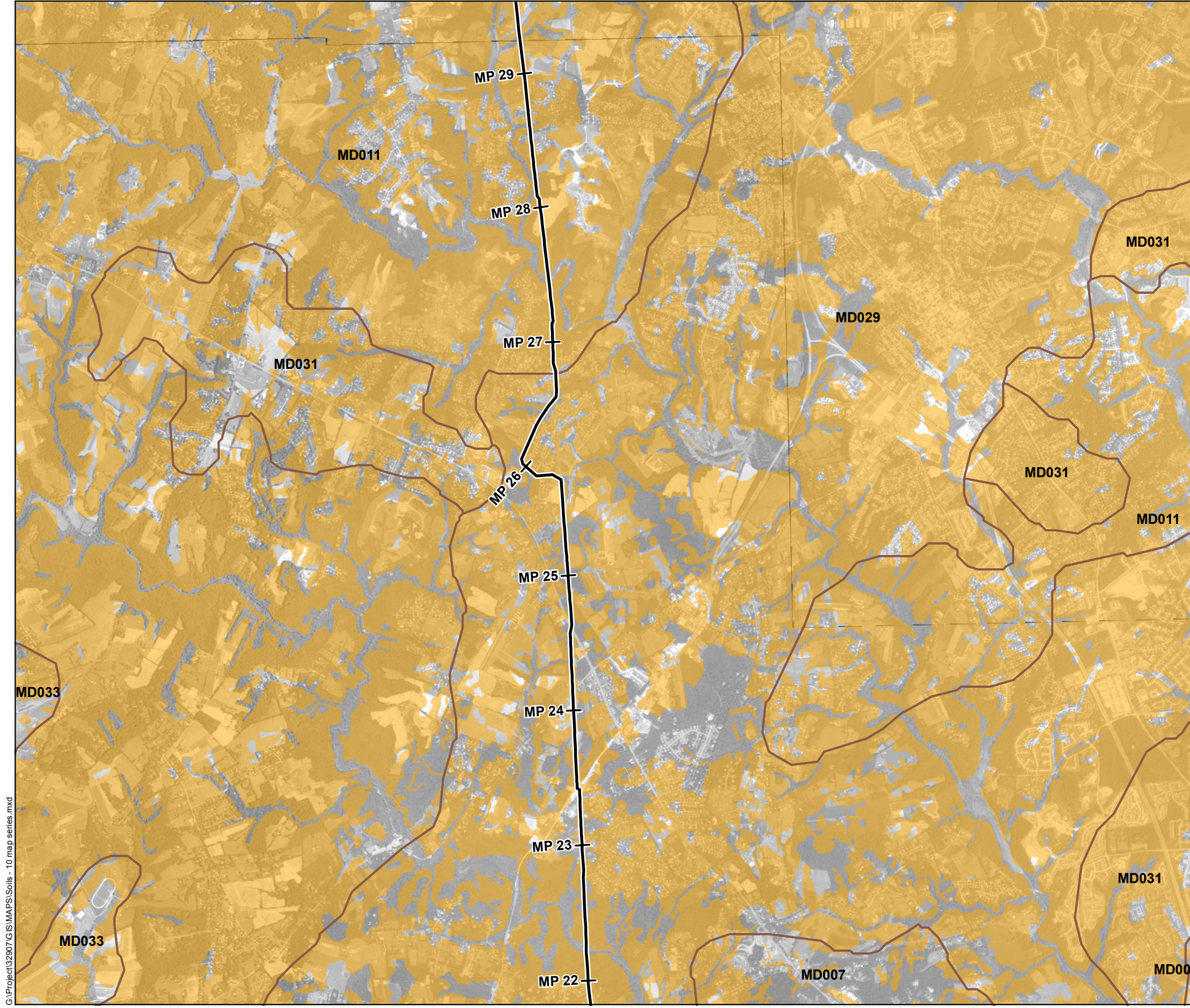
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

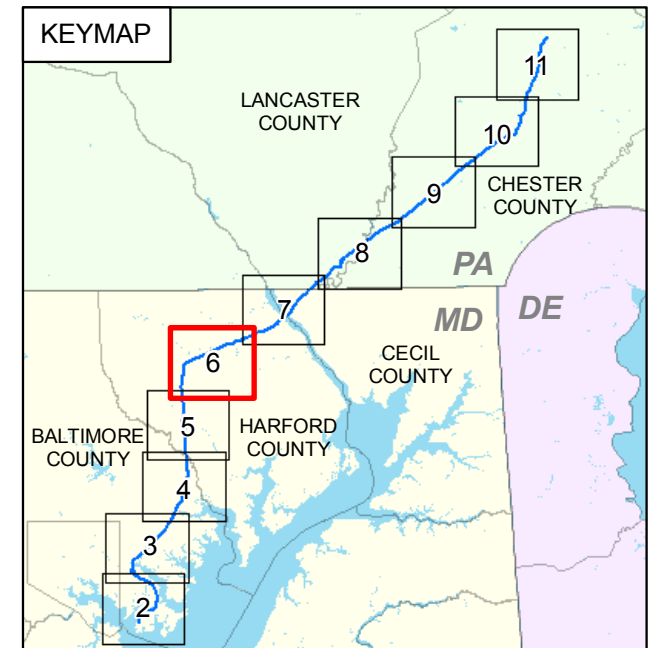
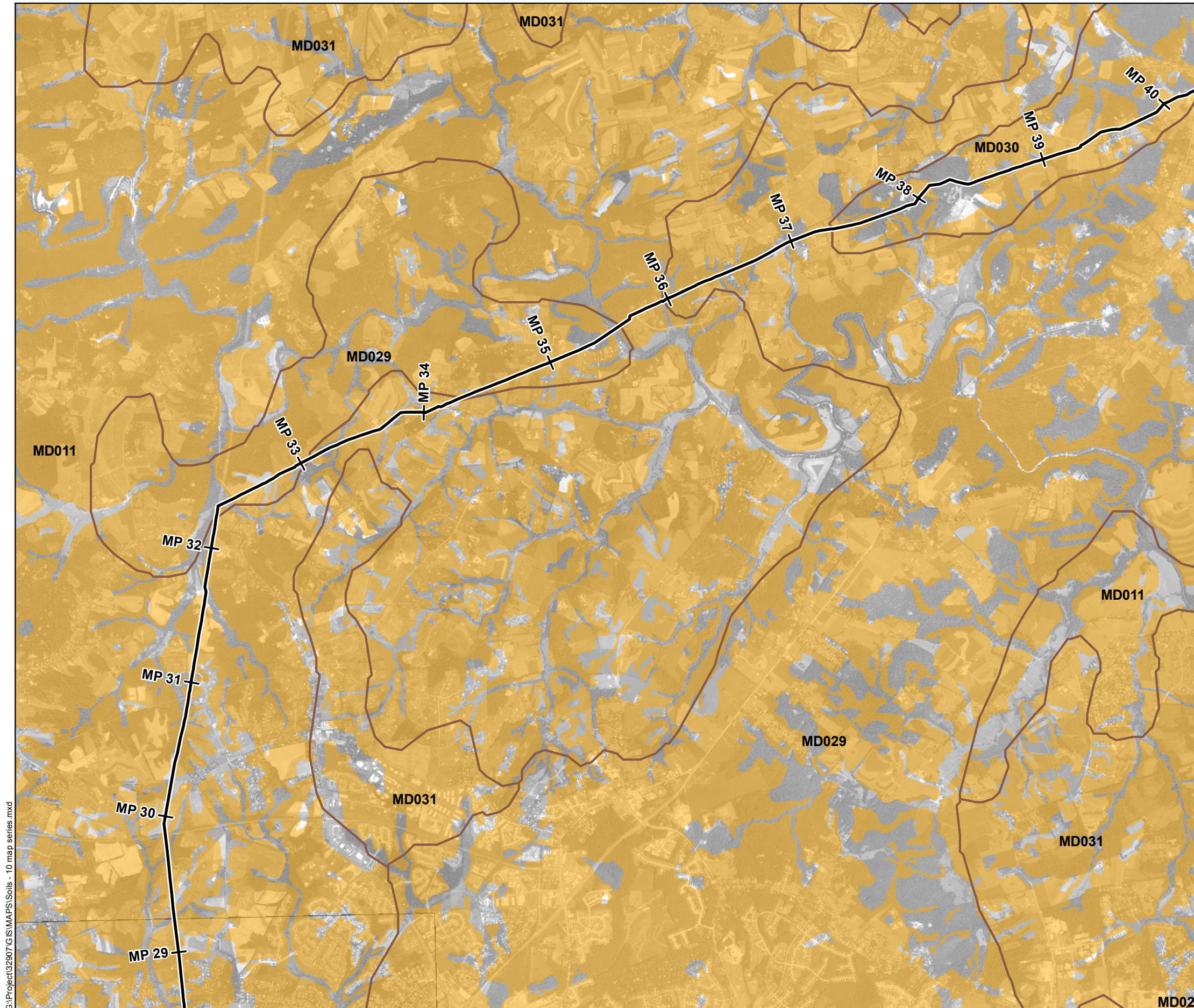
PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1



G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd

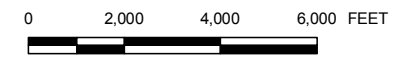
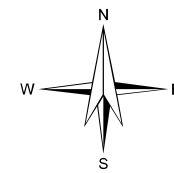


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM:
NRCS, 2006.



ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERCC SUBMITTAL PRE-FILING	H&A

G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd



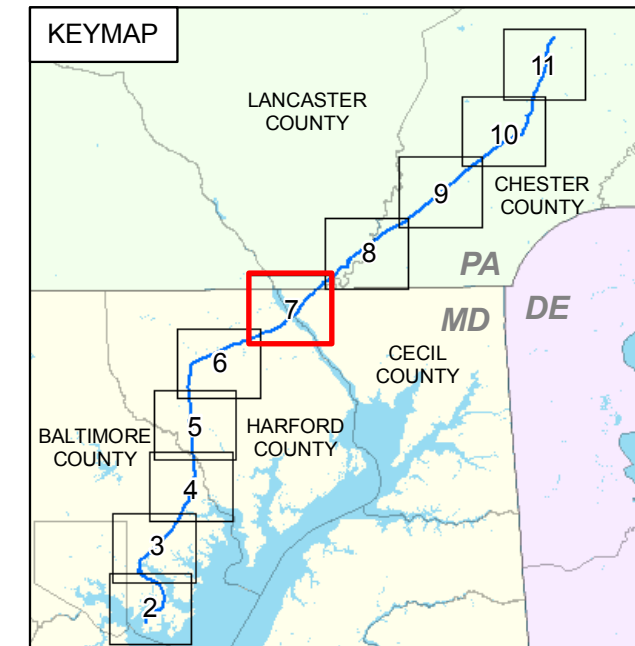
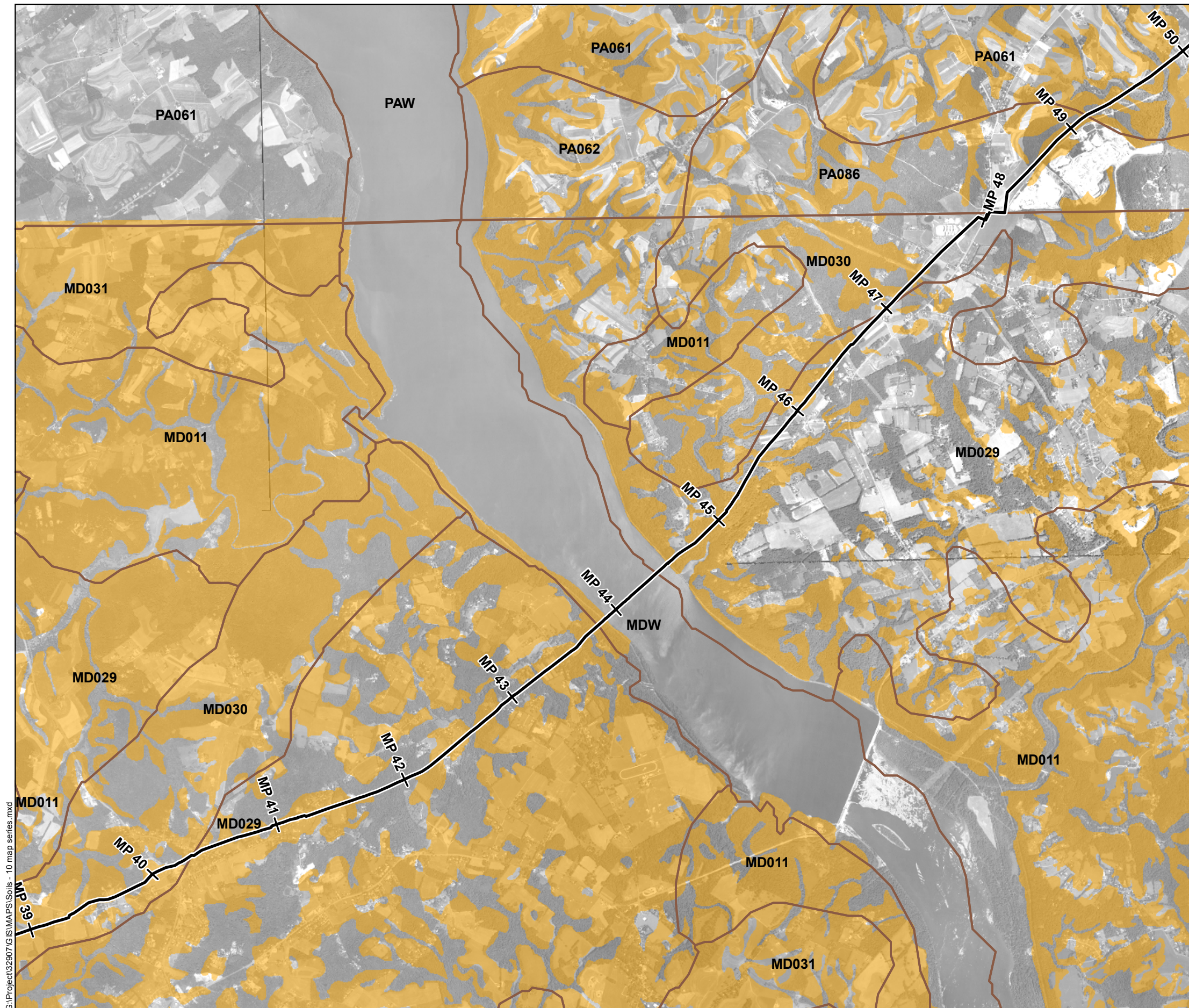
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

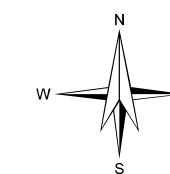


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



0 2,000 4,000 6,000 FEET

ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERC SUBMITTAL PRE-FILING	H&A



PREPARED BY:
HALEY & ALDRICH

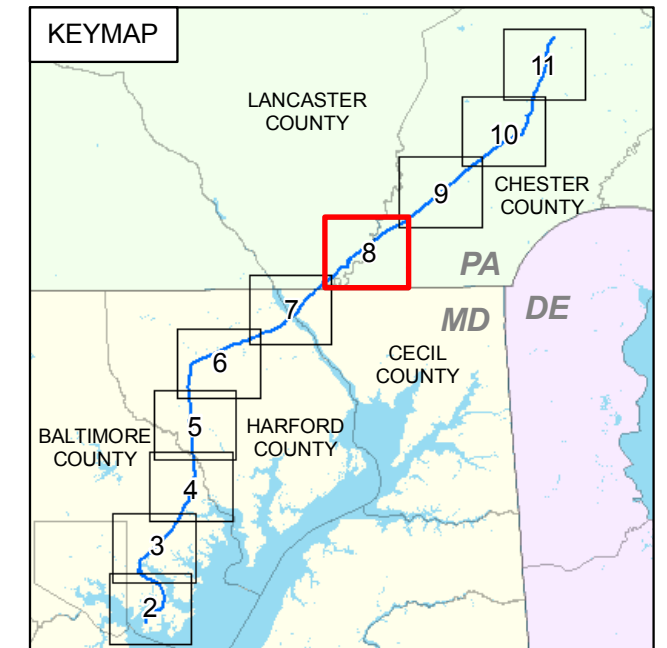
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT





SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd

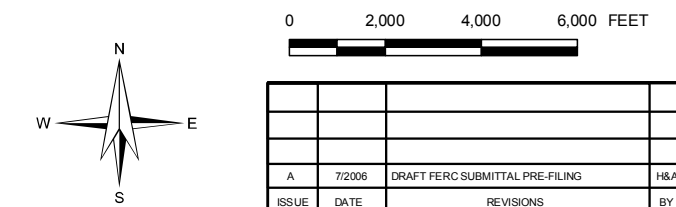


LEGEND

-  MID-ATLANTIC EXPRESS PIPELINE
-  MILEPOST MARKER
-  SOILS ASSOCIATION BOUNDARY
-  HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM:
NRCS, 2006.



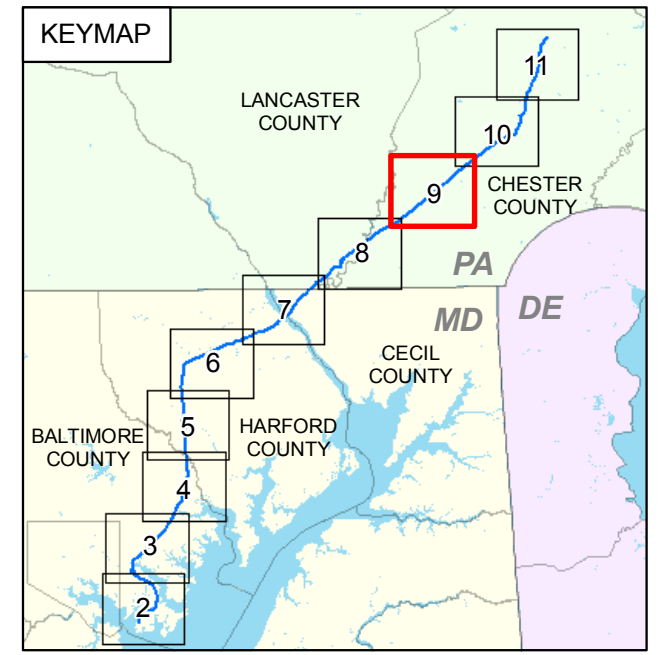
MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd

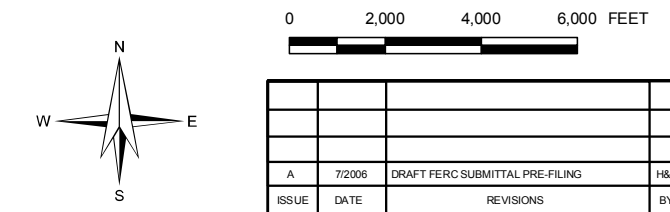


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



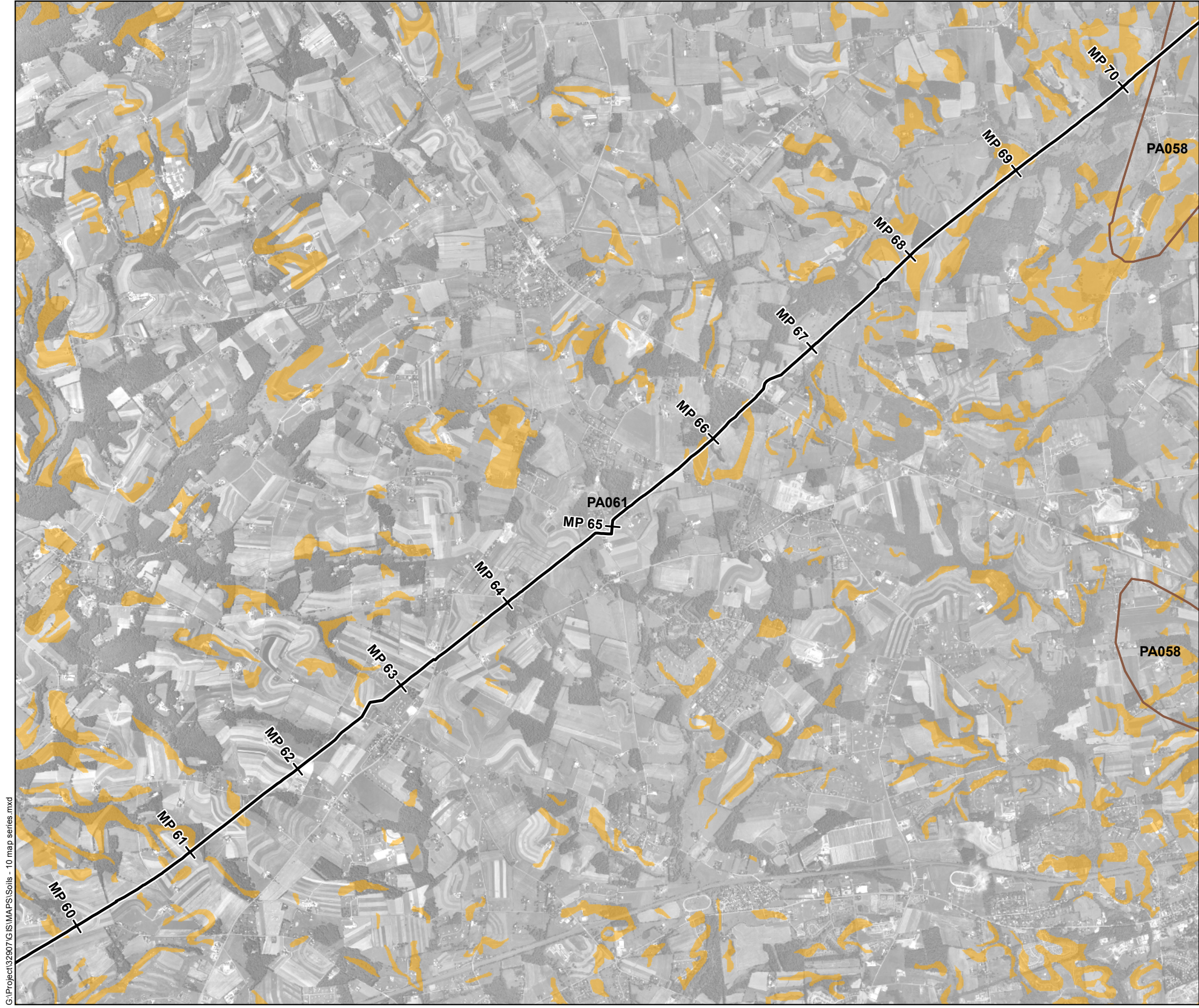
PREPARED BY:
HALEY & ALDRICH

MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

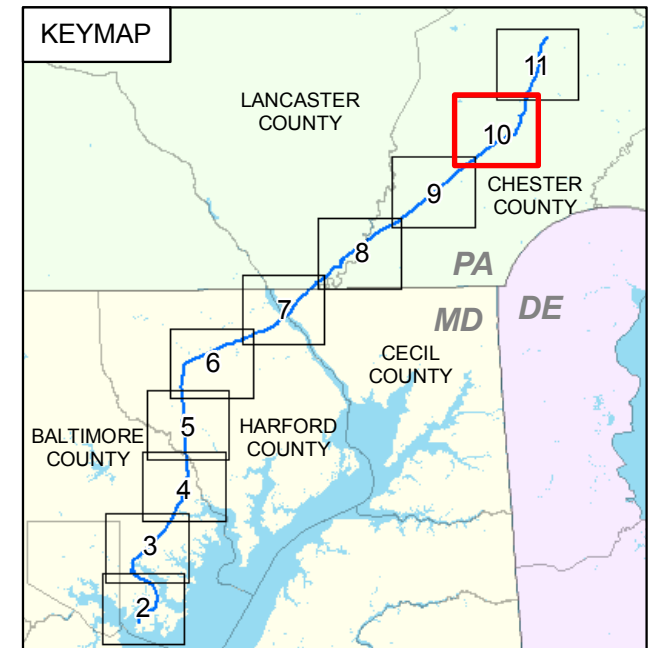
SOILS - SPARROWS POINT PROJECT

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1



G:\Project\32907 GIS\MAPS\Soils - 10 map series.mxd

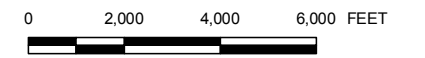
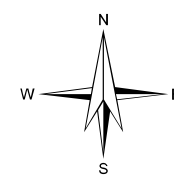


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERCC SUBMITTAL PRE-FILING	H&A



MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

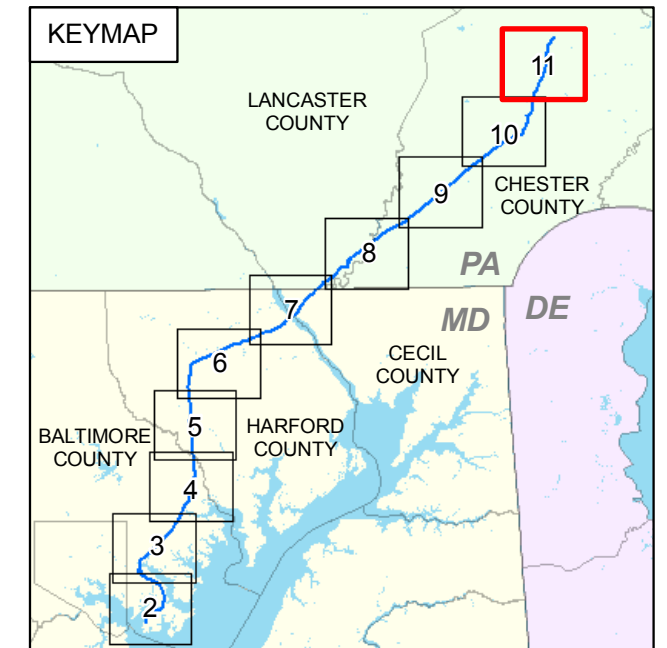
SOILS - SPARROWS POINT PROJECT

PREPARED BY:
HALEY & ALDRICH

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1

G:\Project\32907\GIS\MAPS\Soils - 10 map series.mxd

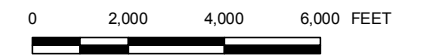
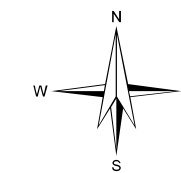


LEGEND

- MID-ATLANTIC EXPRESS PIPELINE
- MILEPOST MARKER
- SOILS ASSOCIATION BOUNDARY
- HIGHLY ERODIBLE LAND

NOTES:

1. SEE PAGE 01 FOR LEGEND SHEET.
2. DATA DERIVED FROM: NRCS, 2006.



ISSUE	DATE	REVISIONS	BY
A	7/2006	DRAFT FERCC SUBMITTAL PRE-FILING	H&A

G:\Project\32907 GIS\MAPS\Soils - 10 map series.mxd



PREPARED BY:
HALEY & ALDRICH

MID-ATLANTIC EXPRESS, LLC.
SPARROWS POINT LNG
BALTIMORE COUNTY, MD -- CHESTER COUNTY, PA

SOILS - SPARROWS POINT PROJECT

SCALE: AS SHOWN
SEPTEMBER 2006

FIGURE 7.3 -1