

## Appendix A

### List of Data and Associated Files Provided in the CAP DSS

#### Data Downloaded from BASINS (02/2001)

Data from BASINS was downloaded February 2001 and reprojected and added to the Arapaho CAP on 3 March 2001. The following files from BASINS are included in the DSS. All of these files have a spatial extent of the watershed or hydrologic unit catalog (Huc) of 10180001 which is the watershed that Arapaho NWR is located.

st.shp - state boundaries  
 cnty.shp - county boundaries  
 cat.shp - 8-digit hydrologic unit catalog  
 mad.shp - land ownership  
 rf1.shp - river reach file 1  
 rf1.shp - river reach file 3  
 NSI.shp - national sediment inventory

**National Sediment Inventory Data:** *Note: NSI tissue and biotoxicity data does not exist for this watershed so no data files are associated with the NSI station data. The file nsi\_desc describes the file attributes.*

ifwa files - fish and wildlife consumption advisories  
*The following files are associated with Listings of Fish and Wildlife Advisories*  
 ifwa96.dbf Index for the advisories of 1996.  
 ifwa96ad.dbf Listings for 1996.  
 ifwa\_desc.doc describes file attribute fields.

gage.shp - locations of USGS gage stations  
*gage\_desc describes the file attributes.*

wdm.shp - weather stations  
**Weather Station Files:** *The following file is associated with the WDM Weather Data Stations (wdm.shp) and the Weather Station Sites (metpt.shp) and Areas (met\_stat.shp) Files.*  
 Wdm\_desc.doc.

wq\_stat.shp - water quality stations from Storet  
**Water Quality Data:** *The following files are associated with the water quality station file: wq\_stat.shp. Note: Water quality data does not exist for this watershed for the years 1995 to present.*  
 wq\_d7074.dbf water quality data for 1970 - 1974  
 wq\_d7579.dbf water quality data for 1975 - 1979  
 wq\_d8084.dbf water quality data for 1980 - 1984  
 wq\_d8589.dbf water quality data for 1985 - 1989  
 wq\_d9094.dbf water quality data for 1990 - 1994  
 wq\_parm.dbf [water quality parameter reference table](#)  
 wqlmon\_desc.doc describes table attributes

bac\_stat - Bacteria monitoring stations  
**Bacteria Data:** *Note: Bacteria data associated with the Bacteria Stations does not exist from 1990 to present.*  
 bc\_d7074.dbf bacteria data from 1970 - 1974  
 bc\_d7579.dbf bacteria data from 1975 - 1979  
 bc\_d8084.dbf bacteria data from 1980 - 1984  
 bc\_d8589.dbf bacteria data from 1985 - 1989  
 bc\_parm.dbf [bacteria parameter reference table](#)  
 bc\_desc.doc describes table attributes

statsgo.shp - soil informaiton  
dams dam.shp - locations of dams  
dem.shp - digital elevation data  
mines.shp - location of mines from  
Mineral Availability System and Mineral Industry Locations (MAS/MIL) *mas\_desc describes the file attributes.*

pcs.shp - Permit Compliance System  
*PCS: The following files are associated with the permitted discharge file pcs.shp. This covers data from 1991 to 1996.*  
pcsl91.dbf, pcsl92.dbf, pcsl93.dbf, pcsl94.dbf, pcsl95.dbf, pcsl96.dbf.

PCS Reference Files:

pcs\_prm.dbf PCS parameter table with parameter code, parameter description, chemical name and CAS number.  
pcs\_desc.doc describes PCS attributes.

**Data Downloaded from Colorado Department of Transportation (02/2001)**

Airports.shp  
Cities.shp  
Cnty.shp  
Fcroads.shp  
Jackhighway.eoo  
Lakes.shp  
Iroads.shp  
Publands.shp  
Streams.shp

**Data Downloaded from EPA Region 8 (03/2001)**

R8\_404.shp list of water violations  
R8afs\_fac.shp EPA regulated facilities releasing to the air  
R8pcs\_pts.shp EPA regulated facilities releasing into the water

**Data Downloaded from the EPA National Response Center (for spills) (03/2001)**

Files also include files for the years 98, 97, 96, and 95.  
Incrpt99.txt Incident report for 1999  
MATRPT99.txt - Contains the materials involved with a spill  
RR\_RPT99.txt - Information on RAILROAD trains with an incident  
DE\_RPT99.txt - Information related to DERAILED train cars

**Data Downloaded from EPAs Envirofacts (03/2001)**

PCS - facilities and release information  
AIRS - facilities and release information  
TRI - facilities and release information

**Data Downloaded from USGS National Atlas (02/2001)**

Abandoned mined lands abnminx020.shp. Reprojected and named - Colorado abnminx.shp  
Mining Operations  
Construction minerals minop2x020.shp. Reprojected and named - construction mineral operations.shp  
Ferrous metal mining operations minop3x020.shp. Reprojected and named - ferrous metal operations.shp  
Misc Industrial mining operations minop5x020.shp. Reprojected and named - misc industrial operations  
Non ferrous metals mining operations minop6x020.shp. Reprojected and named - nonferrous metal operations  
Abrasive and other industrial minop8x020.shp. Reprojected and named - abrasive and other mineral operations.shp

Sand and gravel mining operations sndgrvx020.shp. Reprojected and named – sand and gravel operations.shp

Crushed stone crstonx020.tar.gz. Reprojected and named – crushed stone.shp  
Railroads railrdl020.shp. Reprojected and named – railroads.shp

**Data Downloaded from CASTNET and NADP, MDN (03/2001)**

NADP annual deposition.dbf

NADP sites.shp

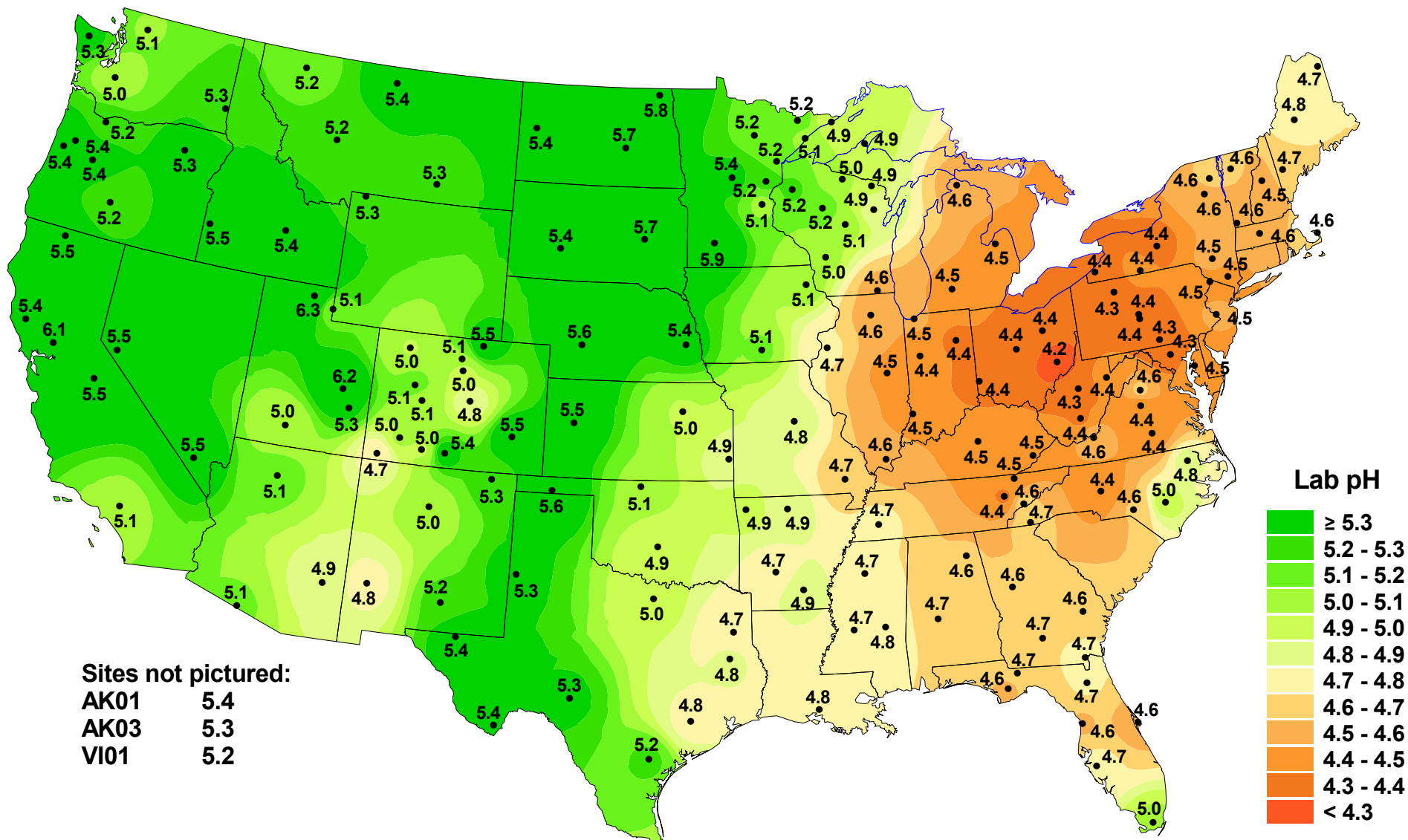
MDN weekly data.dbf Mercury Deposition Network (joined to NADP sites by site ID)

Seasonal deposition2.dbf (CASTNET)

## **Appendix B**

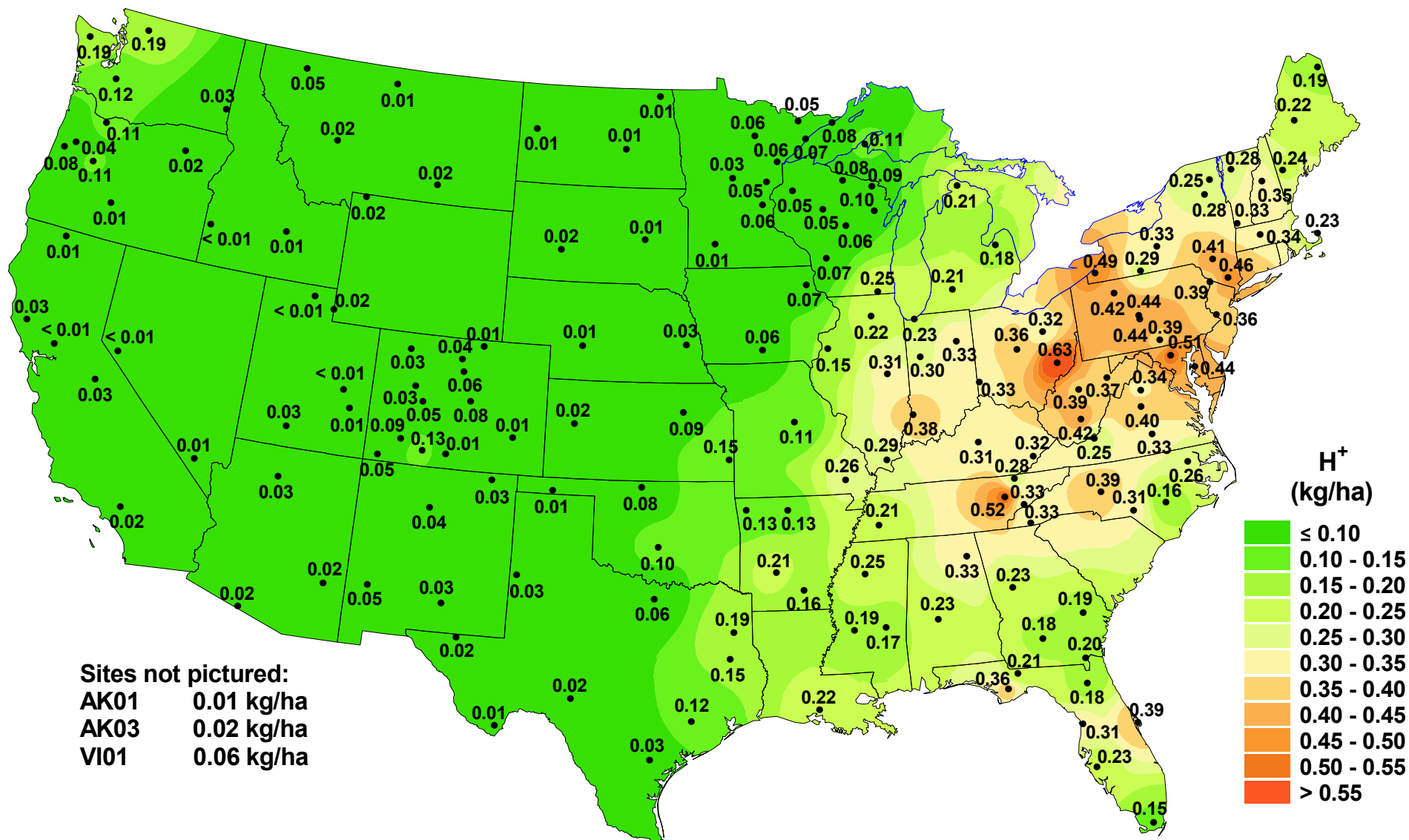
### **National Acid Deposition Program and Mercury Deposition Network Isopleth Maps**

# Hydrogen ion concentration as pH from measurements made at the Central Analytical Laboratory, 1999



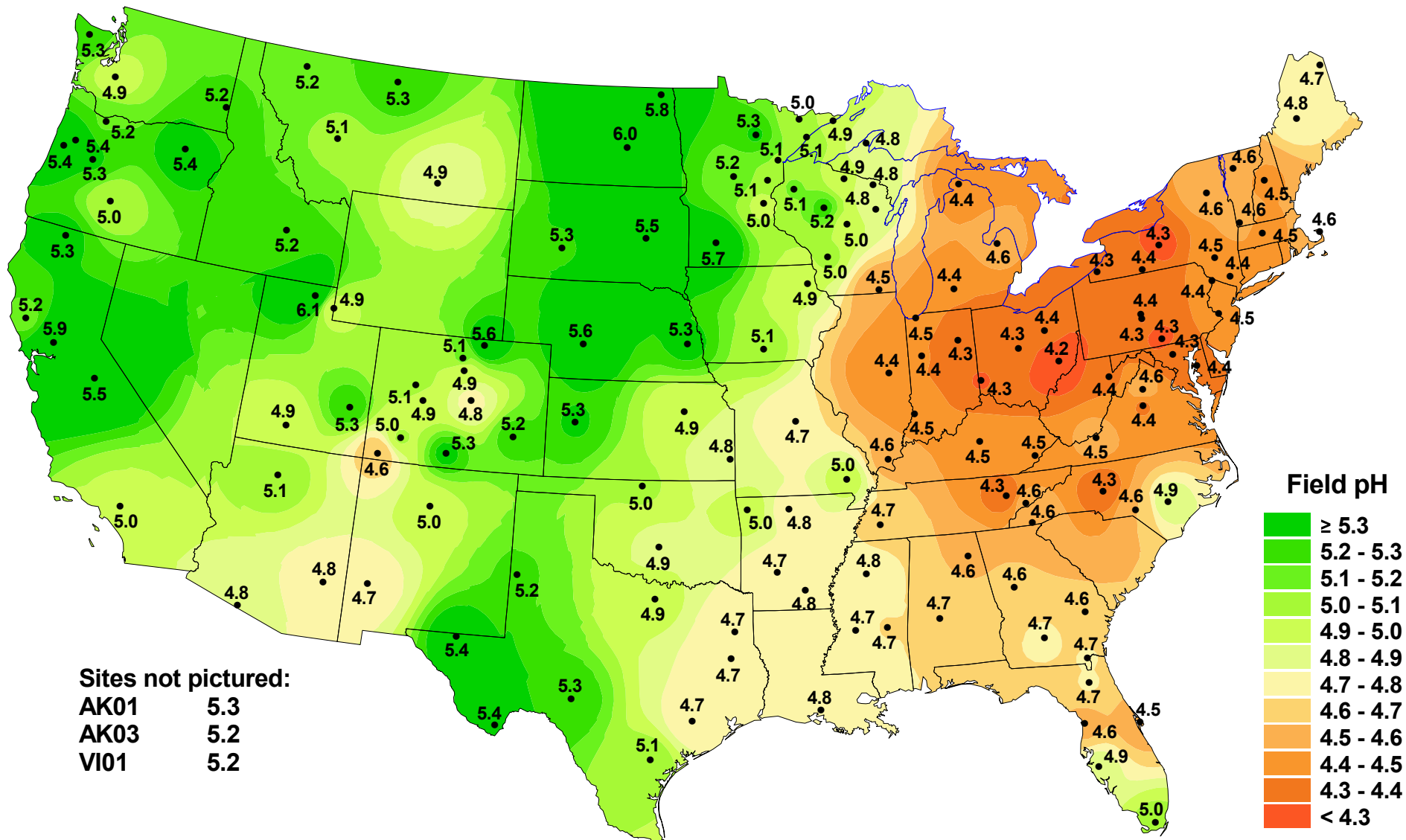
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Estimated hydrogen ion deposition from measurements made at the Central Analytical Laboratory, 1999



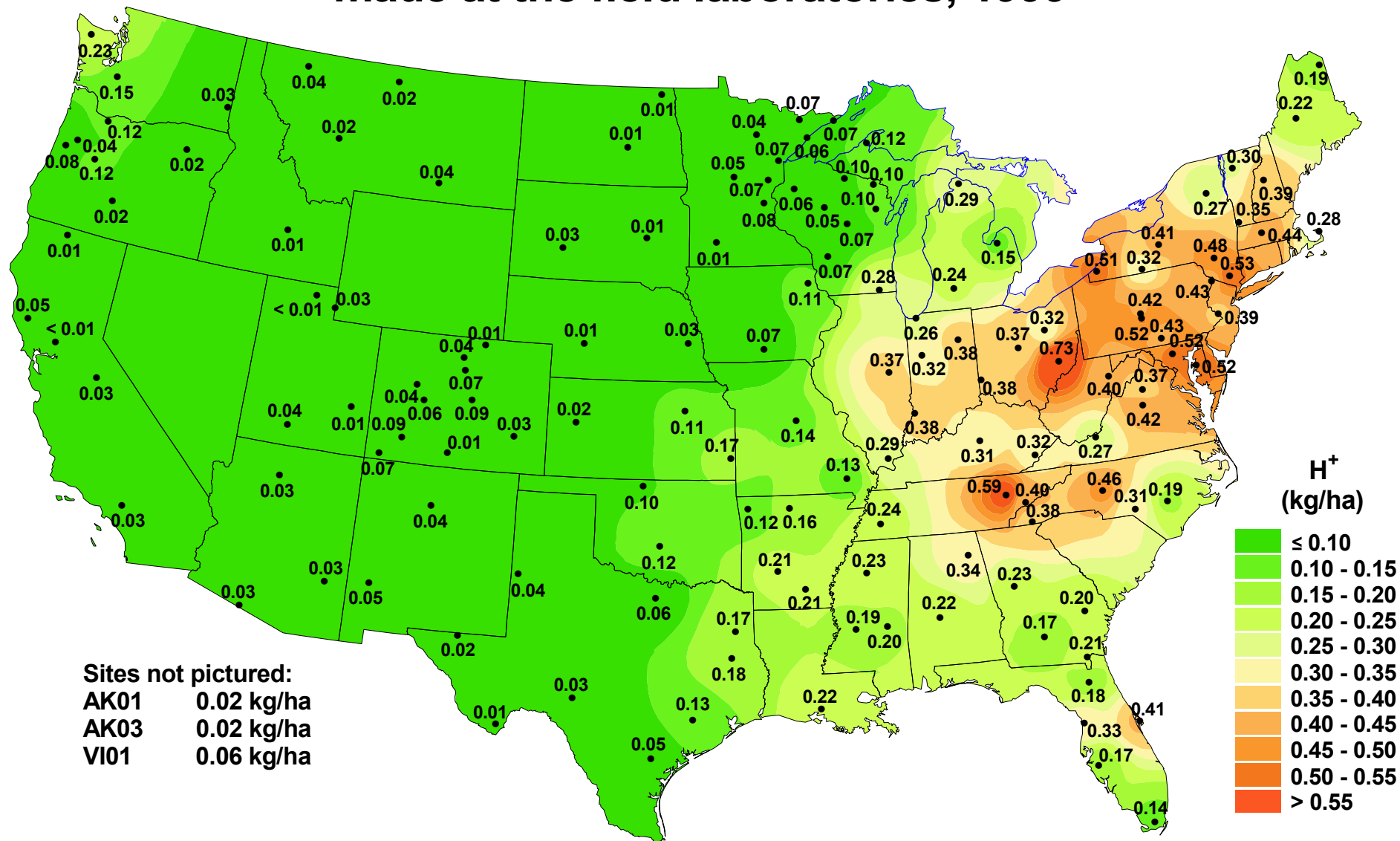
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Hydrogen ion concentration as pH from measurements made at the field laboratories, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

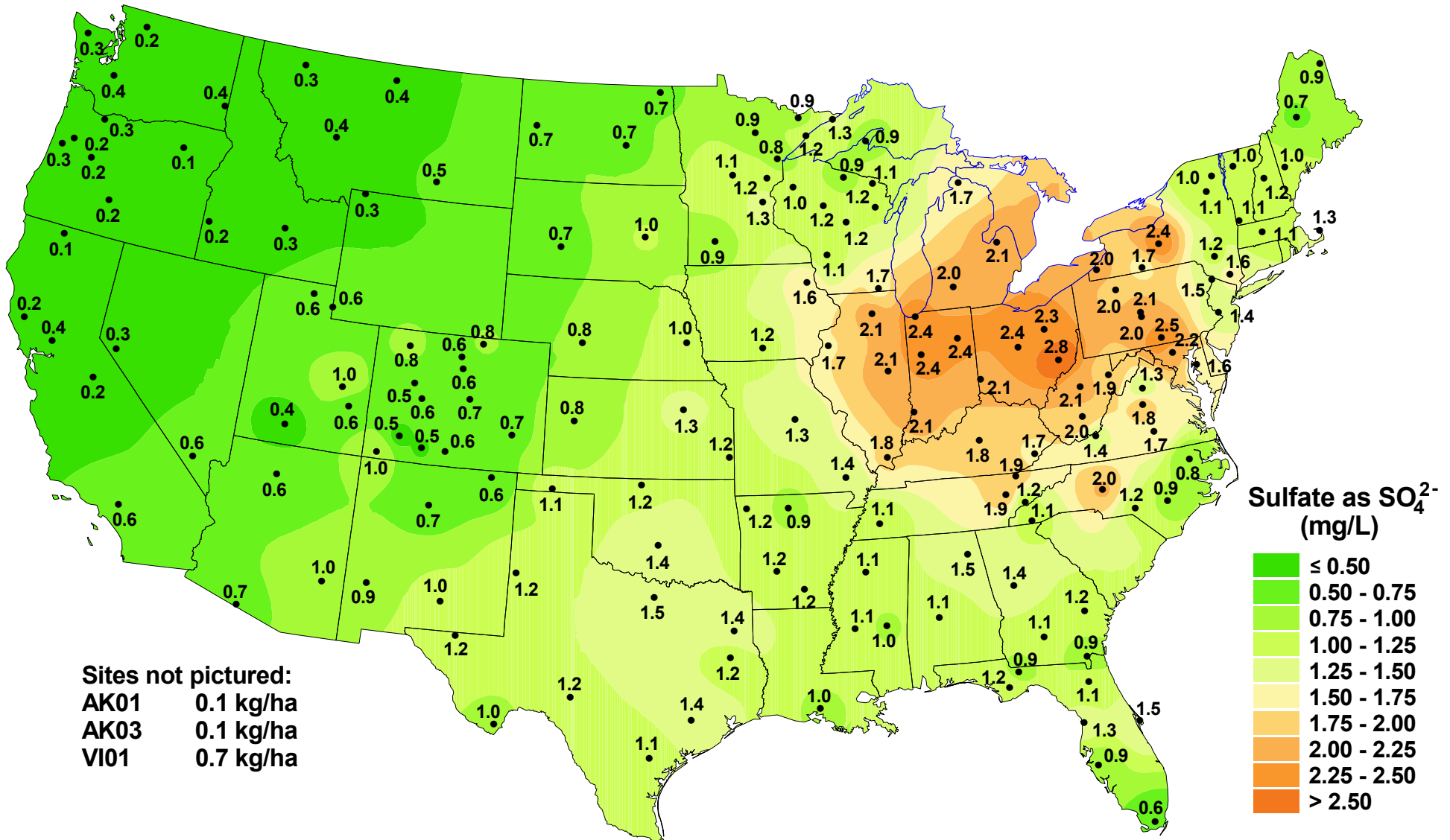
# Estimated hydrogen ion deposition from measurements made at the field laboratories, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

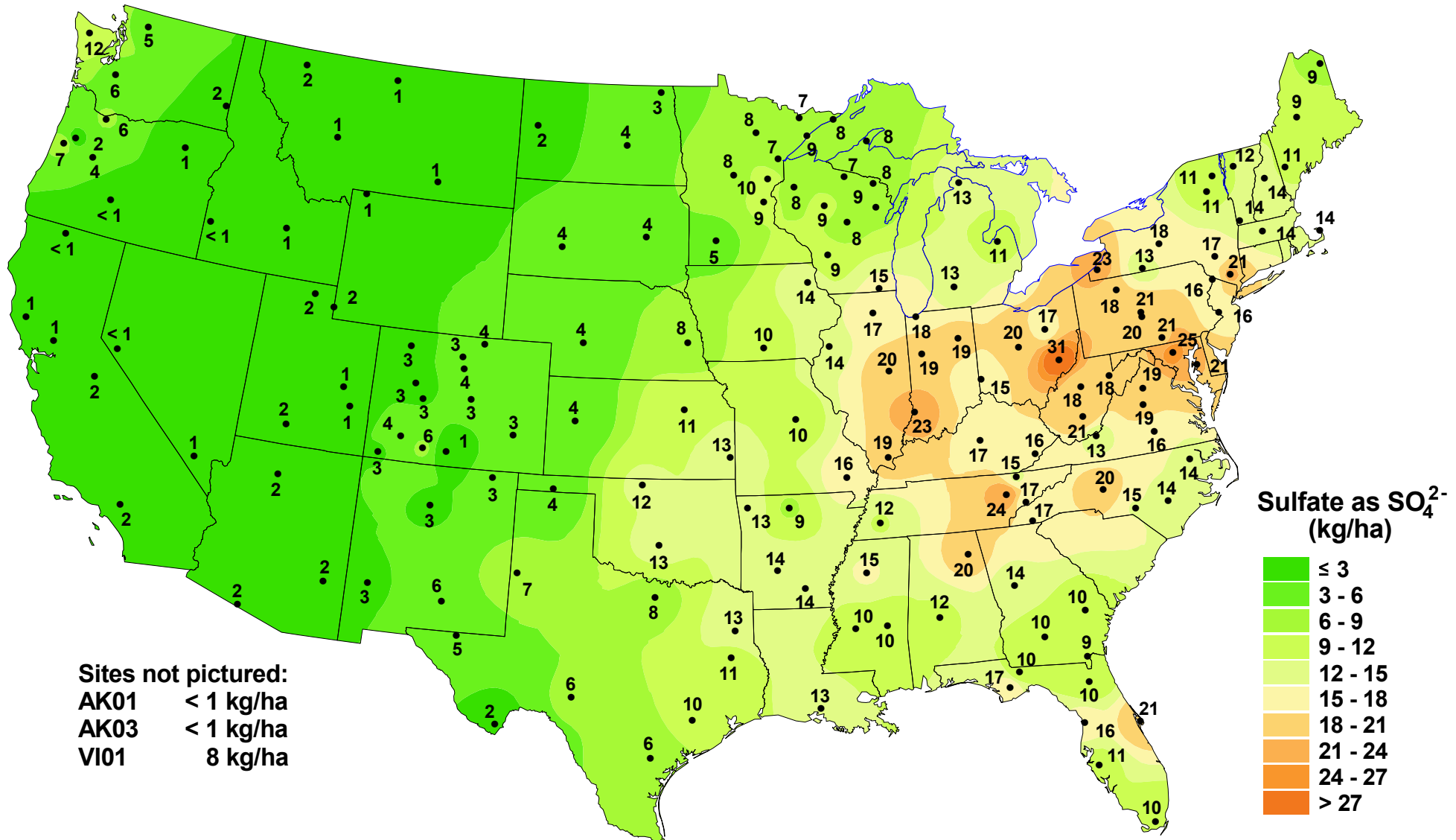


# Sulfate ion concentration, 1999



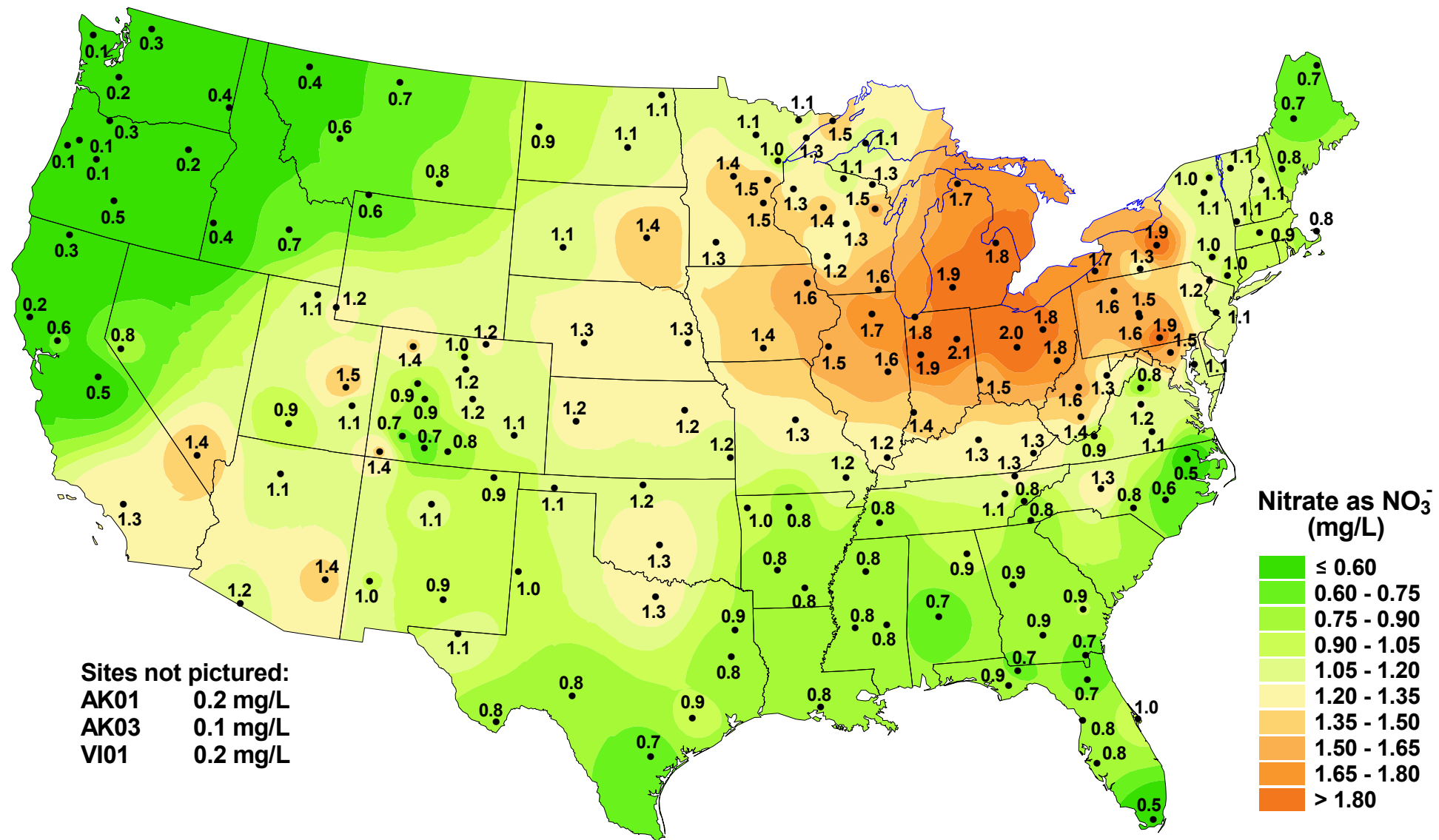
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Estimated sulfate ion deposition, 1999



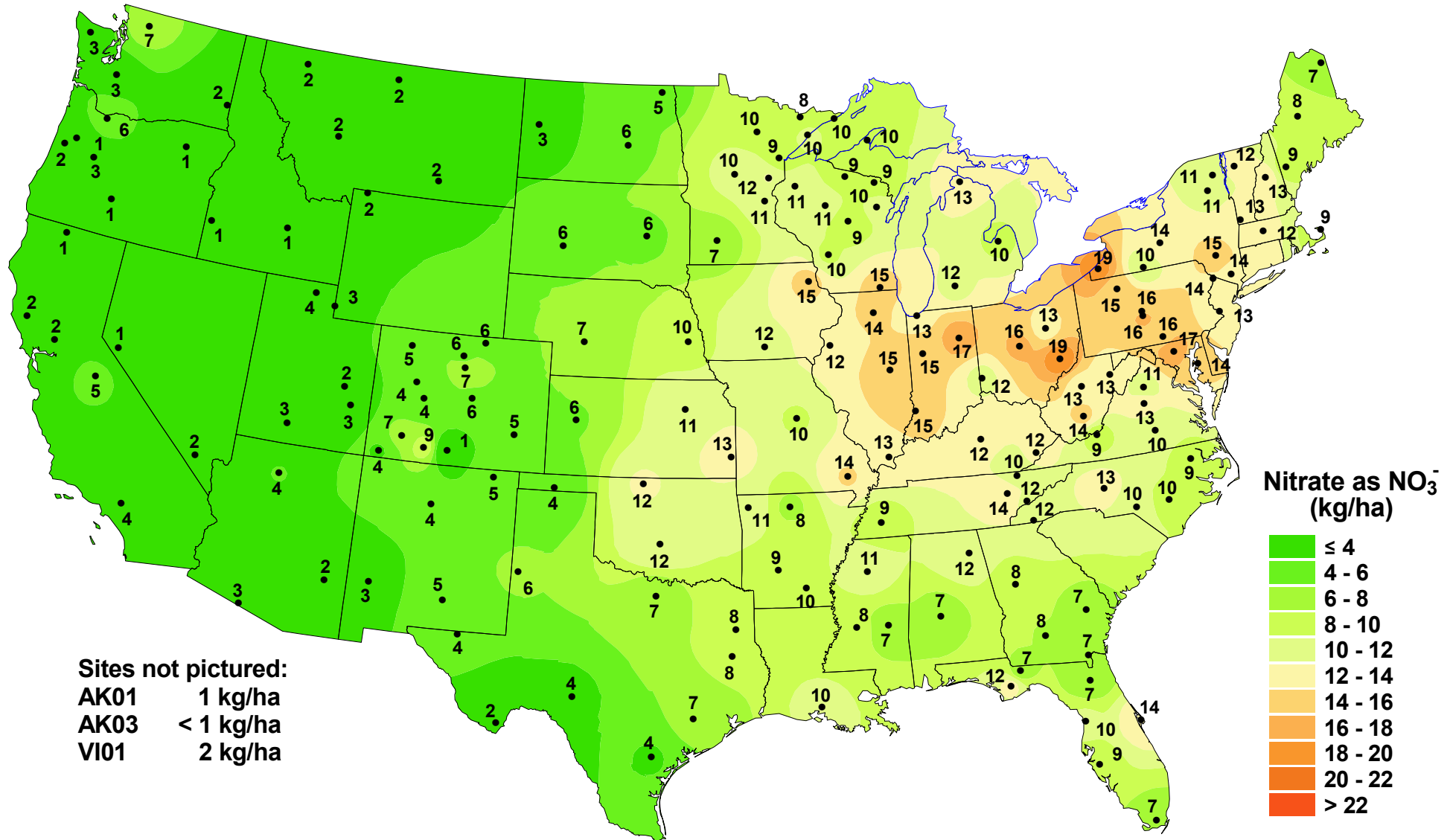
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Nitrate ion concentration, 1999



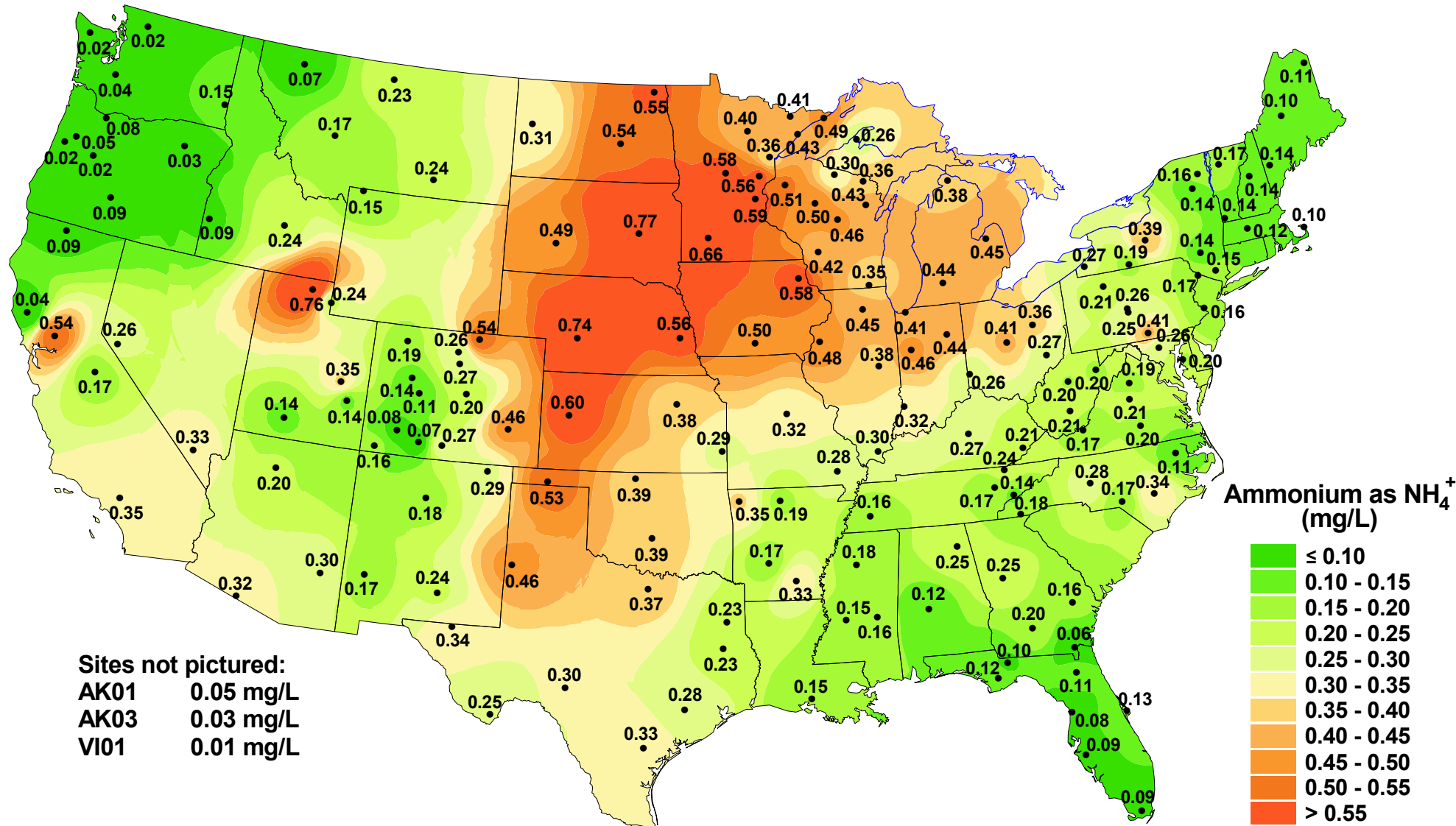
Sites not pictured:  
 AK01 0.2 mg/L  
 AK03 0.1 mg/L  
 VI01 0.2 mg/L

# Estimated nitrate ion deposition, 1999



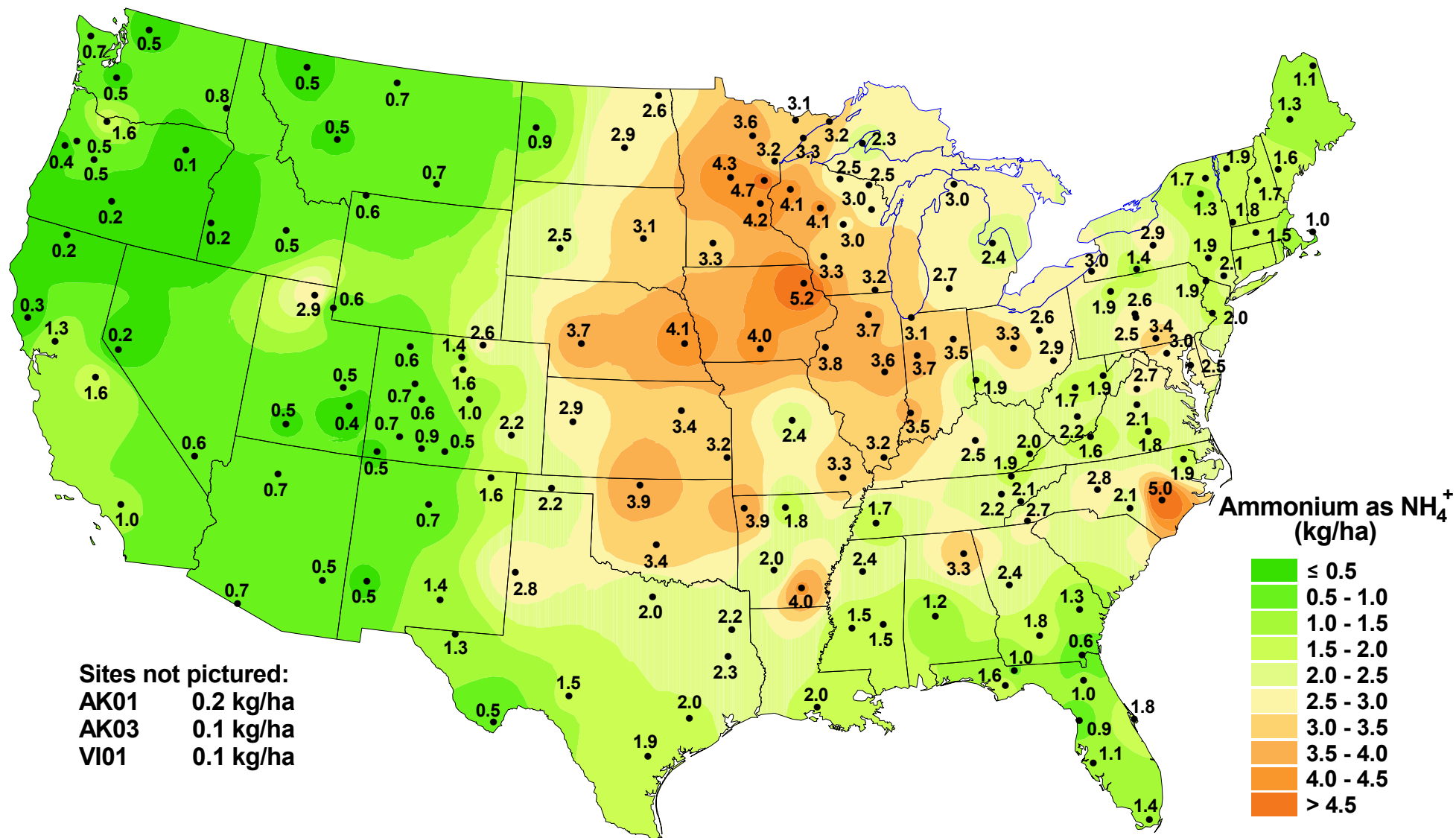
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Ammonium ion concentration, 1999



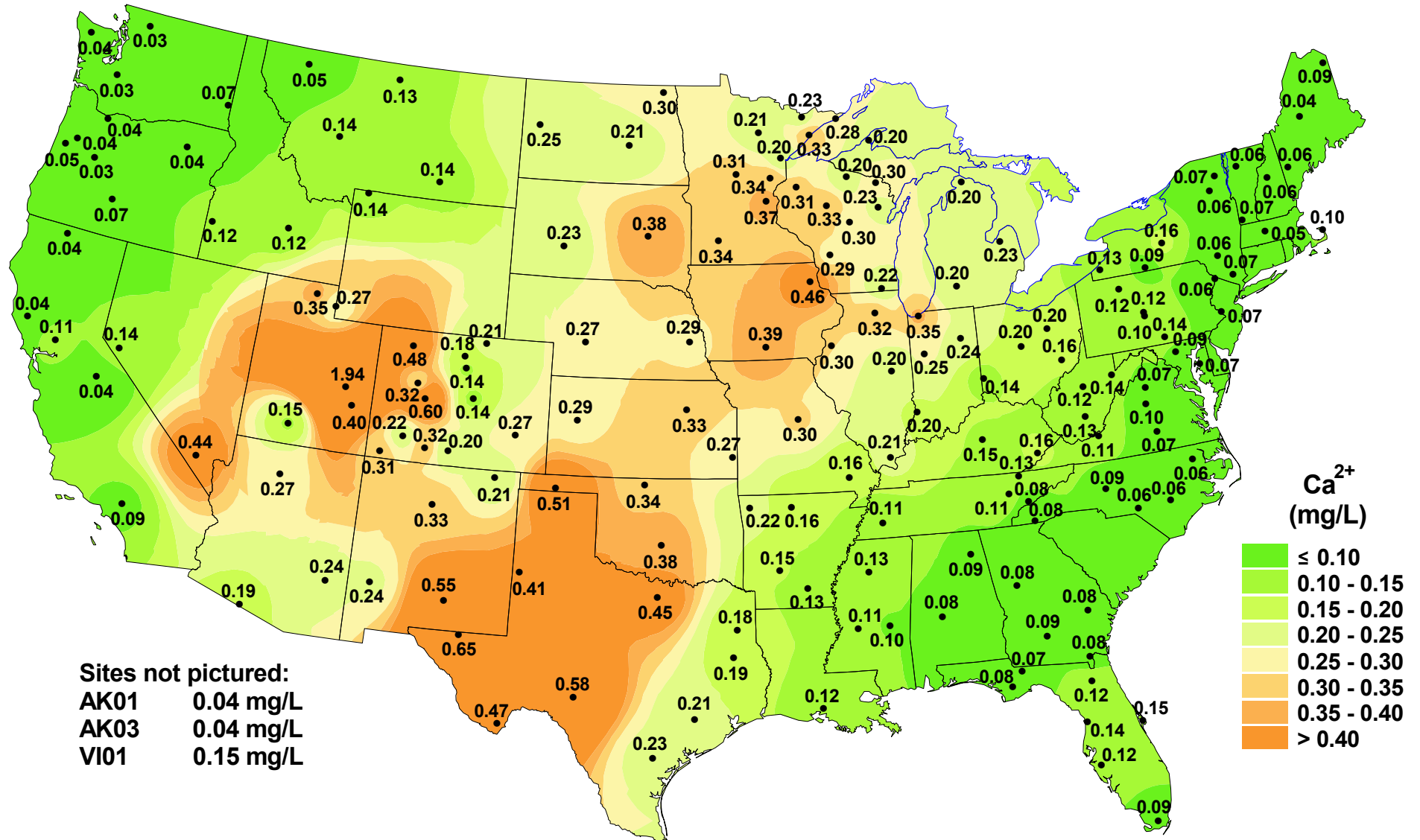
Sites not pictured:  
 AK01 0.05 mg/L  
 AK03 0.03 mg/L  
 VI01 0.01 mg/L

# Estimated ammonium ion deposition, 1999



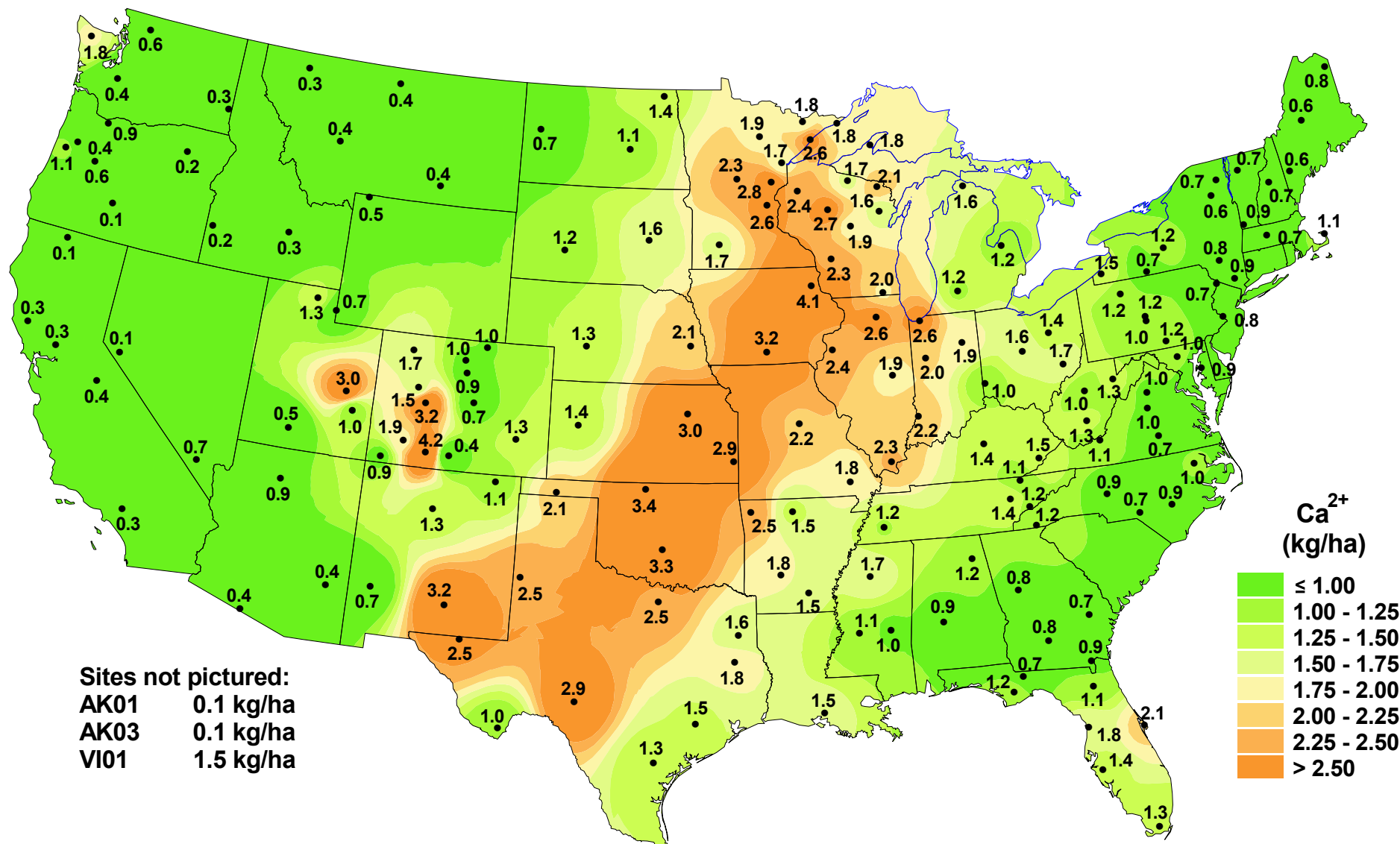
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Calcium ion concentration, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

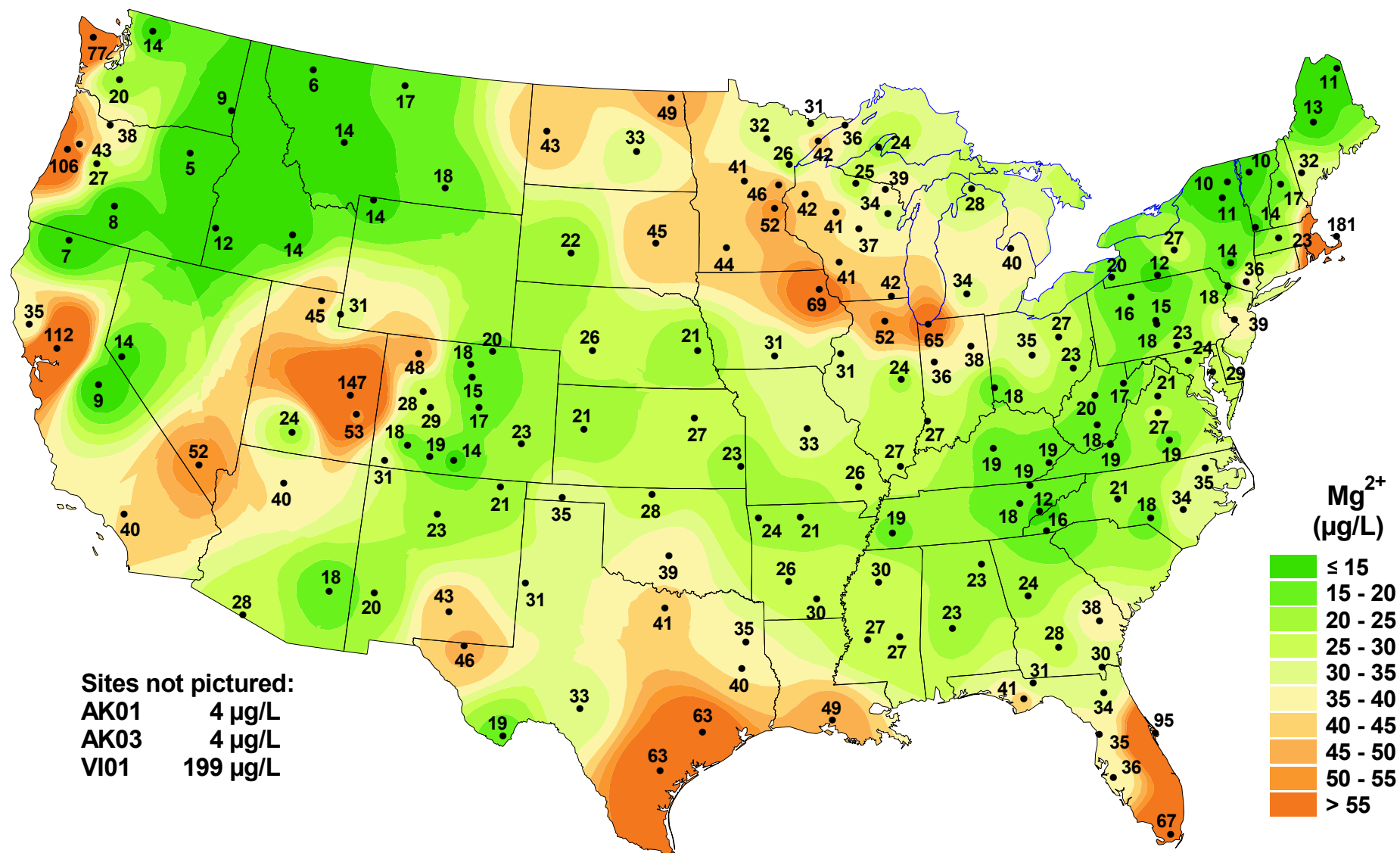
# Estimated calcium ion deposition, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

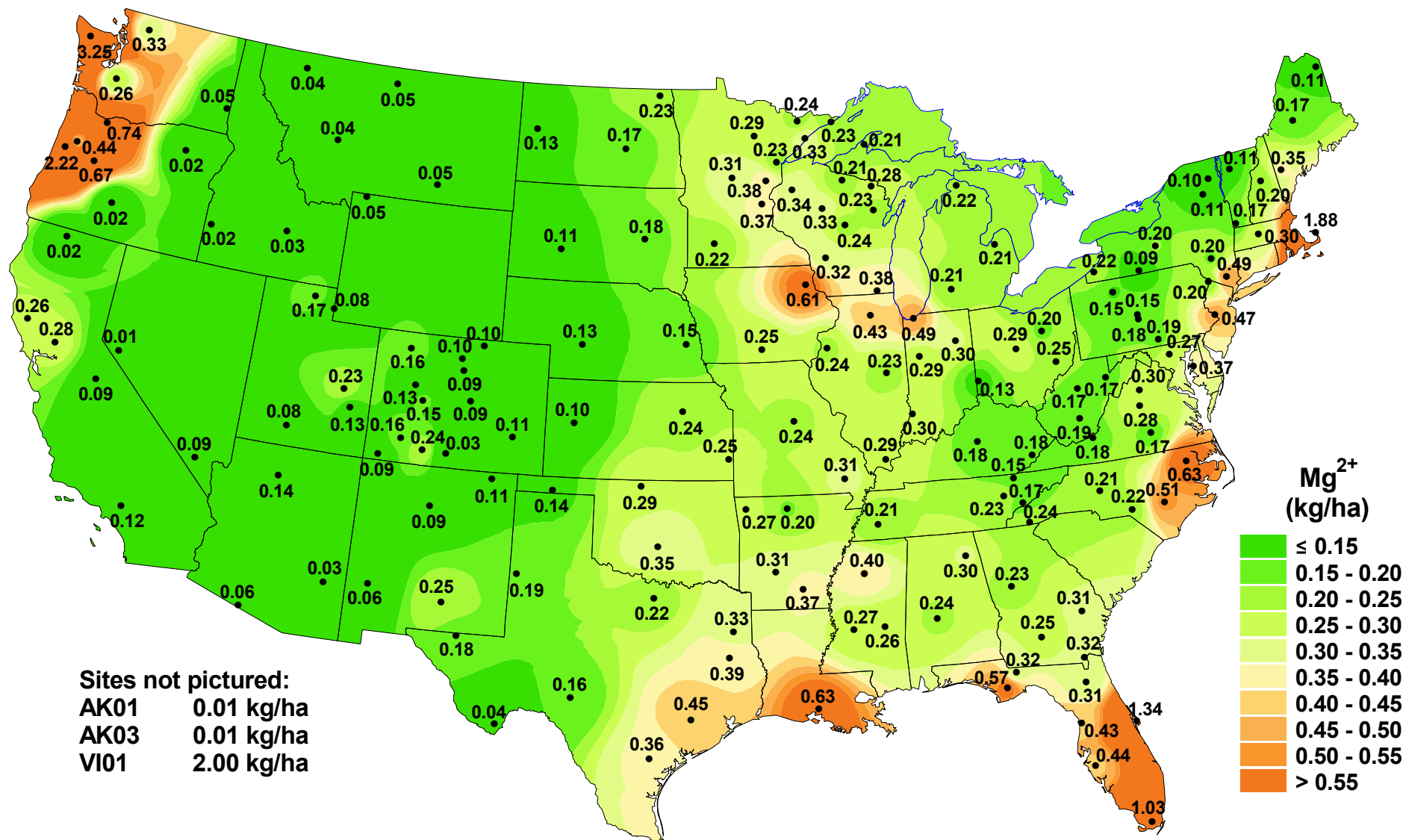


# Magnesium ion concentration, 1999



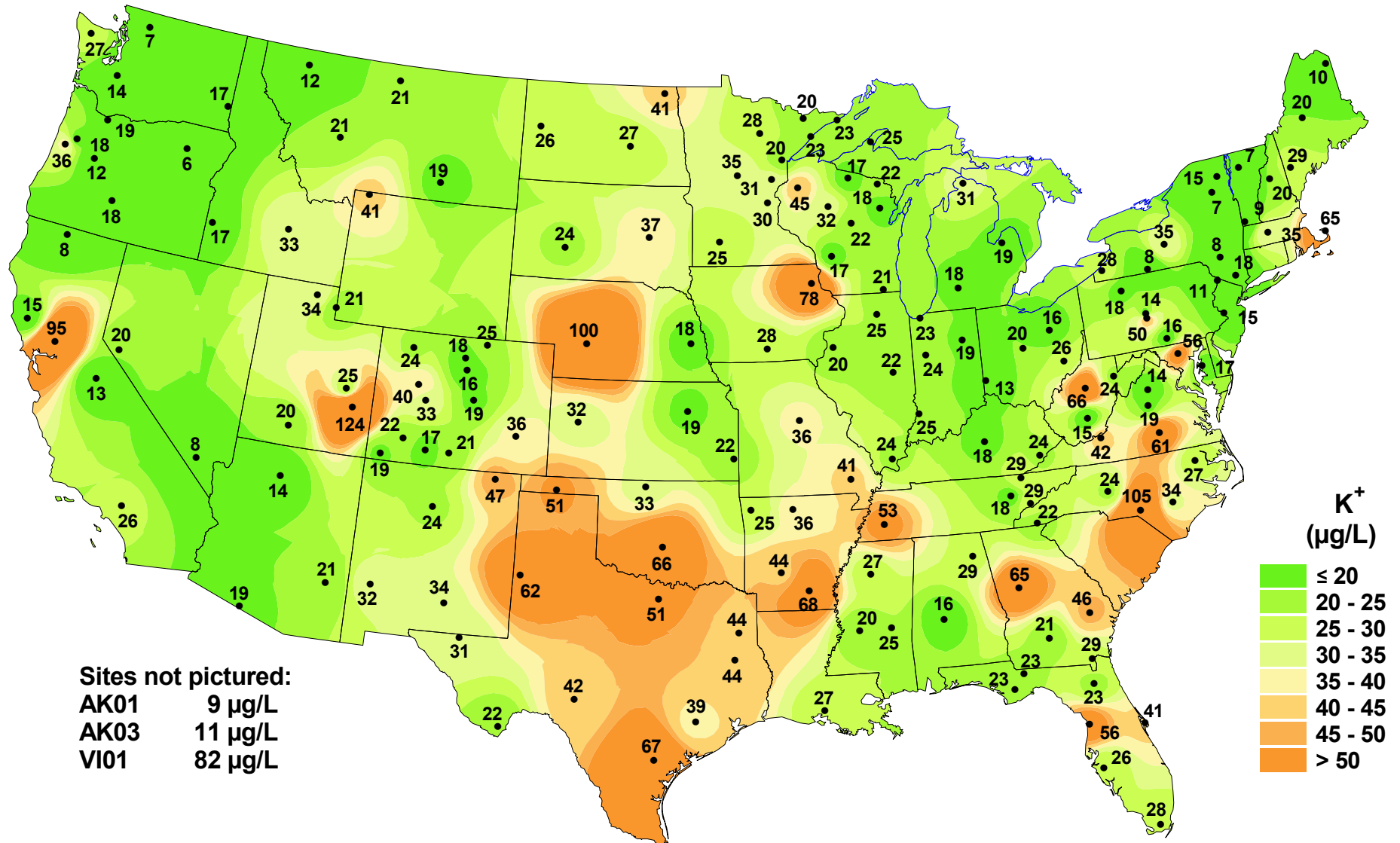
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Estimated magnesium ion deposition, 1999



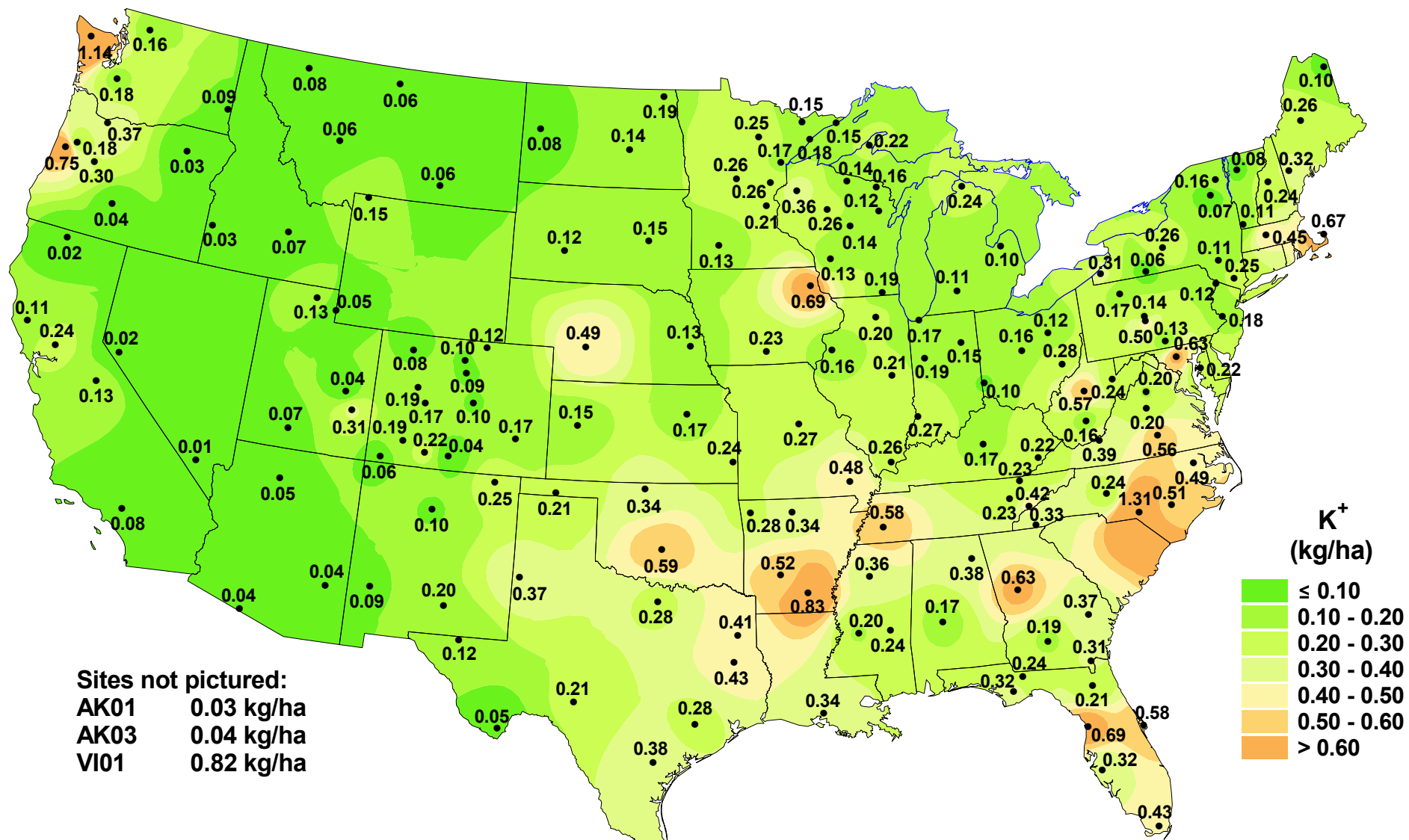
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Potassium ion concentration, 1999



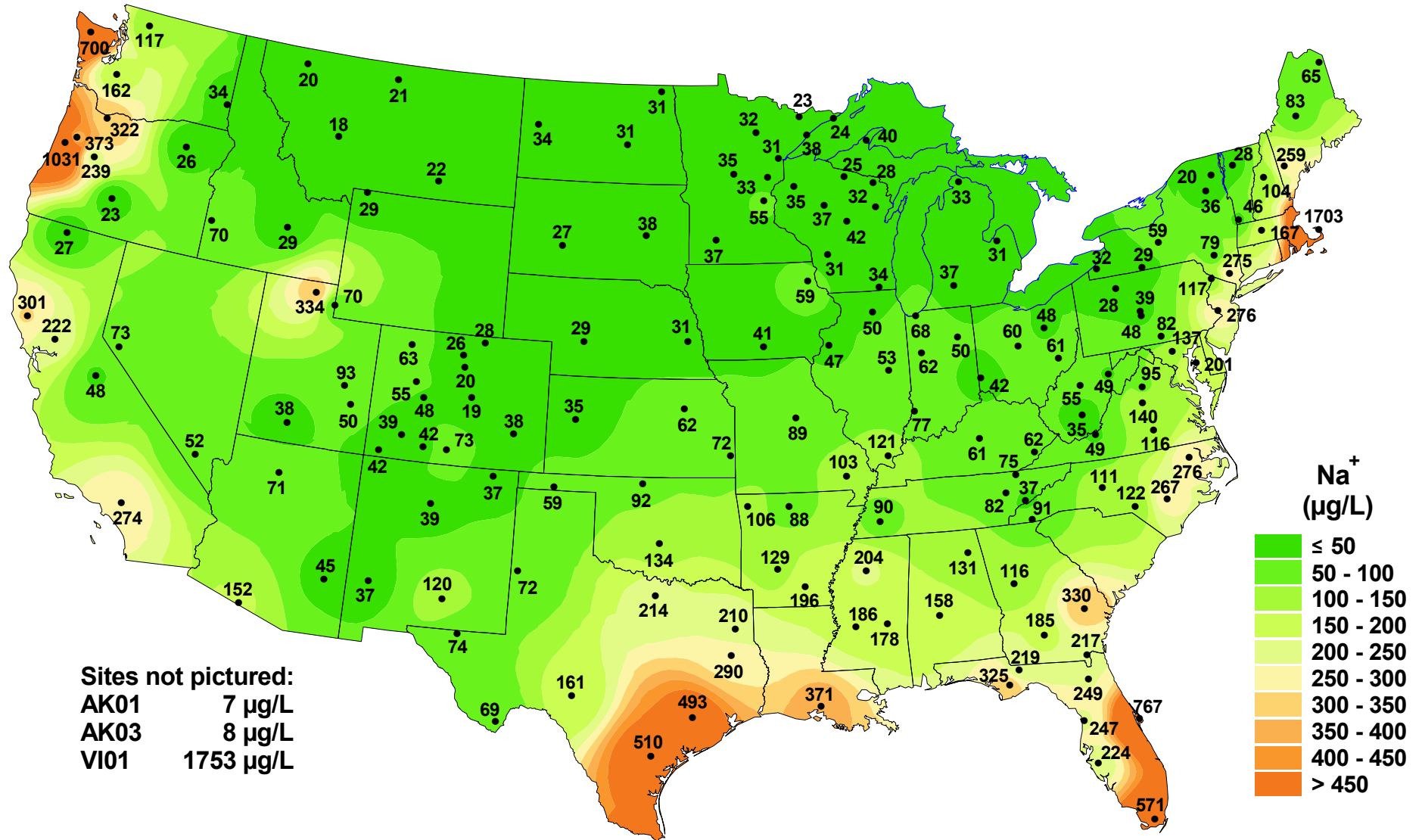
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Estimated potassium ion deposition, 1999



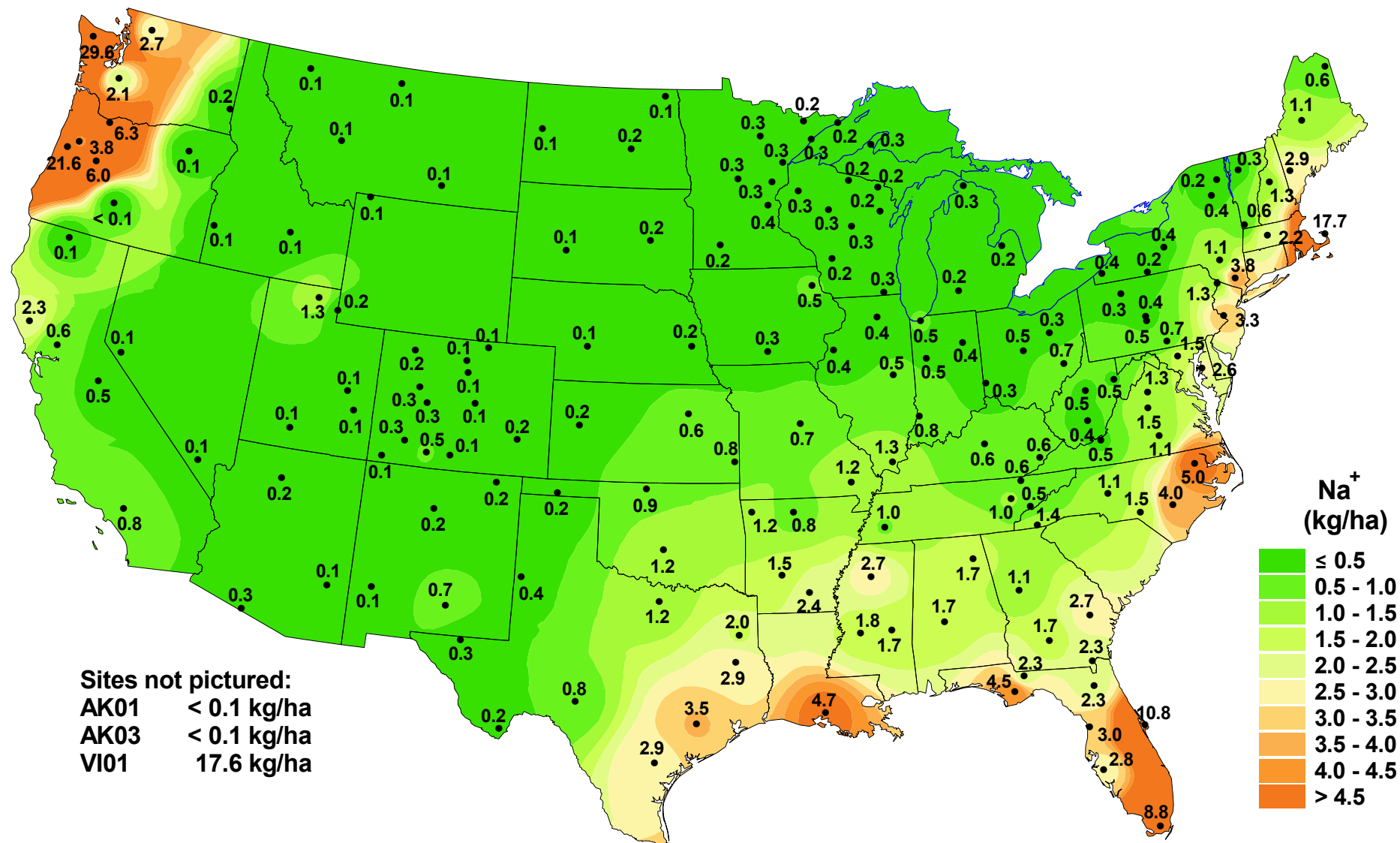
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Sodium ion concentration, 1999



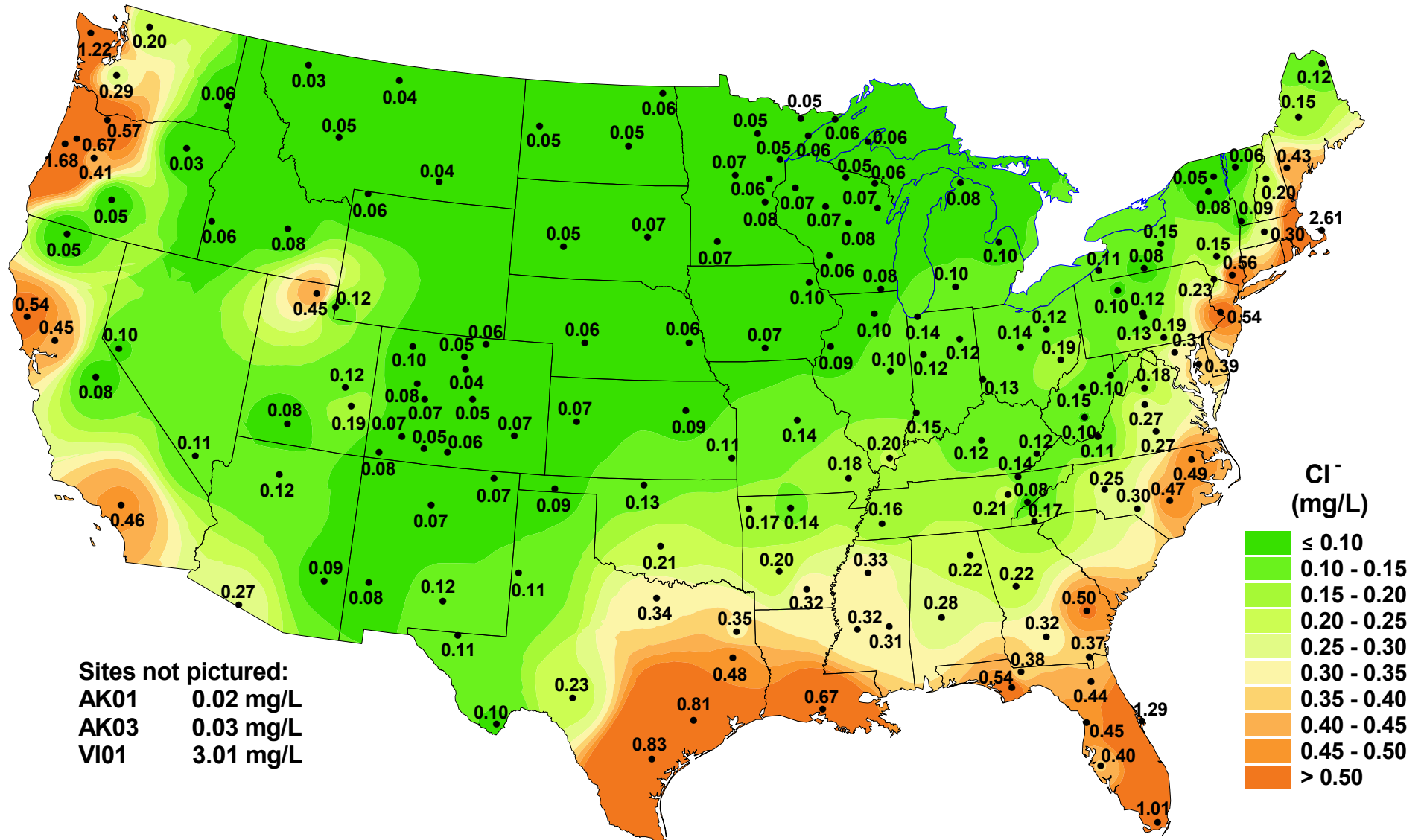
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Estimated sodium ion deposition, 1999



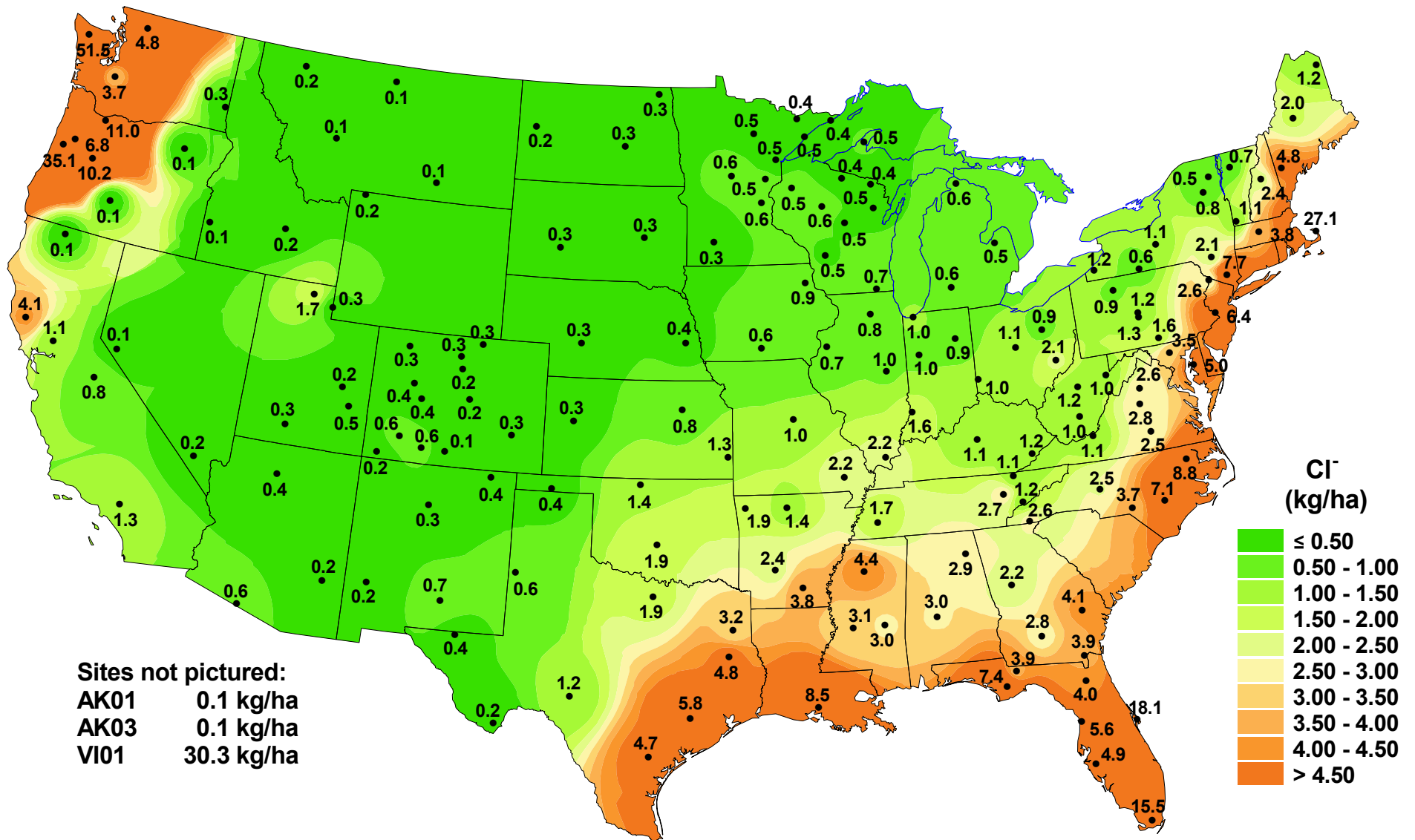
National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Chloride ion concentration, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

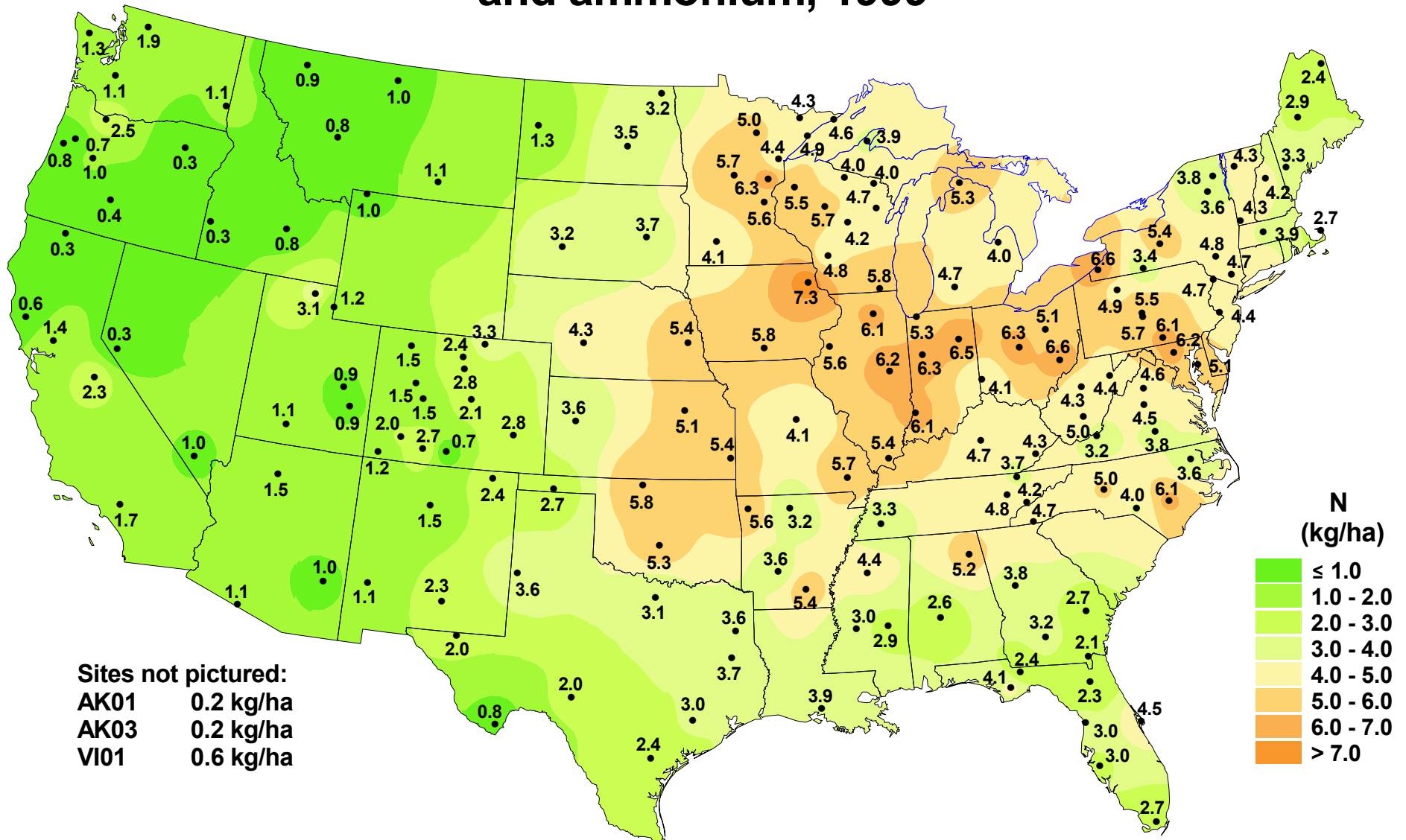
# Estimated chloride ion deposition, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

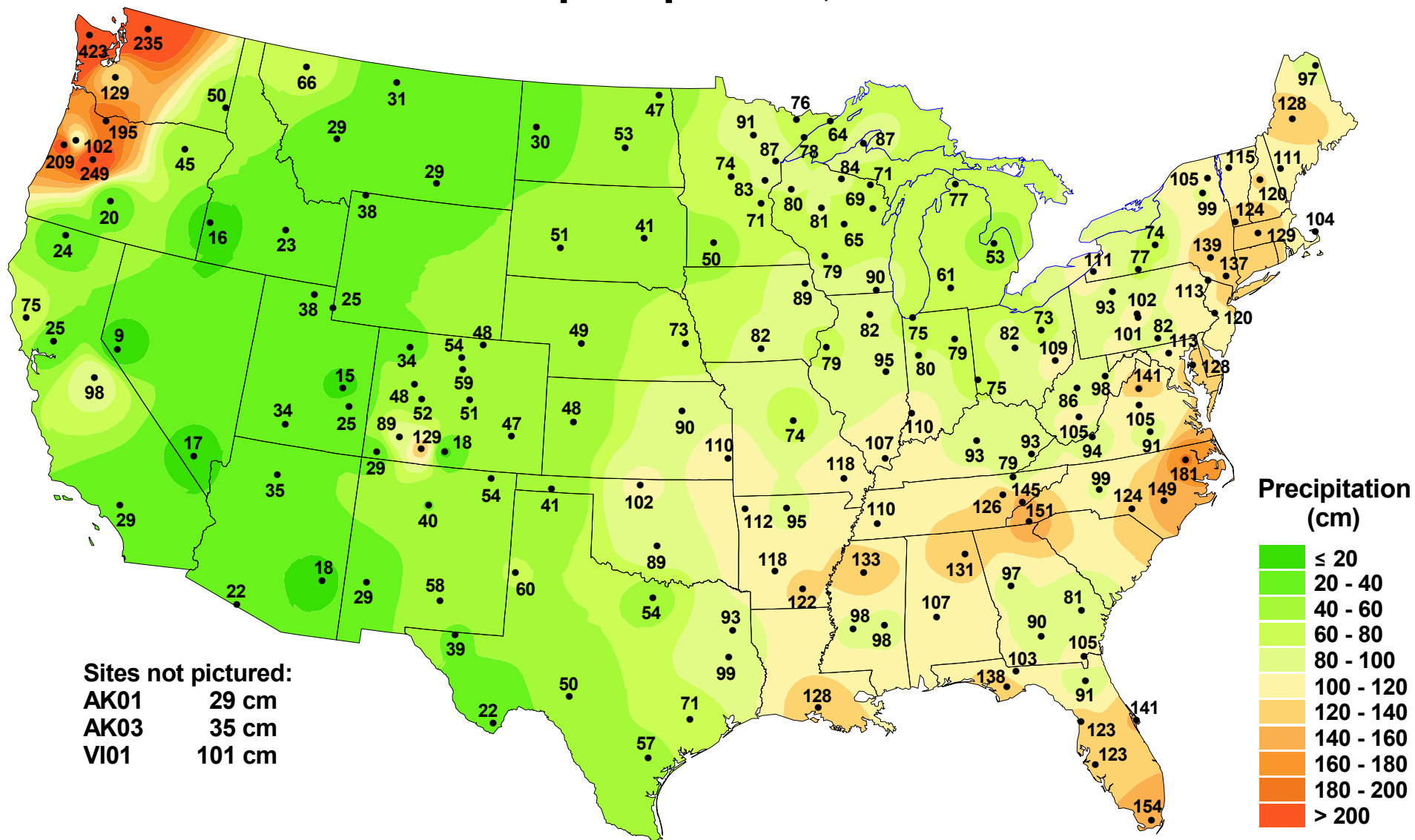


# Estimated inorganic nitrogen deposition from nitrate and ammonium, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

# Total precipitation, 1999



National Atmospheric Deposition Program/National Trends Network  
<http://nadp.sws.uiuc.edu>

## Appendix C

### National Ambient Air Quality Standards (NAAQS)

Pollutant	Standard
Carbon Monoxide	1-hour average concentration of 335 ppm 8-hour average concentration of 9 ppm
Nitrogen Dioxide	Annual average concentration of 0.053 ppm
Sulfur Dioxide	3-hour average concentration of 0.5 ppm (This level may not be exceeded on more than one day per year) 24-hour average concentration of 0.14 ppm (This level may not be exceeded on more than one day per year) Annual average concentration of 0.03 ppm
Ozone	1-hour average concentration of 0.12 ppm (This level may not be exceeded on more than one day per year) 8-hour average concentration of 0.08 ppm
Particulate Matter smaller than 10 microns	24-hour average concentration of 150 $\mu\text{g}/\text{m}^3$ Annual average concentration of 50 $\mu\text{g}/\text{m}^3$
Lead	Quarterly average concentration of 1.5 $\mu\text{g}/\text{m}^3$

## Appendix D

### Digital Photographs



Illinois River – River Site 1



Illinois River – River Site 1



Hill and Crouter Ditch – River Site 2



Hill and Crouter Ditch – River Site 2



Hill and Crouter Ditch – River Site 2



Muskrat Reservoir – Pond 1



Muskrat Reservoir – Pond 1



Elk Pond – Pond 2



Elk Pond – Pond 2



Smith Pond – Black-crowned Night-heron Rookery



Smith Pond – Black-crowned Night-heron Rookery



Historic Refuge Dump – Near Headquarters



Shooting Range – Near Headquarters