

Getting SPoRT LIS data into the Volume Browser (updated September 2015)

For AWIPS II versions 14.4.2 and later.

To make LIS data available through the Volume Browser, take the following steps.

Note: It is considered an AWIPS II best practice to create and edit a local USER file before modifying the SITE localization files. Once testing of the USER file on a local workstation has been completed, then the newly added code can be copied from the USER file to the SITE (XXX) file. Instructions for this are included below. Also, text files with the appropriate code for most of the .xml files (the longer ones) are included in the .tar.gz file.

First, let's change the VbSources file:

1. Open a CAVE session.
2. In CAVE/D2D, go to CAVE→Perspective→Localization...then, in the File Browser window...D2D→Volume Browser→VbSources→local.xml, and open the SITE level local.xml for editing (this file is also located at dx3:/awips2/edex/data/utility/cave_static/site/XXX/volumebrowser/VbSources/local.xml)
3. It may be best to make changes initially to a USER file. If you don't have a USER file already and want to create one, then right click on SITE (XXX), and select Copy To→User (your name).
4. Right click on USER (your name), and select Open With→XML Editor.
5. Somewhere in the file, between the vbSourceList tag, add the following (you may want to place this under a "Local Menu" section)...
`<vbSource key="LIS-CONUS" name="SPoRT LIS" category="Local" />`
6. In the CAVE/D2D menu, select File→Save.

Changing the Level Mapping File:

1. In the Localization File Browser window (opened from step 2 above), go to D2D→Volume Browser→LevelMappingFile.xml, double-click to view the files.
2. Again, you'll probably want to create a USER file if it doesn't already exist, just as above (you may have to do this from the BASE file).
3. Right-click on USER, and select Open With→XML Editor.
4. At the bottom of the file (but before </LevelMappings>), add the following (you may also copy from the volumeBrowserFiles/LevelMappingFile.txt file provided)...

```
<Level displayName="Skin Surface" key="0.0_0.0" group="S">
  <DatabaseLevel levelName="BLS" levelOneValue="0.0"
levelTwoValue="0.0" unit="m" />
</Level>
```

```
<Level displayName="0 to 10cm Below Ground" key="0.0_0.1" group="S">
```

```
<DatabaseLevel levelName="BLS" levelOneValue="0.0"
levelTwoValue="0.1" unit="m" />
</Level>
```

```
<Level displayName="10 to 40cm Below Ground" key="0.1_0.4" group="S">
<DatabaseLevel levelName="BLS" levelOneValue="0.0"
levelTwoValue="0.4" unit="m" />
</Level>
```

```
<Level displayName="40 to 100cm Below Ground" key="0.4_1.0" group="S">
<DatabaseLevel levelName="BLS" levelOneValue="0.4"
levelTwoValue="1.0" unit="m" />
</Level>
```

```
<Level displayName="100 to 200cm Below Ground" key="1.0_2.0" group="S">
<DatabaseLevel levelName="BLS" levelOneValue="1.0"
levelTwoValue="2.0" unit="m" />
</Level>
```

```
<Level displayName="0 to 200cm Below Ground" key="0.0_2.0" group="S">
    <DatabaseLevel levelName="BLS" levelOneValue="0.0"
levelTwoValue="2.0" unit="m" />
</Level>
```

5. In the CAVE/D2D menu, select File→Save.

Changing the planesMenusPlanView file:

1. In the Localization File Browser window, go to CAVE→Menus→volumebrowser→planes→planviewtime-timeseries→lyrs.xml, then double-click to open the file. (note: This is a suggested location, but you may set up your Volume Browser however you wish. If you would prefer to put the below ground menu options in a separate local planes file, then feel free to create one if you don't have one already. You would need to place this local.xml file in ...dx3: /awips2/edex/data/utility/cave_static/user/[your username]/menus/volumebrowser/planes/planviewtime-timeseries/local.xml. Then copy to a SITE level file as appropriate.)
2. Create a USER file if it doesn't already exist (if you desire, or edit the SITE file) and open for editing.
3. At the bottom of the file (but before </contribute> </menuTemplate>), add the following (you may also copy from the volumeBrowserFiles/planesMenusPlanView.txt file provided)...

```
<contribute xsi:type="toolbarSubMenu" menuText="Below Ground">
    <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="Skin Surface" key="0.0_0.0" indentText="false"/>
    <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="0-10cm Below Ground" key="0.0_0.1" indentText="false"/>
    <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="10-40cm Below Ground" key="0.1_0.4" indentText="false"/>
```

```

        <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="40-100cm Below Ground" key="0.4_1.0" indentText="false"/>
        <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="100-200cm Below Ground" key="1.0_2.0" indentText="false"/>
        <contribute xsi:type="menuItem" textLookup="LevelMapping"
menuText="0-200cm Below Ground" key="0.0_2.0" indentText="false"/>
    </contribute>

```

6. In the CAVE/D2D menu, select File→Save.

Changing the fieldsMenus file:

1. In the Localization File Browser window, go to
CAVE→Menus→volumebrowser→fields→planviewtimeseries→other.xml,
double-click to view the files. (note: As above, this is a suggested location to
place these menu options, but you may set up your Volume Browser however
you wish. If you would prefer to put the below ground menu options in a
separate local planes file, then feel free to create one if you don't have one
already. You would need to place this local.xml file in ...dx3:
/awips2/edex/data/utility/cave_static/user/[your
username]/menus/volumebrowser/fields/planviewtime-timeseries/local.xml.
Then copy to a SITE level file as necessary.)
2. If you wish, create a USER file if it doesn't already exist.
3. Right-click on USER (or SITE), and select Open With→XML Editor.
4. Insert the Fields Menu options in the .xml file. (you may also copy from the
volumeBrowserFiles/fieldsMenus.txt file provided)...

```

<contribute xsi:type="toolbarSubMenu" menuText="NASA SPoRT LIS Fields" >
    <contribute xsi:type="menuItem" menuText="Soil Temperature"
key="TSOIL" indentText="false" />
    <contribute xsi:type="menuItem" menuText="Average Surface Skin
Temperature" key="AVSFT" indentText="false" />
    <contribute xsi:type="menuItem" menuText="Relative Soil Moisture"
key="RSM" indentText="false" />
    <contribute xsi:type="menuItem" menuText="Volumetric Soil Moisture"
key="SOILW" indentText="false" />
    <contribute xsi:type="menuItem" menuText="One Week Change in
Column Relative Soil Moisture" key="CHGRSM" indentText="false" />
</contribute>
    <contribute xsi:type="menuItem" menuText="Two Week Change in
Column Relative Soil Moisture" key="CHGRSM14" indentText="false" />
</contribute>
    <contribute xsi:type="menuItem" menuText="One Month Change in
Column Relative Soil Moisture" key="CHGRSM30" indentText="false" />
</contribute>
    <contribute xsi:type="menuItem" menuText="Three Month Change in
Column Relative Soil Moisture" key="CHGRSM90" indentText="false" />
</contribute>
    <contribute xsi:type="menuItem" menuText="Six Month Change in
Column Relative Soil Moisture" key="CHGRSM182" indentText="false" />

```

```

</contribute>
    <contribute xsi:type="menuItem" menuText="One Year Change in
Column Relative Soil Moisture" key="CHGRSM365" indentText="false" />
</contribute>
    <contribute xsi:type="menuItem" menuText="Green Vegetation Fraction"
key="VEG" indentText="false" />
</contribute>

```

5. In the CAVE/D2D menu, select File→Save.

Changing the gridImageryStyleRules file:

1. In the Localization File Browser window, go to CAVE→Style Rules→gridImageryStyleRules.xml, double-click to view the files.
2. Again, you'll probably want to create a USER file if it doesn't already exist.
3. Right-click on USER, and select Open With→XML Editor.
4. Insert the following at the end of the file, but before </styleRuleset> (you may also copy from the volumeBrowserFiles/gridImageryStyleRules.txt file provided)... (NOTE: XXX indicates your three letter office identifier)...

```

<styleRule>
    <paramLevelMatches>
        <parameter>AVSFT</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>F</displayUnits>
        <range levelScale="LINEAR">
            <minValue>-30</minValue>
            <maxValue>130</maxValue>
        </range>
        <defaultColormap>SITE/XXX/LIS_SoilTemp_new</defaultColormap>
        <colorbarLabeling>
            <increment>10</increment>
        </colorbarLabeling>
    </imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>TSOIL</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>F</displayUnits>
        <range levelScale="LINEAR">
            <minValue>-30</minValue>
            <maxValue>130</maxValue>
        </range>
        <defaultColormap>SITE/XXX/LIS_SoilTemp_new</defaultColormap>
        <colorbarLabeling>
            <increment>10</increment>
        </colorbarLabeling>
    </imageStyle>
</styleRule>

```

```

<styleRule>
  <paramLevelMatches>
    <parameter>RSM</parameter>
  </paramLevelMatches>
  <imageStyle>
    <displayUnits>%</displayUnits>
    <range levelScale="LINEAR">
      <minValue>0</minValue>
      <maxValue>100</maxValue>
    </range>
  <defaultColormap>SITE/XXX/LIS_RelativeSoilMoisture</defaultColormap>
  <colorbarLabeling>
    <increment>10</increment>
  </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
  <paramLevelMatches>
    <parameter>SOILW</parameter>
  </paramLevelMatches>
  <imageStyle>
    <displayUnits>%</displayUnits>
    <range levelScale="LINEAR">
      <minValue>0</minValue>
      <maxValue>50</maxValue>
    </range>
  <defaultColormap>SITE/XXX/LIS_VolumetricSoilMoisture</defaultColormap>
  <colorbarLabeling>
    <increment>10</increment>
  </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
  <paramLevelMatches>
    <parameter>CHGRSM</parameter>
  </paramLevelMatches>
  <imageStyle>
    <displayUnits>%</displayUnits>
    <range levelScale="LINEAR">
      <minValue>-50</minValue>
      <maxValue>50</maxValue>
    </range>
  <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
  <colorbarLabeling>
    <increment>10</increment>
  </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
  <paramLevelMatches>
    <parameter>CHGRSM14</parameter>

```

```

        </paramLevelMatches>
        <imageStyle>
            <displayUnits>%</displayUnits>
            <range levelScale="LINEAR">
                <minValue>-50</minValue>
                <maxValue>50</maxValue>
            </range>
        <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
        <colorbarLabeling>
            <increment>10</increment>
        </colorbarLabeling>
    </imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>CHGRSM30</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>%</displayUnits>
        <range levelScale="LINEAR">
            <minValue>-50</minValue>
            <maxValue>50</maxValue>
        </range>
    <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
    <colorbarLabeling>
        <increment>10</increment>
    </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>CHGRSM90</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>%</displayUnits>
        <range levelScale="LINEAR">
            <minValue>-50</minValue>
            <maxValue>50</maxValue>
        </range>
    <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
    <colorbarLabeling>
        <increment>10</increment>
    </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>CHGRSM182</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>%</displayUnits>

```

```

        <range levelScale="LINEAR">
            <minValue>-50</minValue>
            <maxValue>50</maxValue>
        </range>
    <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
    <colorbarLabeling>
        <increment>10</increment>
    </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>CHGRSM365</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>%</displayUnits>
        <range levelScale="LINEAR">
            <minValue>-50</minValue>
            <maxValue>50</maxValue>
        </range>
    <defaultColormap>SITE/XXX/LIS_WeeklyChange_1</defaultColormap>
    <colorbarLabeling>
        <increment>10</increment>
    </colorbarLabeling>
</imageStyle>
</styleRule>
<styleRule>
    <paramLevelMatches>
        <parameter>VEG</parameter>
    </paramLevelMatches>
    <imageStyle>
        <displayUnits>%</displayUnits>
        <range levelScale="LINEAR">
            <minValue>0</minValue>
            <maxValue>100</maxValue>
        </range>
    <defaultColormap>SITE/XXX/LIS_Greenfrac</defaultColormap>
    <colorbarLabeling>
        <increment>10</increment>
    </colorbarLabeling>
</imageStyle>
</styleRule>

```

Changing the d2dContourStyleRules file:

1. In the Localization File Browser window, go to CAVE→Style Rules→d2dContourStyleRules.xml, double-click to view the files.
2. Create a USER file if it doesn't already exist.
3. Right-click on USER, and select Open With→XML Editor.

4. Insert the following code at the bottom of the .xml file but before </styleRuleset> (you may also copy from the volumeBrowserFiles/d2dContourStyleRules.txt file provided).....

```
<styleRule>
  <paramLevelMatches>
    <parameter>AVSFT</parameter>
    <parameter>TSOIL</parameter>
  </paramLevelMatches>
  <contourStyle>
    <displayUnits>F</displayUnits>
    <contourLabeling labelSpacing=45
      <increment>5</increment>
    </contourLabeling>
  </contourStyle>
</styleRule>
<styleRule>
  <paramLevelMatches>
    <parameter>SOILW</parameter>
    <parameter>RSM</parameter>
    <parameter>CHGRSM</parameter>
    <parameter>CHGRSM14</parameter>
    <parameter>CHGRSM30</parameter>
    <parameter>CHGRSM90</parameter>
    <parameter>CHGRSM182</parameter>
    <parameter>CHGRSM365</parameter>
  </paramLevelMatches>
  <contourStyle>
    <displayUnits>%</displayUnits>
    <contourLabeling labelSpacing=45
      <increment>10</increment>
    </contourLabeling>
  </contourStyle>
</styleRule>
<styleRule>
  <paramLevelMatches>
    <parameter>VEG</parameter>
  </paramLevelMatches>
  <contourStyle>
    <displayUnits>%</displayUnits>
    <contourLabeling labelSpacing=45
      <increment>10</increment>
    </contourLabeling>
  </contourStyle>
</styleRule>
```

You will need to restart CAVE to see these changes made. Once you have experimented with the new LIS data and made sure the imagery is displaying properly, you can then

right-click each .xml file edited above (USER) and select Copy To→SITE (unless you have just edited the SITE level files). This will overwrite the SITE file with the edits in your USER file and will now apply to all LX workstations in your office. Voila! You are finished!

If you have any questions or concerns, please contact me (kris.white@noaa.gov, 256-890-8503 ext. 232) or a member of the SPoRT team.