USDA ARS Watersheds

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AMSR-E U.S. Soil Moisture Validation Sites

Reynolds Creek, ID
Walnut Gulch, AZ
Little Washita, OK
Little River, GA
## Expanding the Networks

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Type</th>
<th># Sensors</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walnut Gulch, AZ</td>
<td>Semi-Arid</td>
<td>19 (21)</td>
<td>20 min</td>
</tr>
<tr>
<td>Reynolds Creek, ID</td>
<td>Mountainous</td>
<td>16</td>
<td>1 hour</td>
</tr>
<tr>
<td>Little River, GA</td>
<td>Forest</td>
<td>19 (++)</td>
<td>30 min</td>
</tr>
<tr>
<td>Little Washita, OK</td>
<td>Grazingland</td>
<td>20</td>
<td>30 min</td>
</tr>
<tr>
<td>Fort Cobb, OK</td>
<td>Cropland</td>
<td>15</td>
<td>30 min</td>
</tr>
<tr>
<td>Walnut Creek, IA</td>
<td>Cropland</td>
<td>10</td>
<td>30 min</td>
</tr>
<tr>
<td>St. Joseph’s, IN</td>
<td>Cropland</td>
<td>pending</td>
<td></td>
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<tr>
<td>Watershed</td>
<td>Type</td>
<td># Sensors</td>
<td>Reporting</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Little Washita, OK</td>
<td>Grazingland</td>
<td>20</td>
<td>30 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5, 25, 45 cm</td>
<td></td>
</tr>
</tbody>
</table>
Little Washita-SMEX03 Comparison

RMSE=0.009 m³/m³
Fort Cobb, OK

Watershed: Fort Cobb, OK
Type: Agriculture
# Sensors: 15
5, 25, 45 cm
Reporting: 30 min
Reynolds Creek, ID

Watershed: Reynolds Creek, ID
Type: Mountainous
# Sensors: 16
5 cm +
Reporting: 1 hour
Watershed: Little River, GA
Type: Forest
# Sensors: 19 +
5, 15, 30 cm
Reporting: 30 min
Little River-SMEX03 Comparison

Bosch et al. 2006
Walnut Gulch, AZ

Watershed
Walnut Gulch, AZ

Type
Semi-Arid

# Sensors
19 +
5 cm *

Reporting
20 min
Walnut Gulch-SMEX04 Comparison

RMSE ~ .009 m³/m³
<table>
<thead>
<tr>
<th>Watershed</th>
<th>Type</th>
<th># Sensors</th>
<th>Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walnut Creek, IA</td>
<td>Plains</td>
<td>9</td>
<td>30 min</td>
</tr>
<tr>
<td></td>
<td>5 cm</td>
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</table>

Since 2006
<table>
<thead>
<tr>
<th>Watershed</th>
<th>Time Lag</th>
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</thead>
<tbody>
<tr>
<td>Little Washita, OK</td>
<td>30 Min</td>
</tr>
<tr>
<td>Fort Cobb, OK</td>
<td>30 Min</td>
</tr>
<tr>
<td>Reynolds Creek, ID</td>
<td>Daily</td>
</tr>
<tr>
<td>Little River, GA</td>
<td>Daily</td>
</tr>
<tr>
<td>Walnut Gulch, AZ</td>
<td>Daily</td>
</tr>
<tr>
<td>Walnut Creek, IA</td>
<td>Monthly</td>
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