

Seeds of success: Using PhoneGap and Leaflet to build mobile apps

Charlie Schrader-Patton – Senior Analyst/Developer



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IMAGES INTO INFORMATION



The Right Seed in the Right Place at the Right Time:
Tools for Sustainable Restoration



Why Seed Origin Matters

Jameson Crumpler – The Roaming Ecologist – healthlandethic.com

"VNS" Blue Grama (*Bouteloua gracilis*)

Variety Not Stated = Origin(s) unknown

Restoration use potential = unproven/none



'Hachita' Blue Grama (*Bouteloua gracilis*)

Cultivar origin ca. 285mi W of evaluation site

Restoration use potential = high/very high

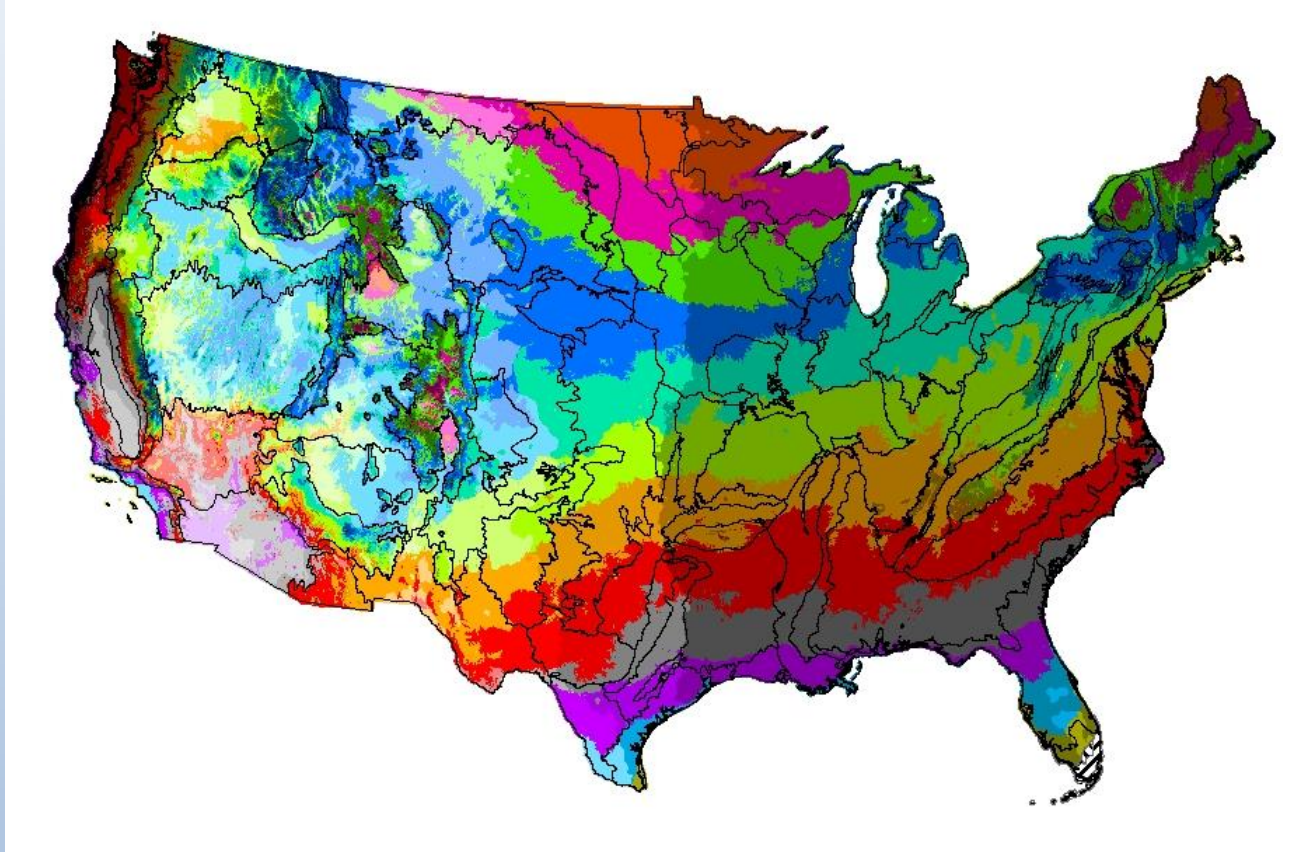


Photos © Jameson Crumpler/The Roaming Ecologist 2015

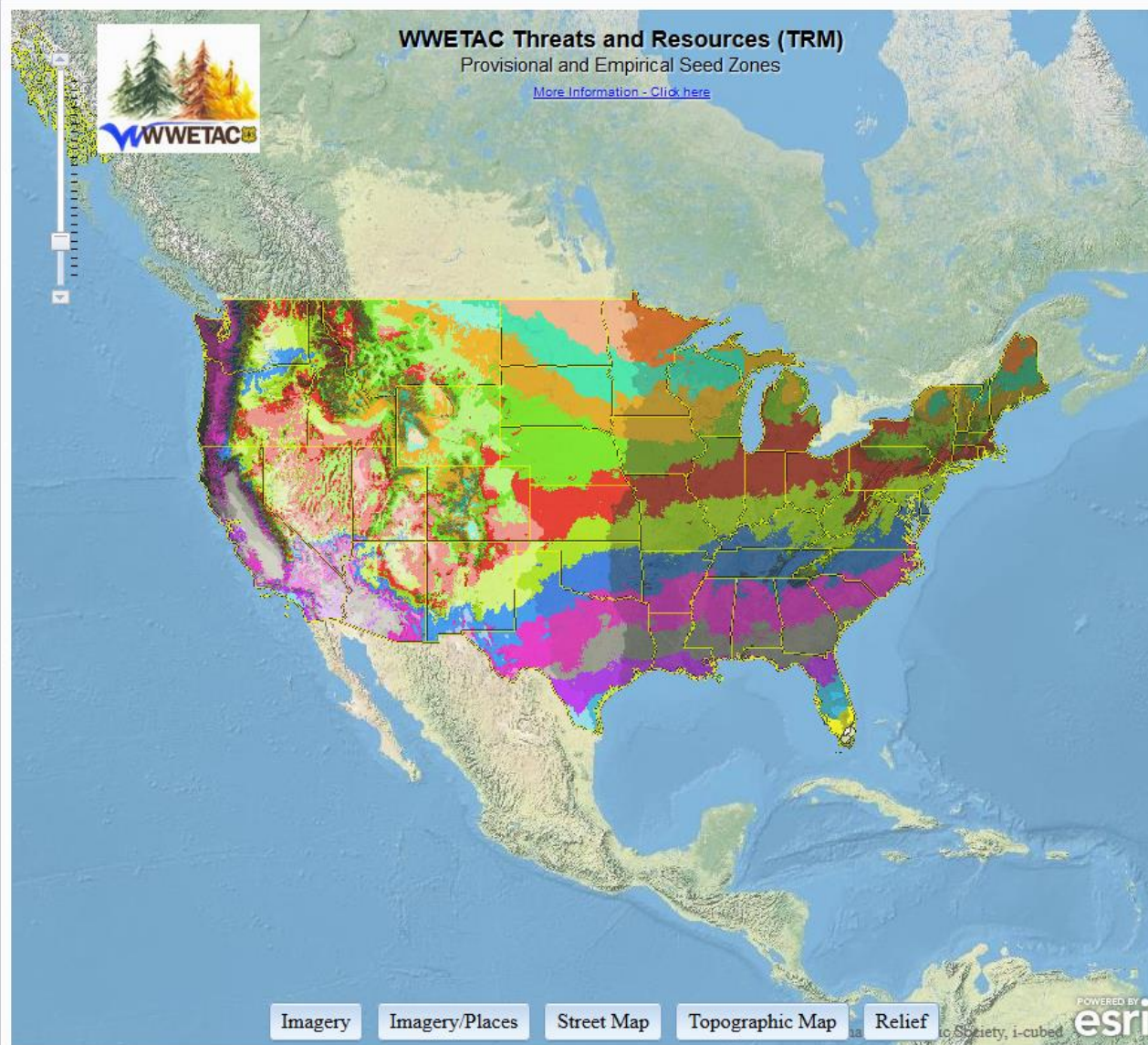
Use of seed with unknown origin(s), such as "VNS" or "Origin: Not Stated", increases risk of planting failure. *Always* purchase **certified seed** of commercial cultivars whenever possible. Their origin(s) are known and their use is proven for a given area. *Certification proves origin!*



Seed Zones + Level III Ecoregions



Bower, A., St Clair, B., Erickson, V. 2014. Generalized provisional seed zones for native plants. *Ecological Applications* 24(5): 913-919. <https://www.fs.fed.us/wwetac/threat-map/seedZones/doc/Ecol%20Apps%20Prov%20Seed%20Zones%202014.pdf>



Legend

Boundary Layers

Provisional Seed Zones

Empirical Seed Zones

Tools

Cursor Coordinates:

Lat: 59.97

Long: -86.356

Active Layer:

Boundaries-State & County

Change Active Layer

Transparency:

Active Layer for Identify:

Emp.Seed Zones-Sandberg Bluegr

Zoom To Point:

Enter the X-Coordinate
(Longitude, -125 to -67):

-120.8090

Enter the Y-Coordinate
(Latitude, 24 to 49):

44.3020

Zoom To Location

Export Map:

Select the output format:

ArcGIS®

Collector



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Details

Seed_collect_data
long:-121.353844 lat:44.065109
Edited by cspatton seconds ago

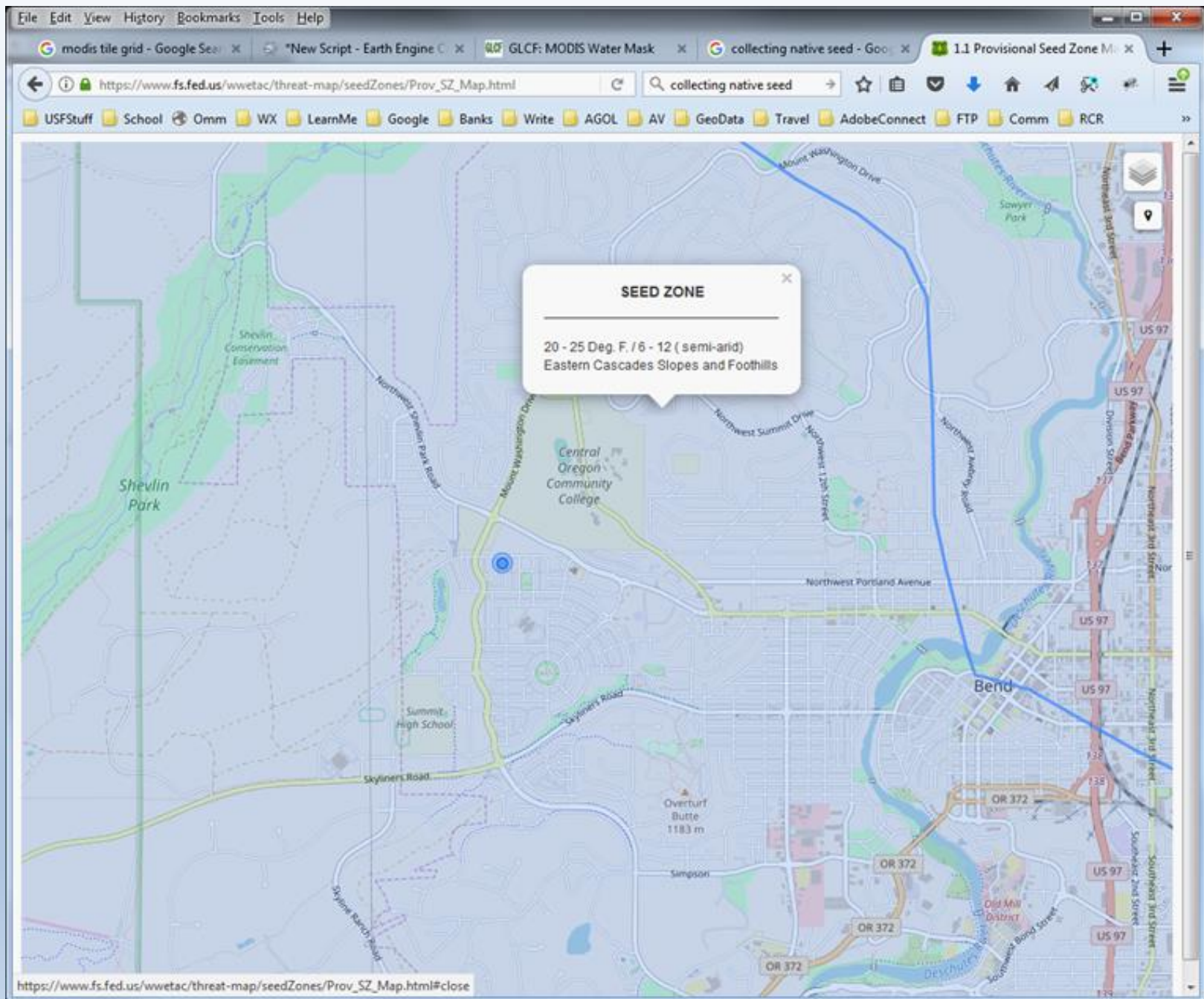
REF NUMBER
1234

DATE
August 01, 2016 Use current

COLLECTOR CODE
xyz

COLLECTION NUMBER
8

GENUS
Poa



- Simple:
 - Map, id of seed zone
 - No use restrictions (AGOL)
- Downloading of data for field locations not necessary.
- iOS and Android – single code source.



Web page
(HTML, CSS, Javascript)



Mobile Atlas Creator
(Map tiles)

Seed Zones shapefile



Adobe
PhoneGap



- Statewide apps – OR, WA, CA, ID, AZ, NM, UT, CO, MT, WY, NV
- Auto switch between connected/disconnected environments
- OSM base map, Imagery available (on-line only)
- Geolocation using device GPS

