

An Introduction to the Vegetation Outlook (VegOut)

*Nebraska Grazing Lands Coalition
Kearney, NE
August 10, 2009*



What is VegOut?

A new experimental tool that provides a series of maps depicting future outlooks of general vegetation conditions (seasonal greenness) based on an analysis of:

- 1) climate-based drought indices
- 2) satellite-based observations of vegetation
- 3) general biophysical characteristics of the environment
- 4) oceanic indicators



VegOut Products

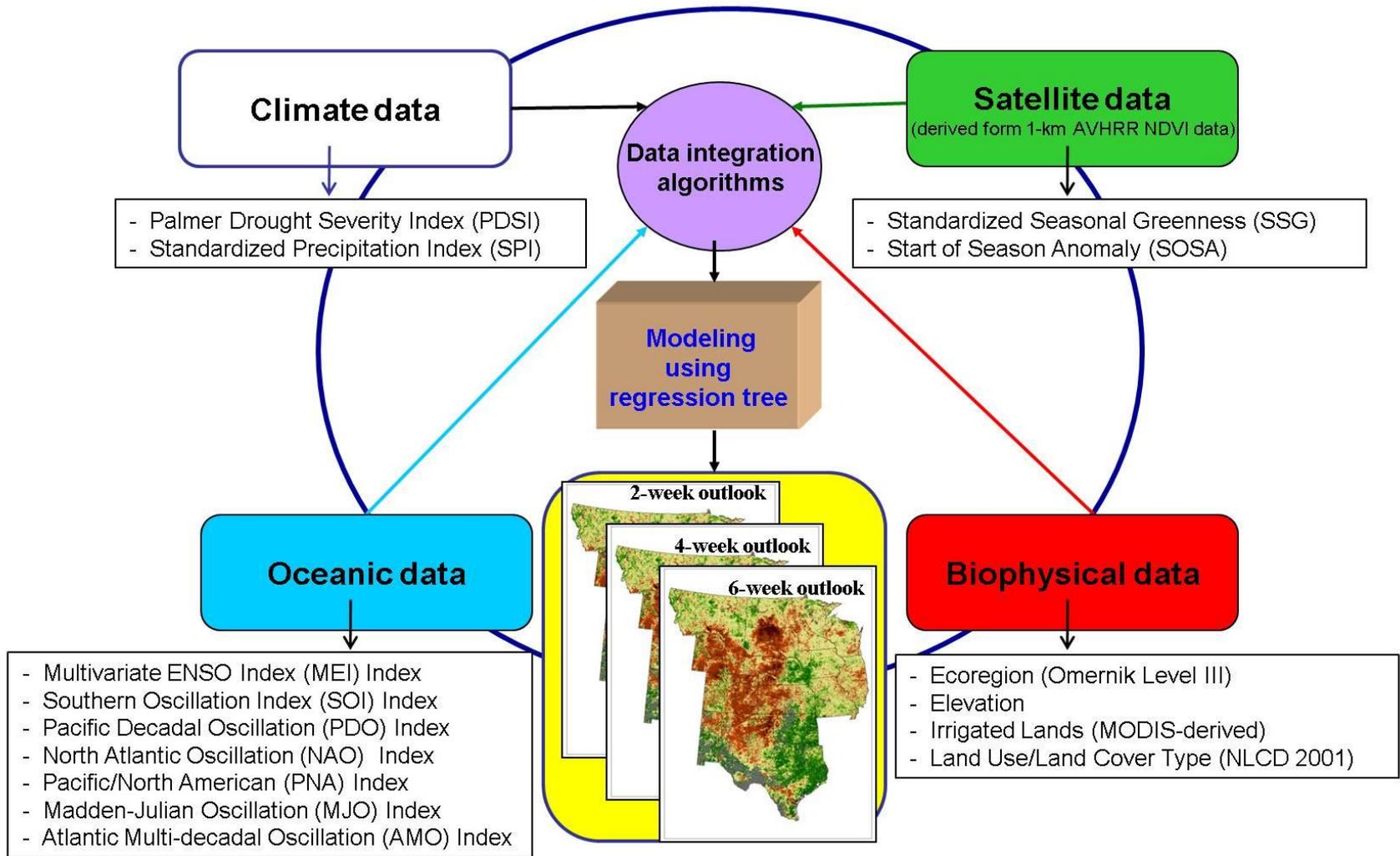
Series of 3 maps depicting future outlooks of general vegetation conditions at a 1-km² spatial resolution that are updated every 2 weeks during the growing season.

- 1) 2-week Vegetation Outlook map
- 2) 4-week Vegetation Outlook map
- 3) 6-week Vegetation Outlook map

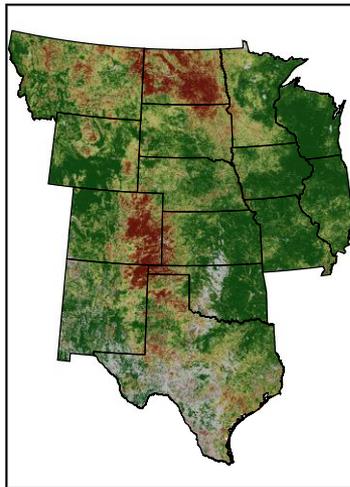
* Release of initial semi-operational VegOut products is planned for the Spring 2010.



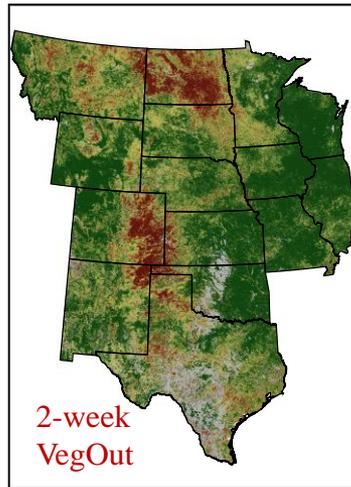
Overview of the Vegetation Outlook (VegOut) Model



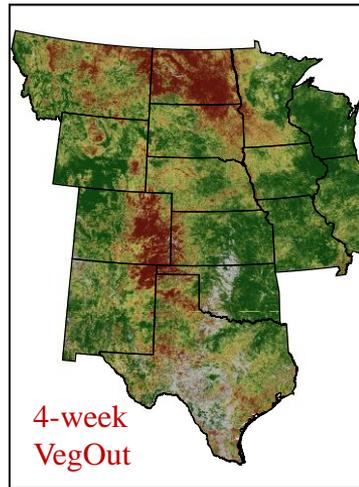
VegOut Results for the Central U.S.



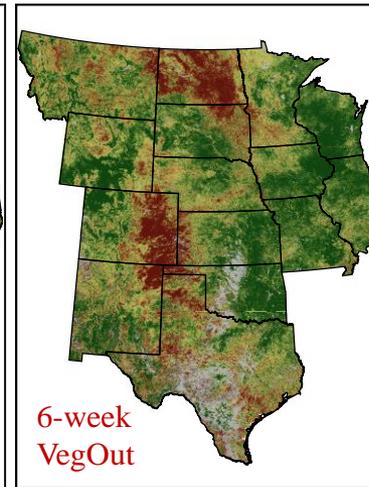
(a) Observed SSG for
July 28, 2008



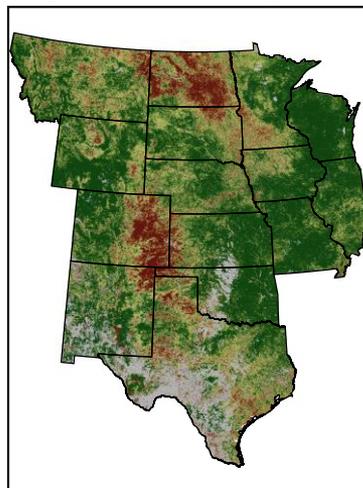
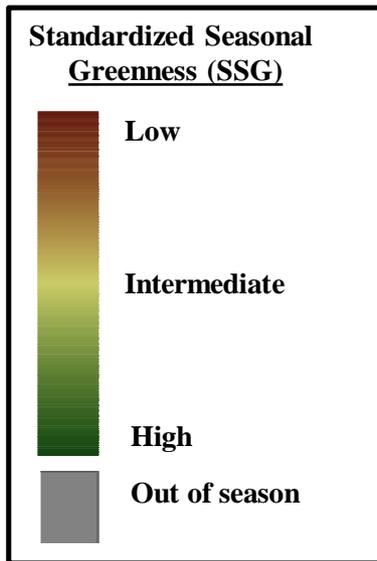
(b) 2-week SSG
prediction for August 11



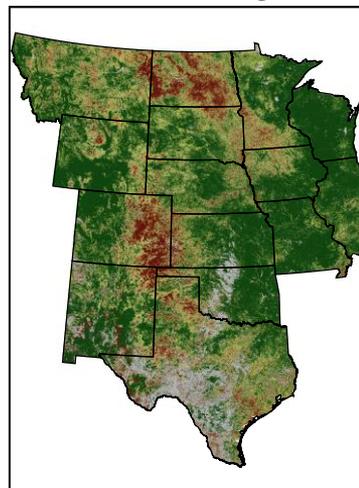
(c) 4-week SSG
prediction for August 25



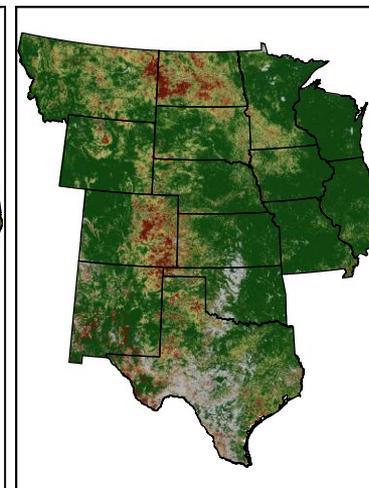
(d) 6-week SSG
prediction for September 8



(e) Observed SSG for
August 11

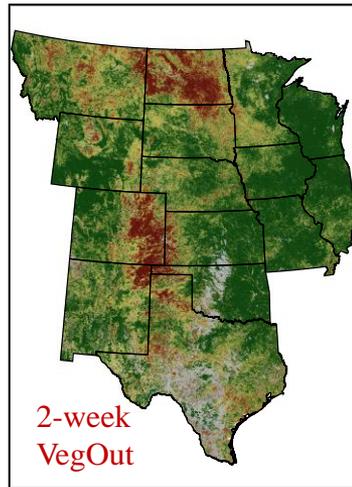
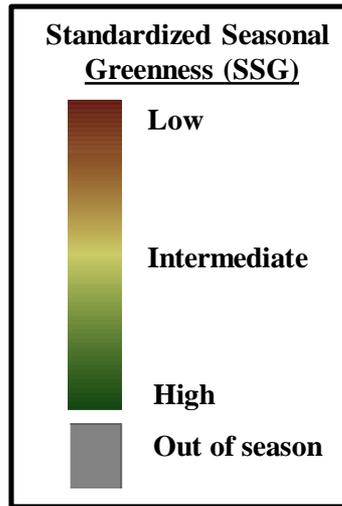


(f) Observed SSG for
August 25

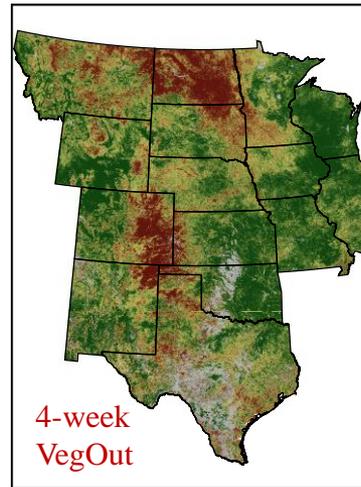


(g) Observed SSG for
September 8

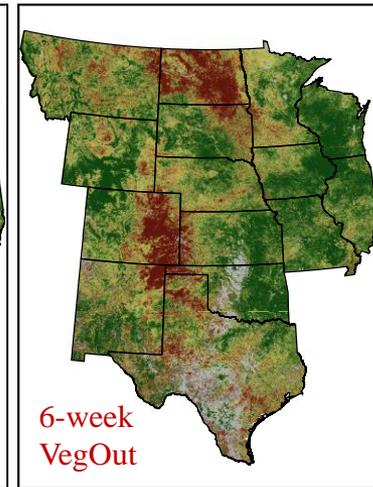
Performance of VegOut



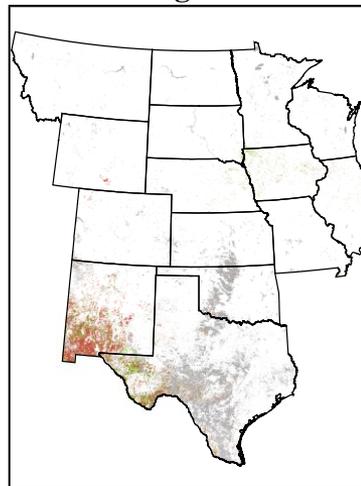
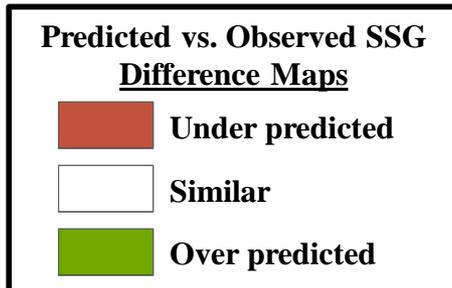
2-week SSG prediction
for August 11



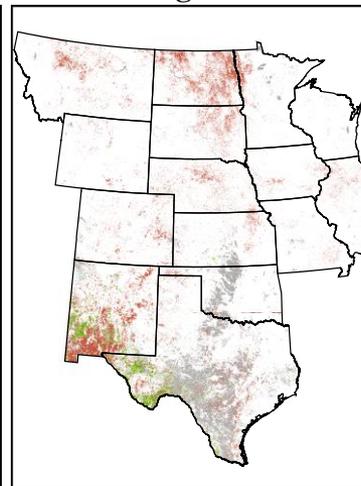
4-week SSG prediction
for August 25



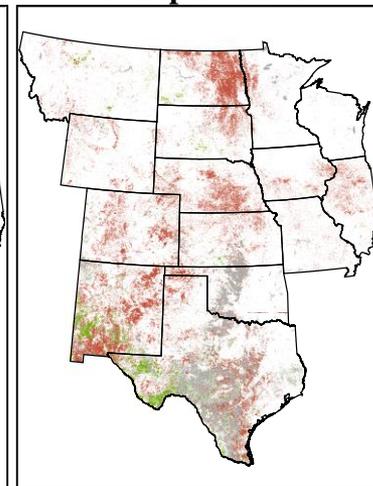
6-week SSG prediction
for September 8



Difference map for
August 11

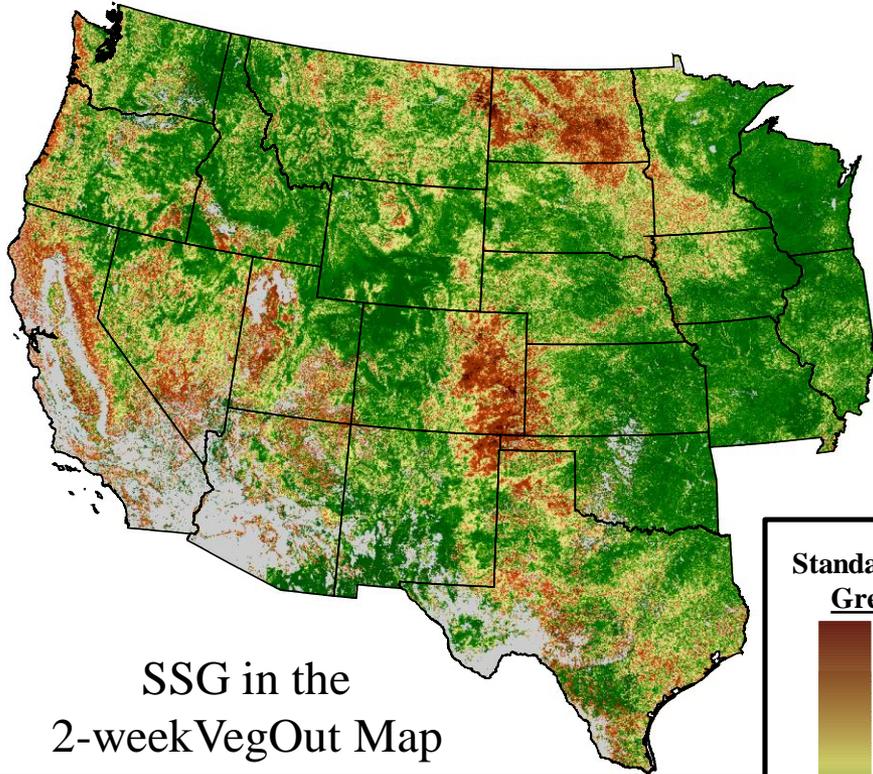


Difference map for
August 25

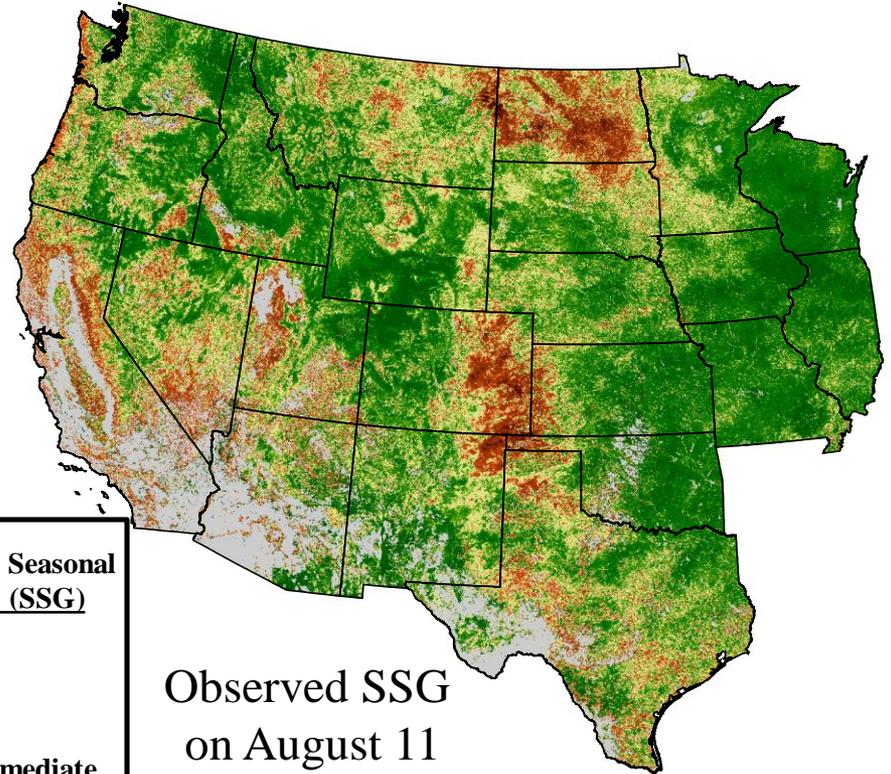


Difference map for
September 8

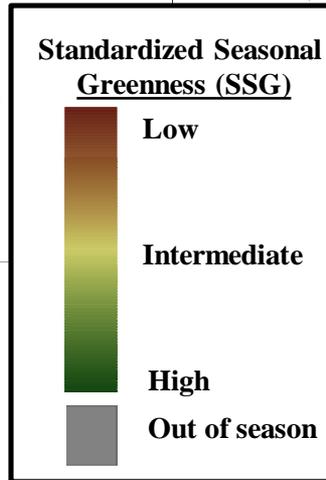
Expansion of VegOut to the Western U.S.



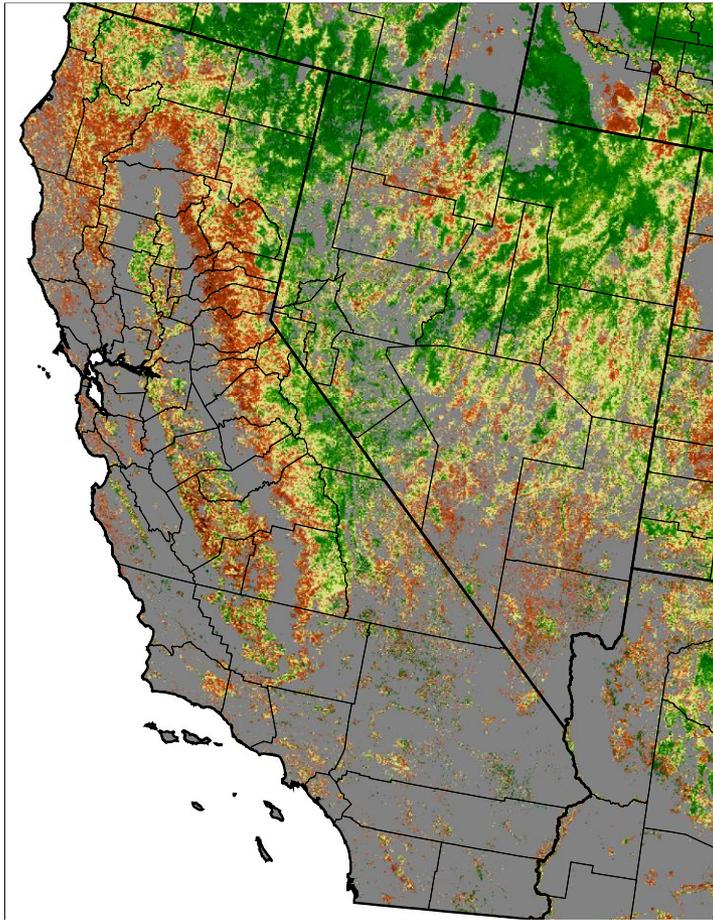
SSG in the
2-week VegOut Map
for August 11



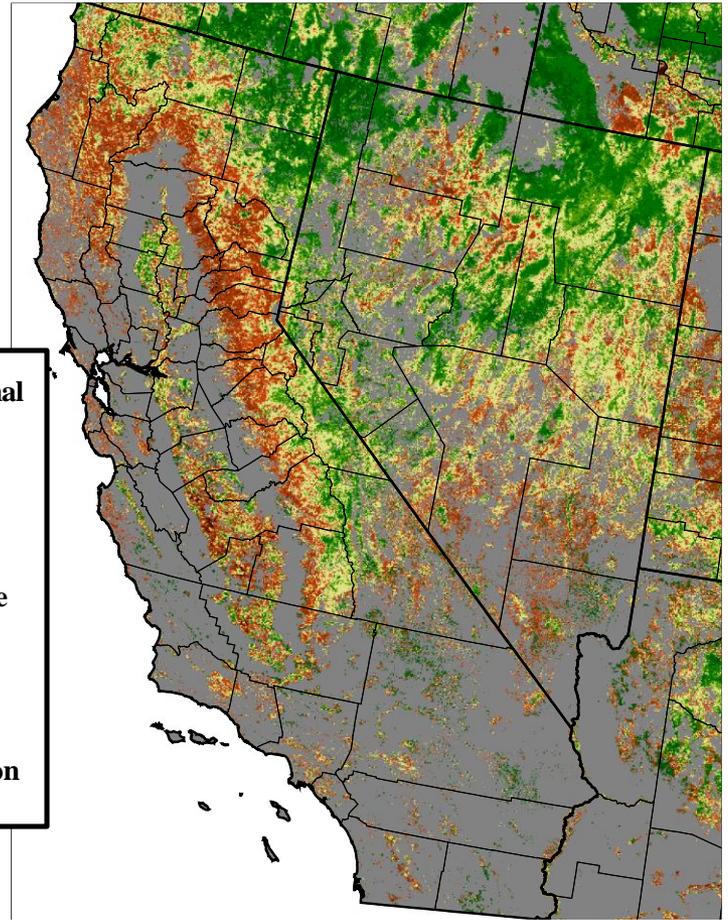
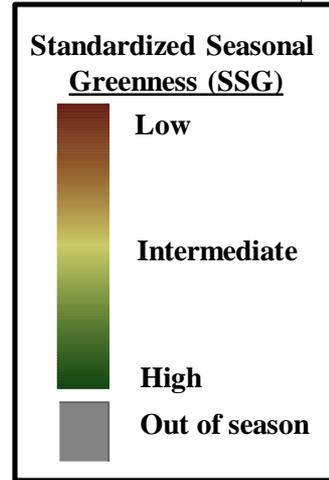
Observed SSG
on August 11



Expansion of VegOut to the Western U.S.



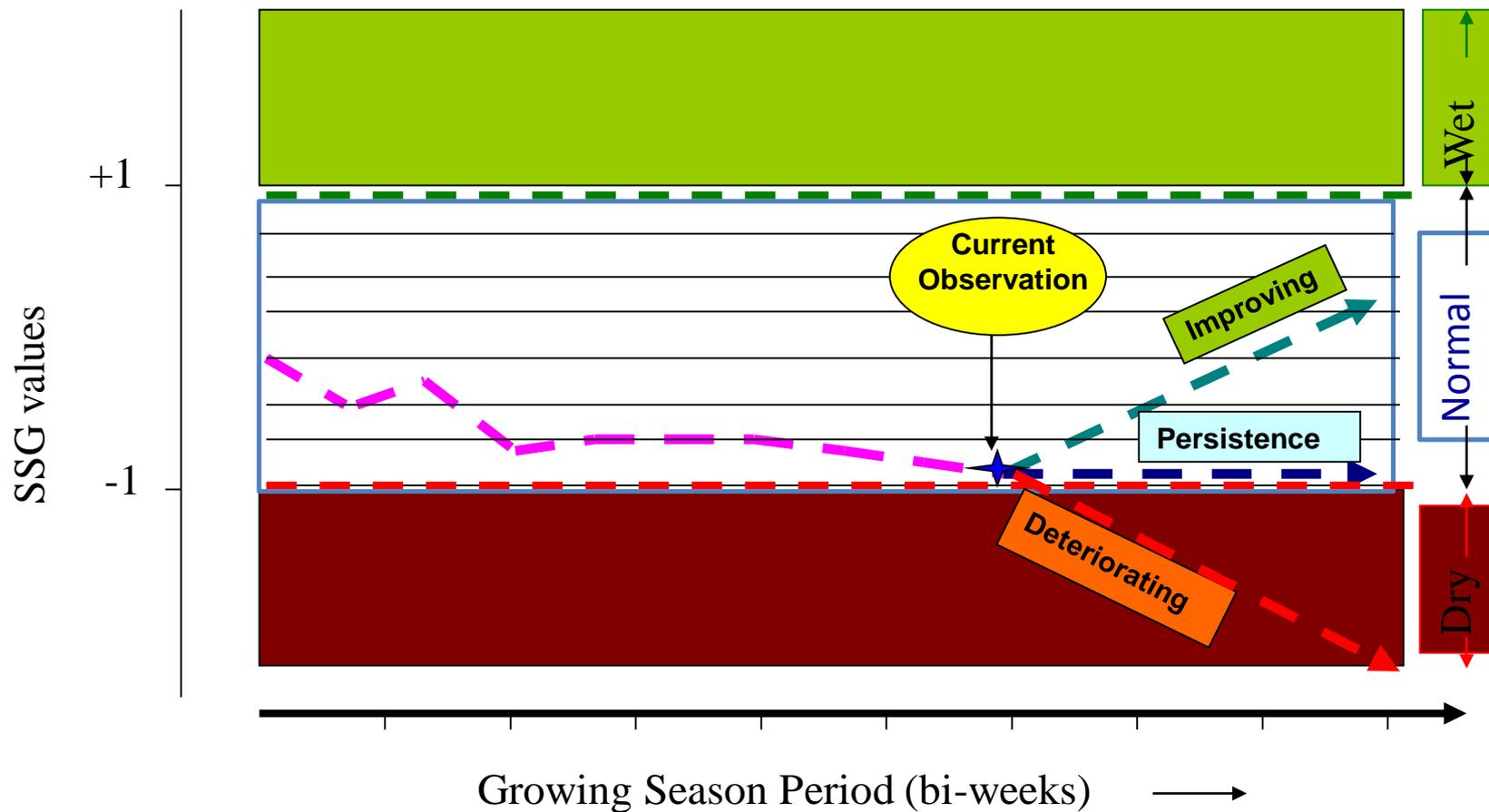
Predicted SSG in the
2-week VegOut Map
for August 11



Observed SSG
on August 11

Scenario-based VegOut

(“Whisk-broom” method)



Scenario-based VegOut

(currently under development)

The series of VegOut maps (2-, 4-, and 6-week outlooks) would be generated for 3 different precipitation scenarios over the 3 outlook period intervals:

1) **DRY Scenario:**

Precipitation is less than 50 % of normal.

2) **NEAR-NORMAL Scenario:**

Precipitation is between 50 & 150 % of normal.

3) **WET Scenario :**

Precipitation is more than 150 % of normal.



Future Activities

- VegOut website to post experimental maps for review by general public – Winter 2009/2010.
- Semi-operational maps production – Spring 2009.
- Develop ‘scenario-based’ VegOut
- Identify and test VegOut for specific applications and various user communities.



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