Summary:
The Soil Agricultural Groundwater Banking Index (SAGBI) is a suitability index for groundwater recharge on agricultural land. The SAGBI is based on five major factors that are critical to successful agricultural groundwater banking: deep percolation, root zone residence time, topography, chemical limitations, and soil surface condition.

There are two versions of the SAGBI: Unmodified and Modified. The Unmodified layer shows suitability using soil data as mapped by the USDA-NRCS Soil Survey Geographic Database (SSURGO). The Modified layer is a hypothetical layer that assumes that all soils with restrictive layers have been modified by deep tillage, thereby increasing their permeability.

More details about the SAGBI can be found in the article in California Agriculture located at http://calag.ucanr.edu/archive/?article=ca.v069n02p75

Description:
Groundwater pumping chronically exceeds natural recharge in many agricultural regions in California. A common method of recharging groundwater — when surface water is available — is to deliberately flood an open area, allowing water to percolate into an aquifer. However, open land suitable for this type of recharge is scarce. Flooding agricultural land during fallow or dormant periods has the potential to increase groundwater recharge substantially, but this approach has not been well studied. Using data on soils, topography and crop type, we developed a spatially explicit index of the suitability for groundwater recharge of land in all agricultural regions in California.

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Field Definitions:
areasymbol – symbol representing the SSURGO survey area
spatialver – number used to denote the serial version of the SSURGO spatial data for a soil survey
musym – symbol used to identify the soil map unit in the SSURGO soil survey
mukey – string used to uniquely identify the SSURGO map unit
mukey_num – same as mukey field, but in numeric format
acres – area in acres of the mapped polygon
mukey_1 – duplicate of mukey field
cokey – string used to identify the dominant component of the SSURGO map unit
deep_perc – suitability score (0-100) for the deep percolation SAGBI factor
rt_zn_res_ – suitability score (0-100) for the root zone residence time SAGBI factor
toxicity – suitability score (0-100) for the toxicity SAGBI factor
topo_rest – suitability score (0-100) for the topographic restrictions SAGBI factor
surf_cond – suitability score (0-100) for the surface condition SAGBI factor
restrictns – description of the dominant component's restrictive layers
sagbi – overall SAGBI suitability score (0-100)

rat_grp – rating group associated with the SAGBI score
slope_l – slope gradient (low value) of the dominant component
slope_h – slope gradient (high value) of the dominant component
compname – name of the dominant soil component
taxsubgrp – the taxonomic subgroup of the dominant component

Suggested Symbology:

SAGBI Score	Rating Group	RGB values
85 – 100	Excellent	38, 115, 0
69 - 85	Good	152, 230, 0
49 - 69	Moderately Good	255, 255, 0
29 - 49	Moderately Poor	255, 170, 0
15 - 29	Poor	255, 85, 0
0 - 15	Very Poor	168, 0, 0

Access Constraints: None

Use Constraints: Please contact Toby O'Geen prior to use.

Data Distribution: Please contact Toby O'Geen.

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