SAN MATEO COUNTY
RESOURCE
CONSERVATION
DISTRICT

PHONE: 650.712.7765

625 Miramontes Street, Ste.103, Half Moon Bay, CA 94019
www.sanmateoRCD.org

DRAFT Minutes of the Regular Meeting of the Board of Directors
December 15, 2016
Location: RCD Office

Directors present: TJ Glauthier, Barbara Kossy, Neal Kramer, Jim Reynolds
Staff present: RCD – Renee Moldovan, Kellyx Nelson, Jarrad Fisher
NRCS – N/A
Guests: N/A

1. **Call to Order**
   - The meeting was called to order at 4:15pm.
2. **Introduction of Guests and Staff**
3. **Public Comment**
   - None
4. **Approval of Agenda**

   4.1. Kossy moved to approve the agenda. Kramer seconded the motion. Motion to approve the agenda passed unanimously.
5. **Consent Agenda**

   5.1. November 22, 2016 Draft Regular Meeting Minutes
   - Correction: California Invasive Plant Council, not consortium.

   5.2. November 2016 Draft Financial Statements
6. **Discussion Items**

   6.1. Executive Director Report
   - Cannabis farming – there are concerns regarding public health and crop farming in San Mateo County.
   - Pescadero Marsh
     - Article was published outlining the work that has been accomplished. (ATTACH?)
     - Potential new funding/support from Coastal Conservancy, Dept. Fish and Wildlife, NOAA, and State Parks to address fish kills and flooding in Pescadero Marsh.
     - County has contracted with the RCD for Pescadero flooding work.
   - Samples will be taken at ranches for bacteria monitoring for total maximum daily load (TMDL)

- Toilet rebate program is being expanded to include all of Pescadero, Butano and San Gregorio Watersheds. Timeline is also being extended and is pending approval from County.
- Repetto and Cloverdale Gully are still in construction.
- Teaching program
  - There is a potential partnership opportunity between TomKat and RCD to educate on soils, geology, etc.
  - Nelson would like to host a speak off.
  - Nelson would like to start a Youth Associate Director position to engage youth on restoration topics.

6.2. Directors' Report

- Rich Casale will be retiring (District Conservationist for Santa Cruz). Glauthier suggested that directors send a commemoration letter, to be presented at his retirement event.
- Glauthier noted that we still want to plan an event at his home for staff and Board to get together and get acquainted. Email will be circulated to pin down a date and time.

6.3. Mid-year Budget Review

- There was discussion about how current projections (based on actual and anticipated revenues and expenses) compare to the Board approved budget for FY '17, and discussion about individual line items with variances.
- Final numbers from FY '16 will be discussed at the January meeting.

6.4. Presentation on Conservation Grazing by Kevin Watt, Board Member (ATTACHMENT A)

- Center for Food Safety- Soil Solutions Video with Michael Pollen
  - Storing atmospheric carbon as soil carbon is an available solution for helping to transform excess GHG from Earth's atmosphere into stable and productive soils.
- TomKat Ranch Education Foundation's mission is to provide healthy food on working lands in a way that sustains the planet and inspires other to action.
  - Conservation and production agriculture benefit from improved soil health. Productive and diverse grasslands help to grow healthy soils through photosynthesis, which then store more water and grow more healthy and diverse grasses that continue and accelerate the cycle.
  - Regenerative grazing systems can be an effective way to help promote more productive and diverse grasslands and produce healthy food.
    - It is important to create grazing strategies that fit the specific landscape they take place on. There is no cookie cutter model. All of the successful systems share an on-going cycle of clear planning, rigorous record keeping, and sensitive monitoring.
      - TomKat Ranch's grass-fed beef herd is used as a land management tool as well as for food production. Its overall goal is graze in order to increase net

primary production (productivity) and biological diversity (resilience) on its lands.

- ♦ TomKat Ranch has also used Horses, Pigs, and Poultry in its land management to provide different, but complementary, grazing services.
- ♦ TomKat Ranch monitors its ecological impact through participation in Point Blue Conservation Science's Rangeland Monitoring Network (RMN). The RMN tracks stream flow, wildlife, vegetation, and soil health (water infiltration, bulk density, and carbon) on TomKat Ranch. TomKat Ranch shares these data freely on their website to inspire other ranchers to begin monitoring.

– Net primary production and the biodiversity of flora and fauna has increased as regenerative grazing management has been implemented on TomKat Ranch. Native and perennial grasses have been expanding without any seed, spray, or fertilizer use.

– TomKat Ranch is now working to help support the development of more cost-effective monitoring and planning tools to help other ranchers. Some of these tools include PastureMap for grazing planning and TerrAvion for high-resolution monitoring.

– TomKat Ranch works with universities, land trusts, NRCS/RCD, and individual ranchers to help discover and share the most effective strategies for increasing the productivity and resilience of rangelands.

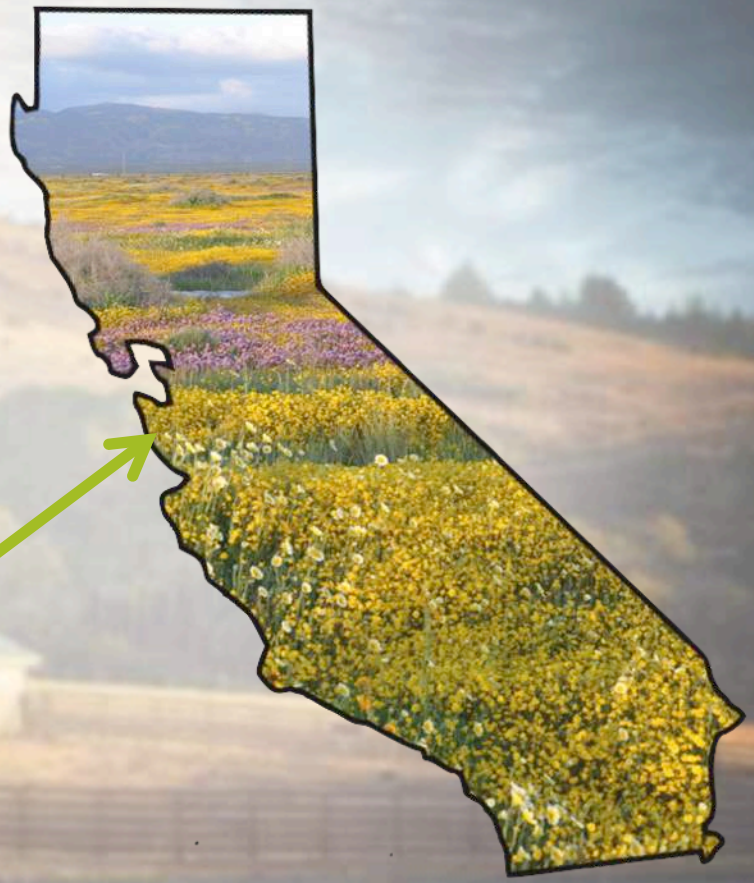
7. <u>Adjourn</u>

- Meeting adjourned at 6:08pm.
- Next meeting will be January 26th at 4:00pm.

Providing healthy food on working lands in a way that sustains the planet and inspires others to action.

TomKat Ranch
Educational Foundation

We provide healthy food on working lands in a way that sustains the planet and inspires others to action.



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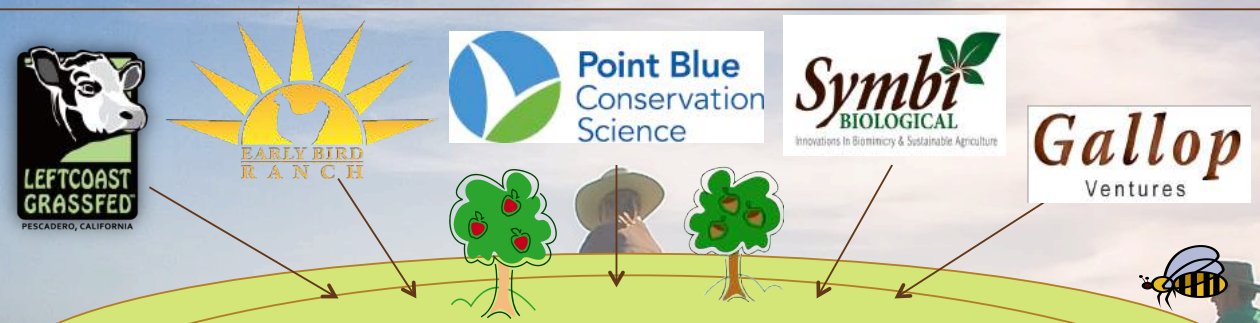
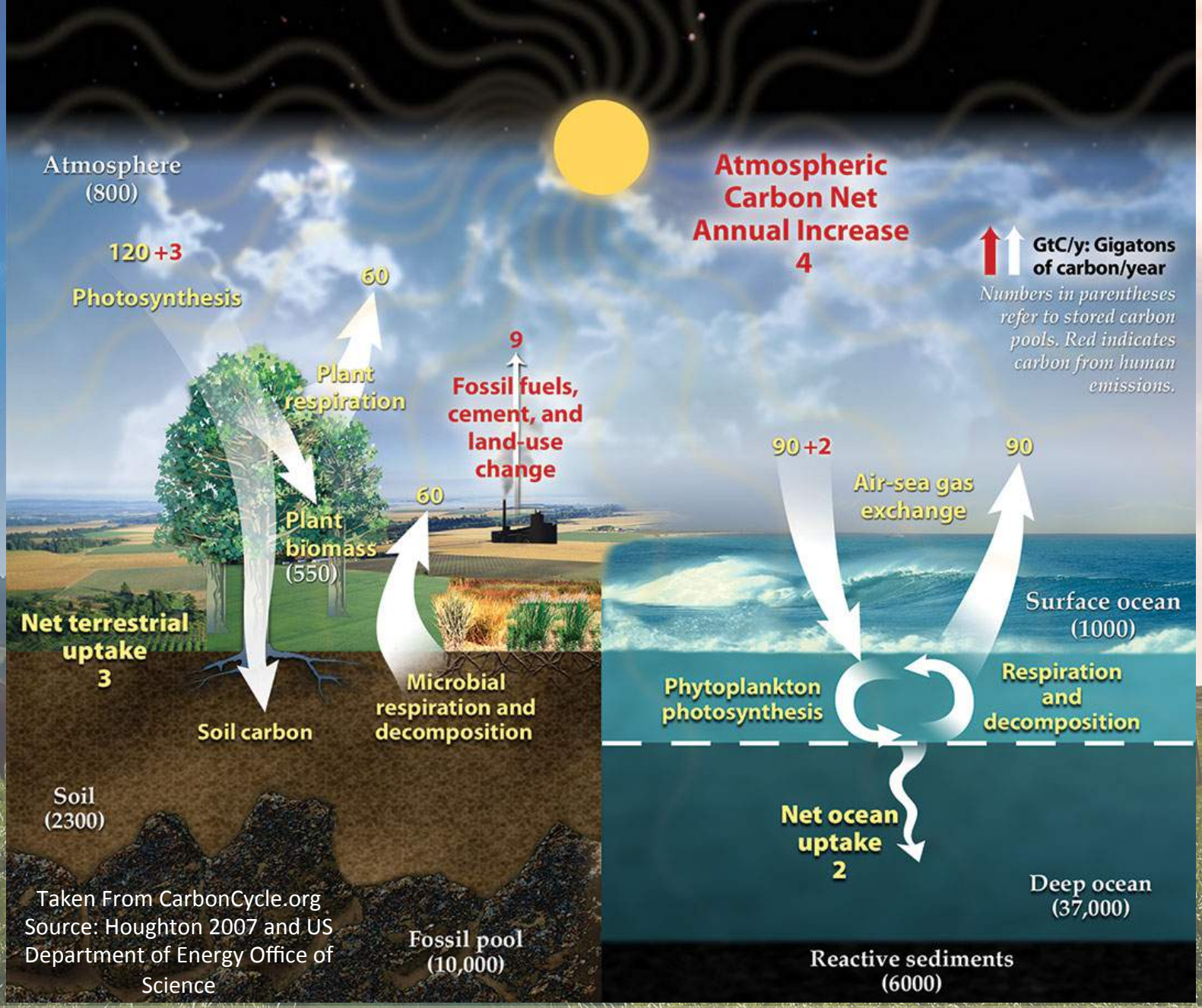
The Learning Laboratory



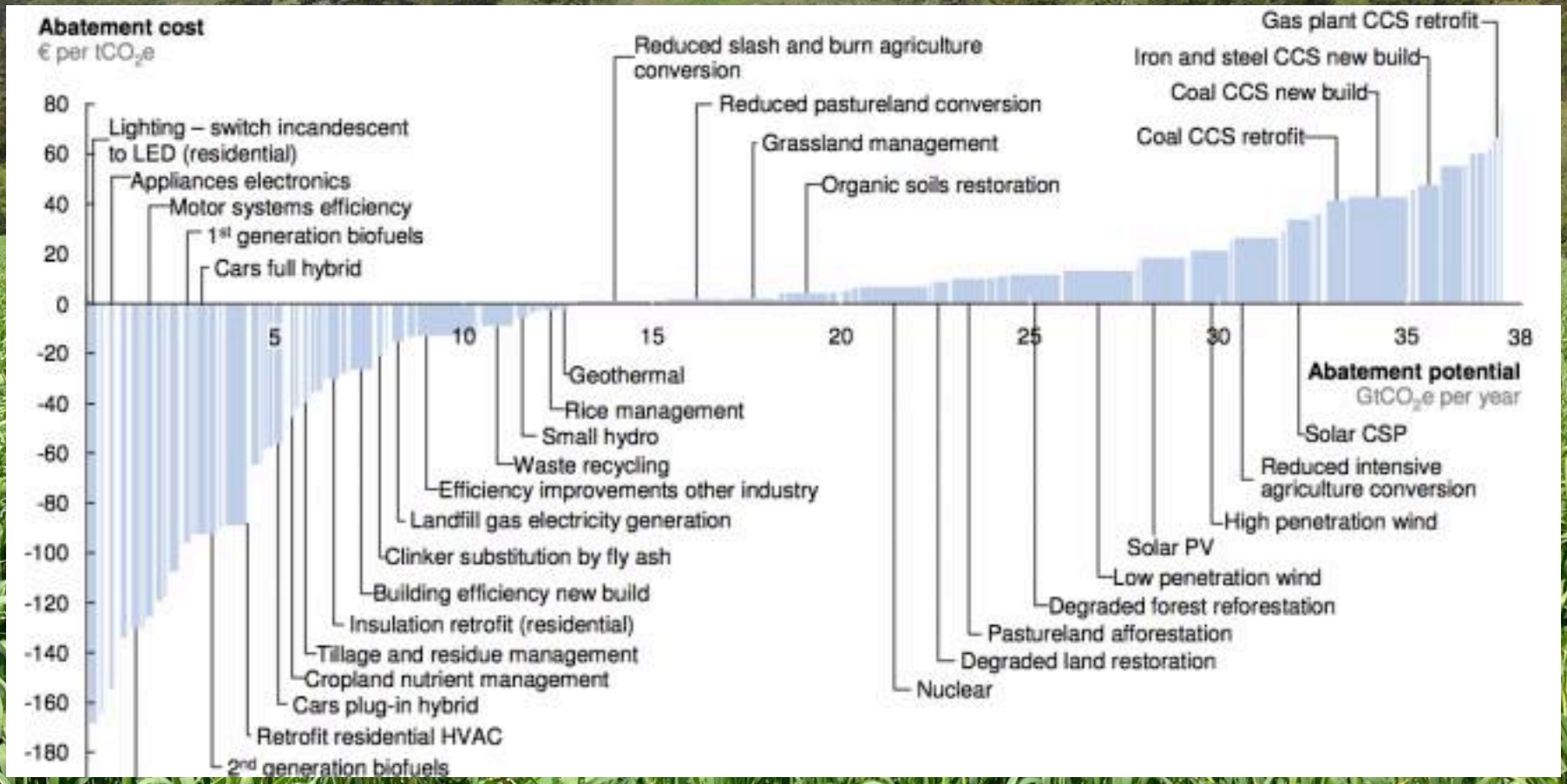
Integrated Management Plan

TomKat Ranch Educational Foundation

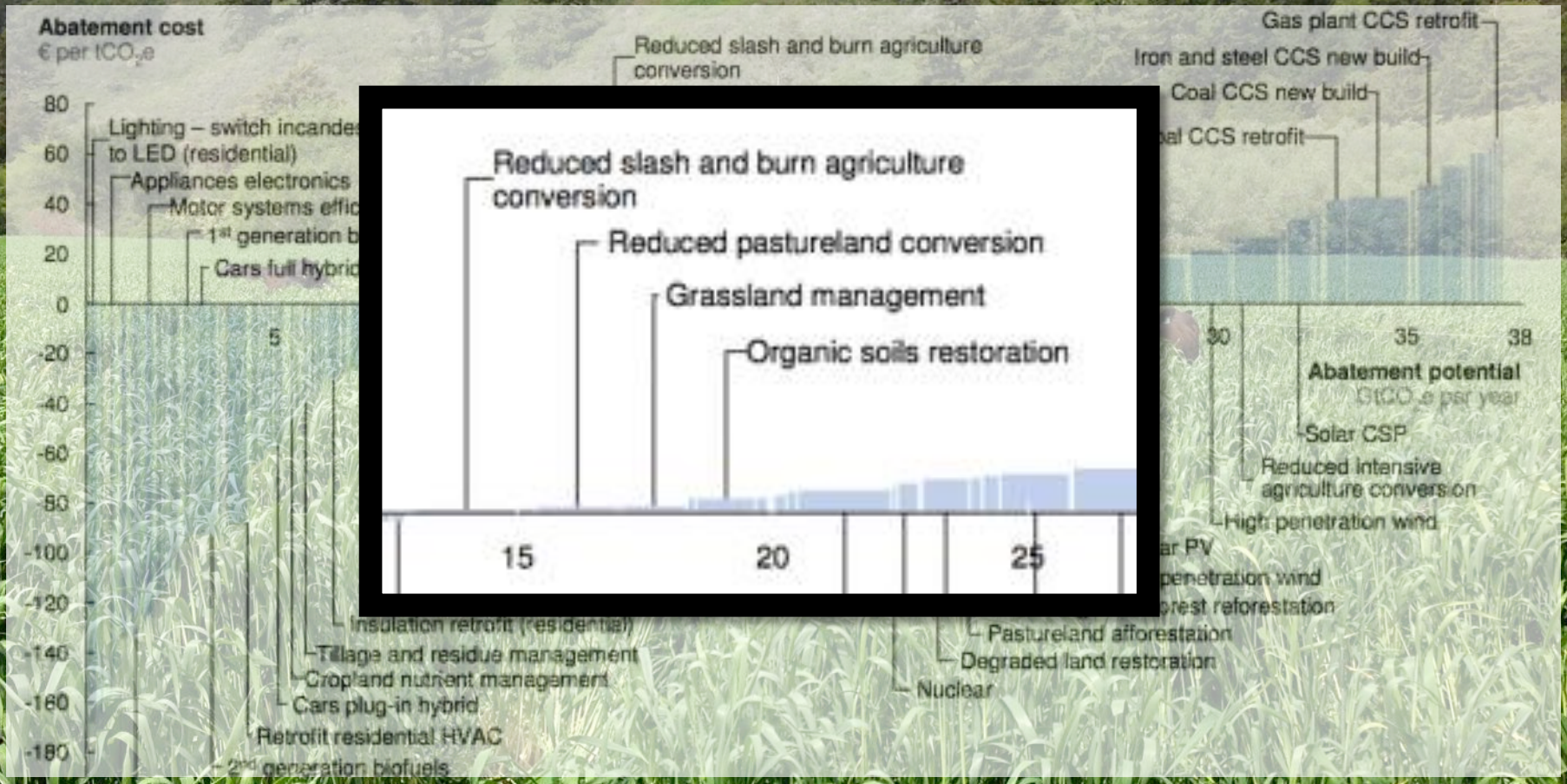
Research | Teach | Learn | Sponsor | Connect | Empower



Taken From CarbonCycle.org
Source: Houghton 2007 and US Department of Energy Office of Science



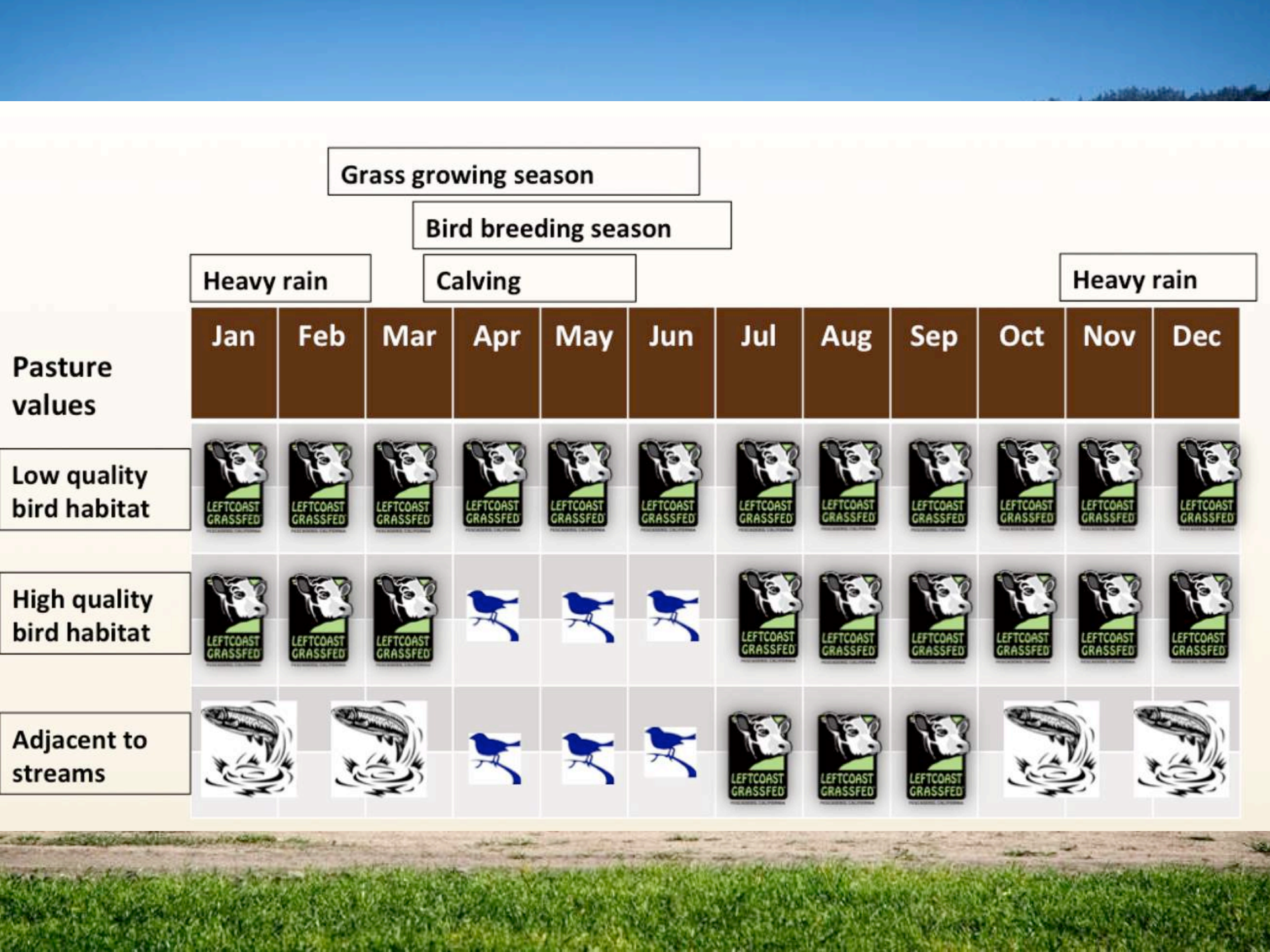
"Pathways to a Low-Carbon Economy" – McKinsey & Company 2009



"Pathways to a Low-Carbon Economy" – McKinsey & Company 2009


TomKat Ranch
Educational Foundation
Our Regenerative Grazing Goal:
Increase net primary production and biological diversity above and below ground.

TomKat Ranch
Educational Foundation


Grass growing season
Bird breeding season
Heavy rain
Calving
Heavy rain
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Pasture values
Low quality bird habitat
High quality bird habitat
Adjacent to streams

TomKat Ranch
Educational Foundation

Land & Livestock Team Calendar

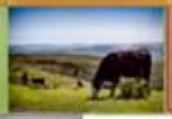
January | February | March | April | May | June | July | August | September | October | November | December

Rainy Season

Peak Water Conservation Season

Rainy Season

Quick, Low-Density Grazing to Maintain Rapid Grass Growth



High-Density Grazing to Trample Standing Matter and Provide Soil Protection and Ground Cover

360 Degree Staff Evaluations

Grassland Nesting Bird Season

Point Blue Conservation Science

Write TK Grazing Plan

Riparian Nesting Bird Season

Point Blue Conservation Science

Gather and Evaluate Ecological Data

Point Blue Conservation Science

Bird Banding and Wildlife Surveys

Point Blue Conservation Science

Rangeland Compost Applications

Symbi BIOLOGICAL

Calving Season

Breeding Season

Cattle Finishing Season

Brush Management

Team Conferences, Site Visits, and Continuing Education

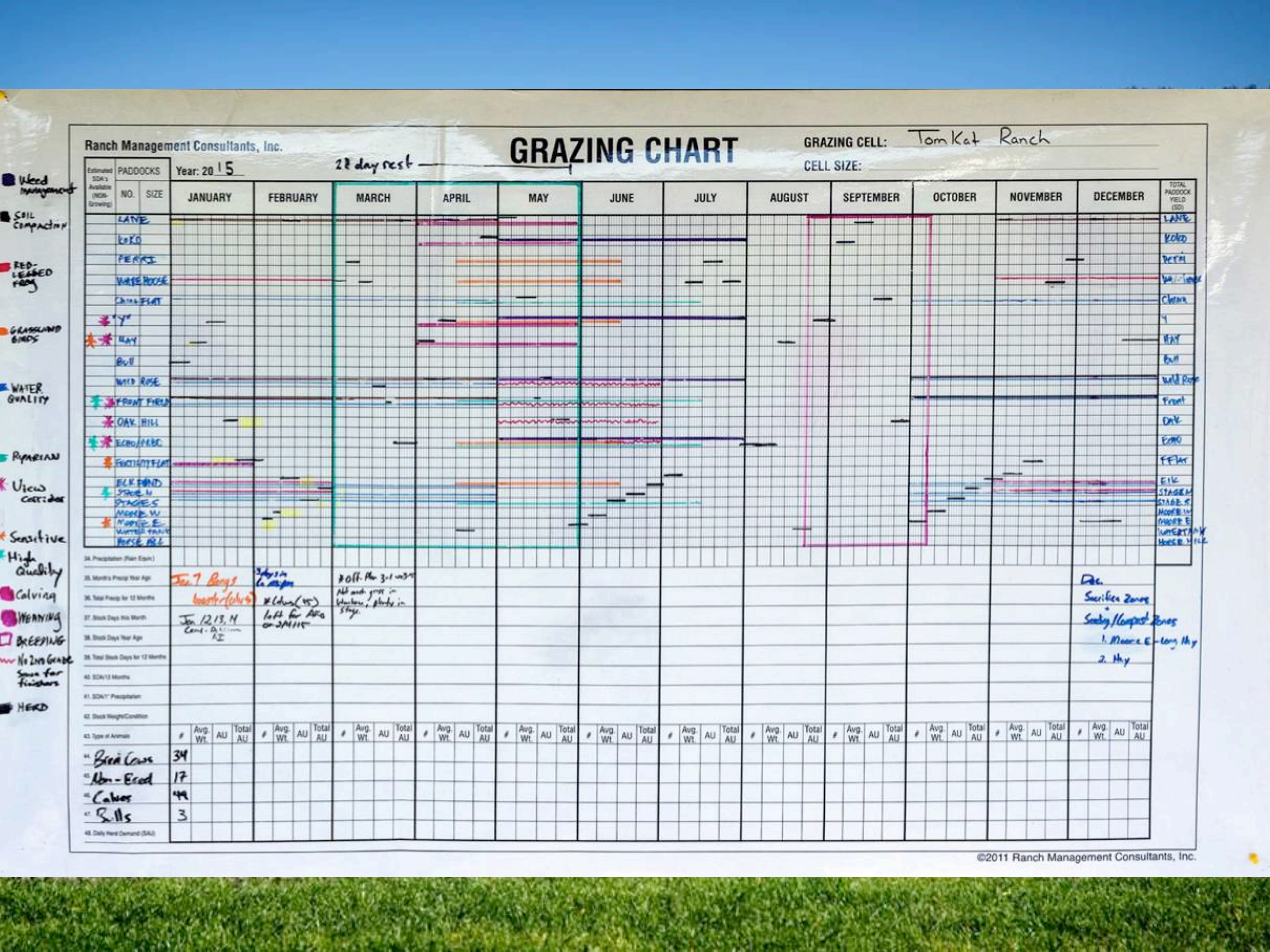
Road and Erosion Management

TKREF Internship Program Applications

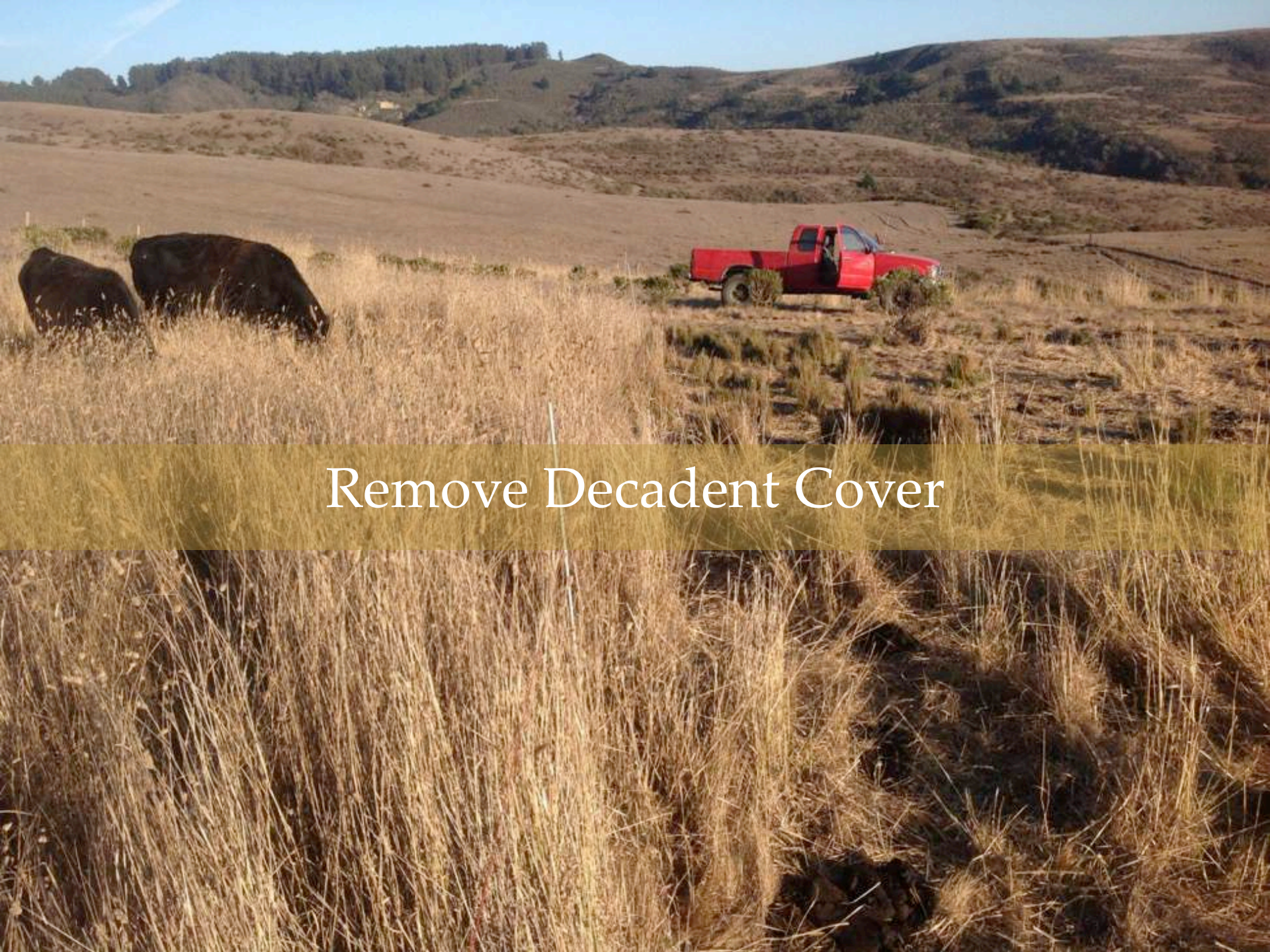
TKREF Internship Program

TKREF Apprenticeship and Conservation Ranching Fellowship Program

Stacked Agriculture Production (Poultry/Hogs) to Fertilize and Interrupt Pathogen Life Cycles



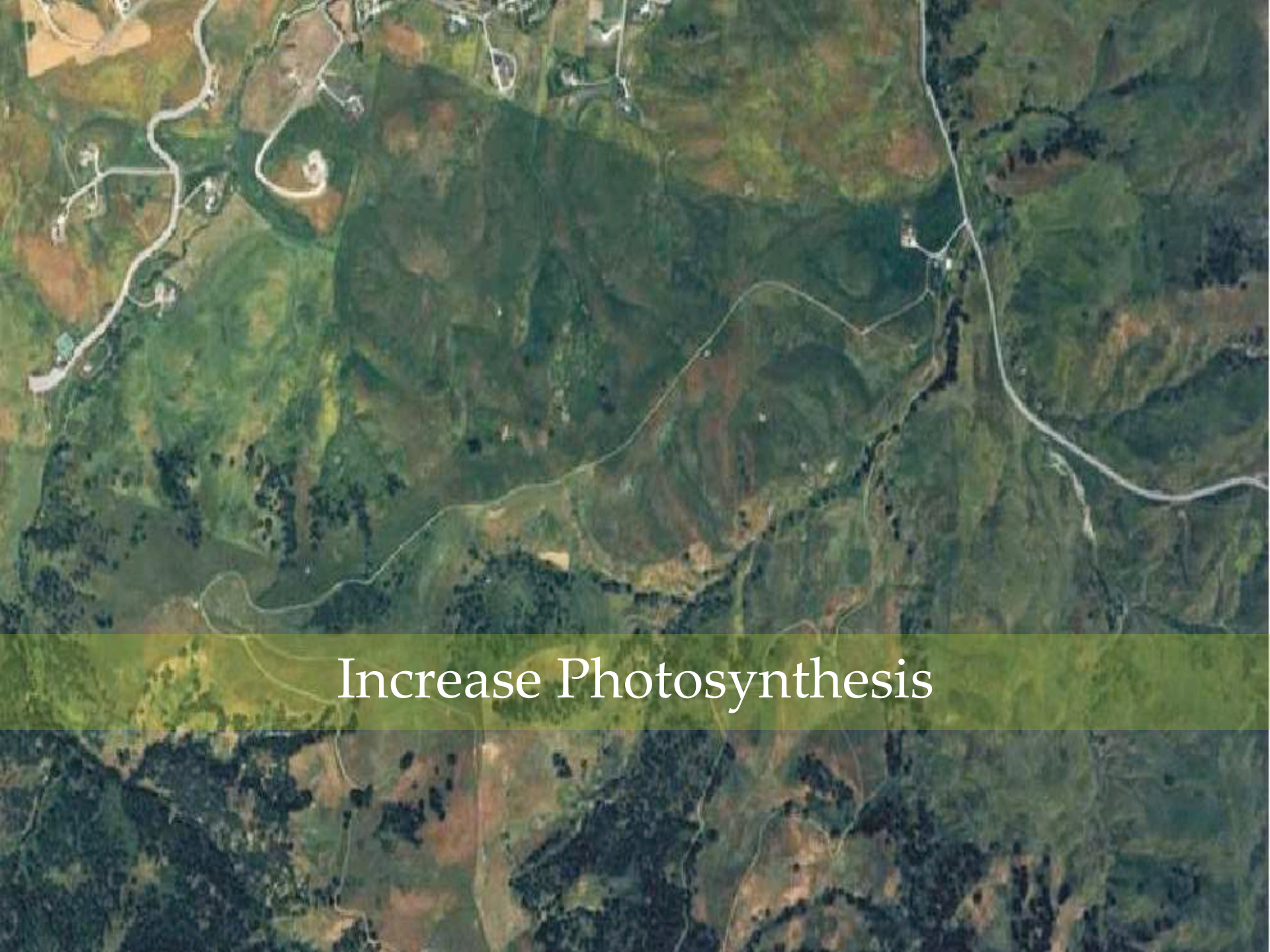
Ranch Management Consultants, Inc.
GRAZING CHART
GRAZING CELL: Tom Kat Ranch
CELL SIZE:
Year: 20 15
28 day rest
PADDOCKS
NO. SIZE
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
TOTAL PADDOCK YIELD (SD)
Weed management
Soil Compaction
Red-legged frog
Grassland birds
Water quality
Riparian
View corridor
Sensitive
High Quality
Calving
Weaning
Breeding
No 2nd Graze Save for finishers
Herd
Avg. Wt.
AU
Total AU
Bred Cows 34
Non-Bred 17
Calves 44
Bulls 3
Sacrifice Zones
Seeding / Compost Zones
©2011 Ranch Management Consultants, Inc.


Remove Decadent Cover

Manage Non-Natives & Weeds

Improve Riparian Areas

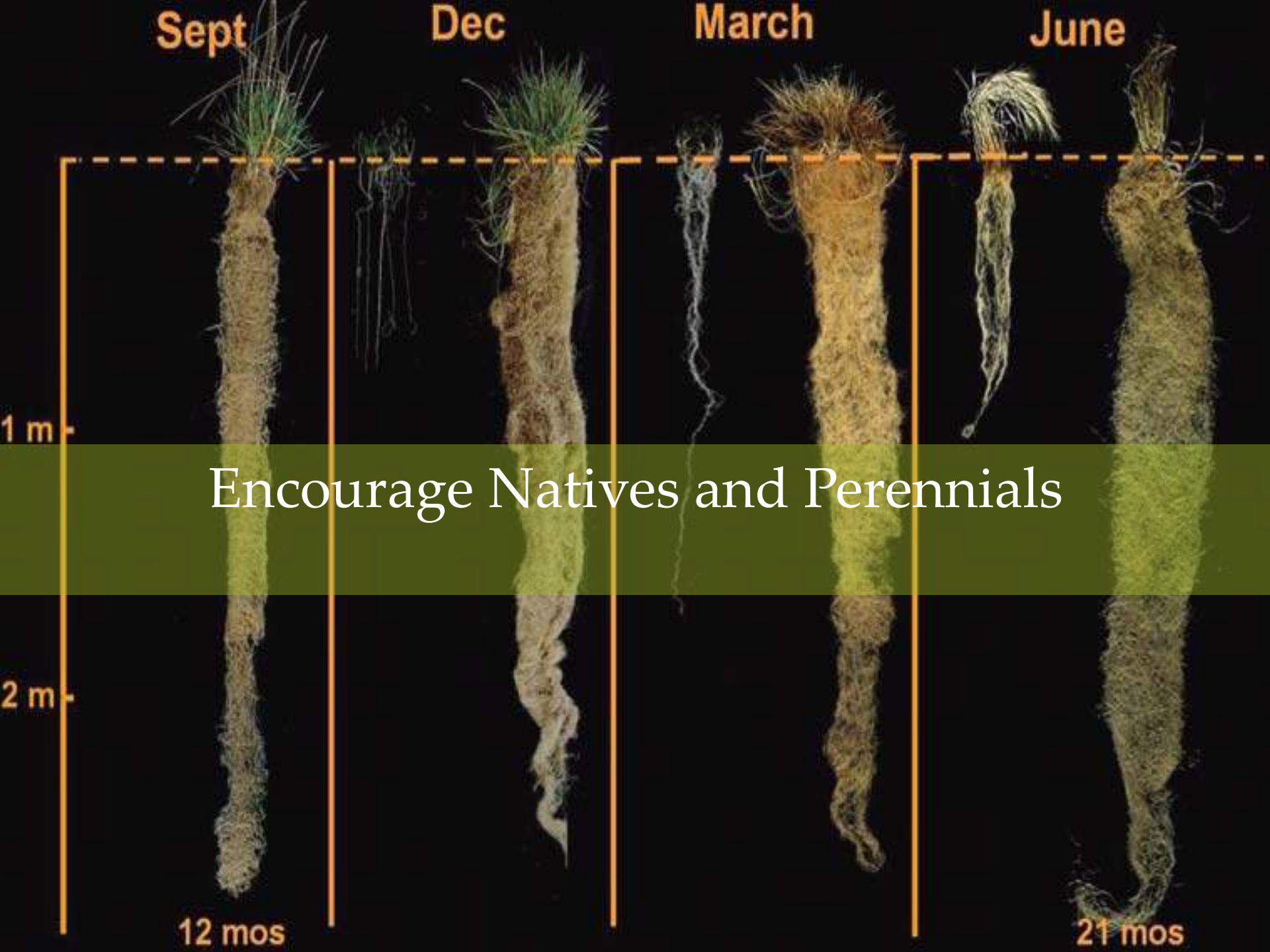

Improve Water Quality



Increase Photosynthesis


Increase Biodiversity


Un-Grazed by Pastured Poultry
Increase Fertility
Grazed by Pasture Poultry



Encourage Natives and Perennials

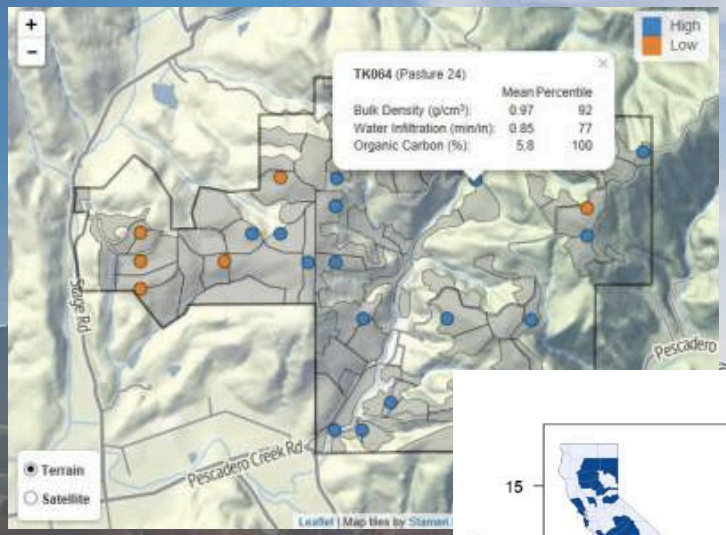

Move Carbon Underground

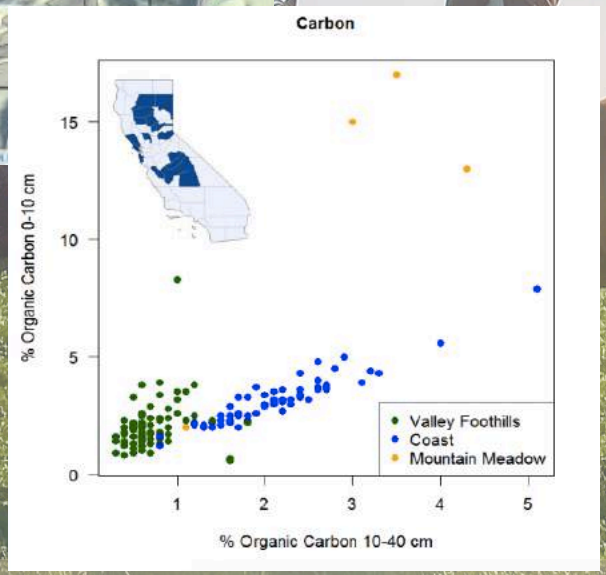
Protect Wildlife

Build Long-Term Soil Health and Resilience

TomKat Ranch
Educational Foundation

Point Blue
Conservation
Science





Point Blue Field Station at TomKat Ranch

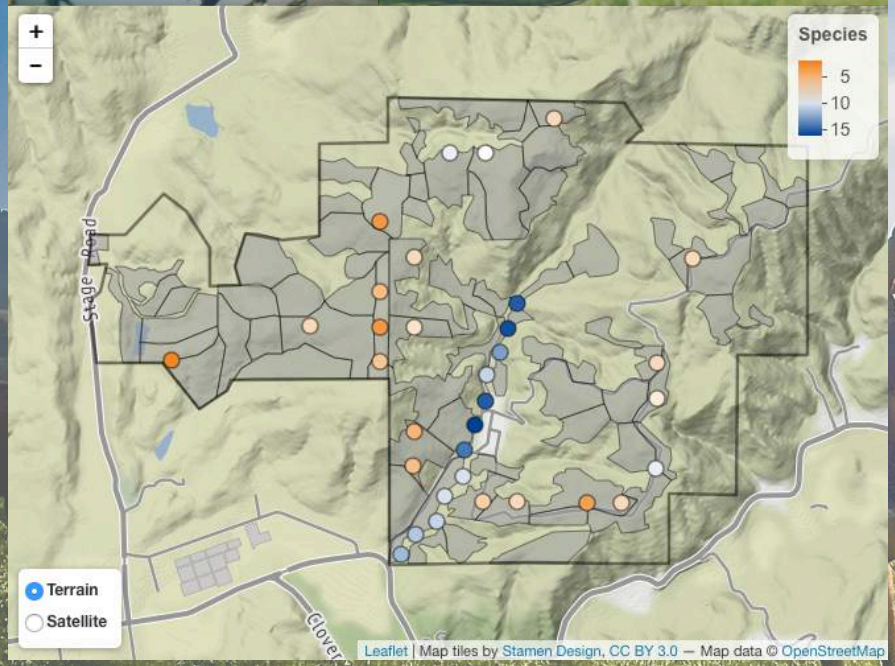
- 5 Years of Bird, Vegetation & Weather Monitoring
- 4 Years of Stream Monitoring
- Soil Monitoring at 30 Sites
  - Organic Carbon Content
  - Soil Bulk Density (Compaction)
  - Water Infiltration Rates
- 1 Research Update Published

California Rangeland Monitoring Network

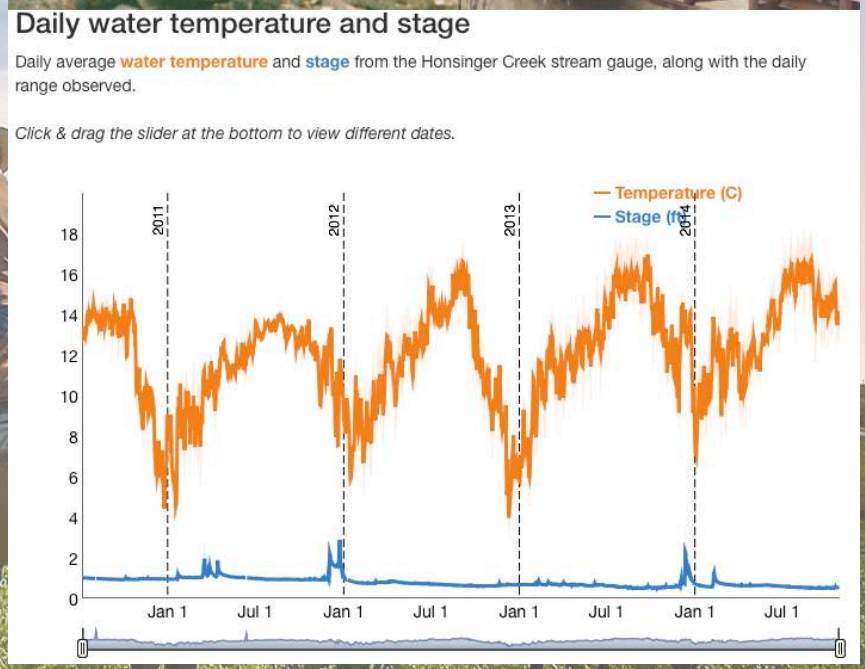
- 100,000+ Acres
- 19 California Counties
- 50 Properties
- 220 Locations of Soil Sampling
- 800 Locations of Bird Sampling

TomKat Ranch Educational Foundation

91 Bird Species and 895 Surveys

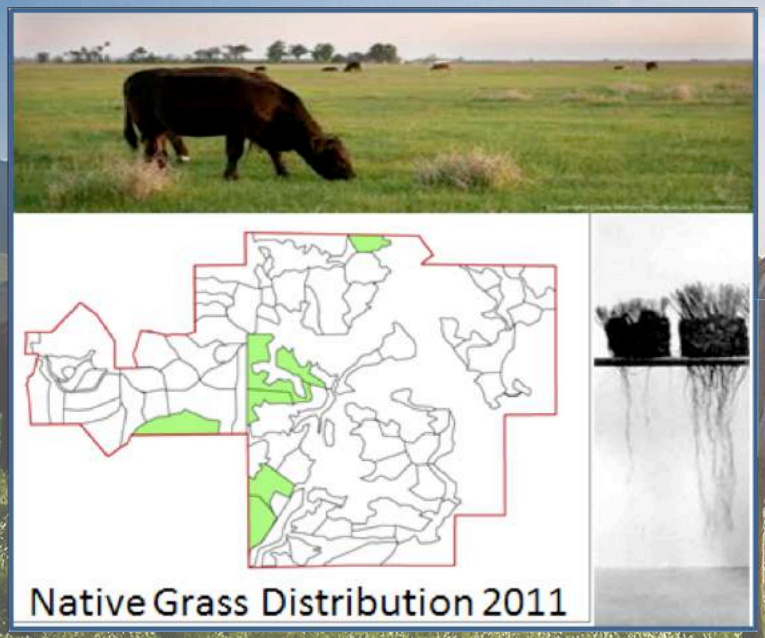


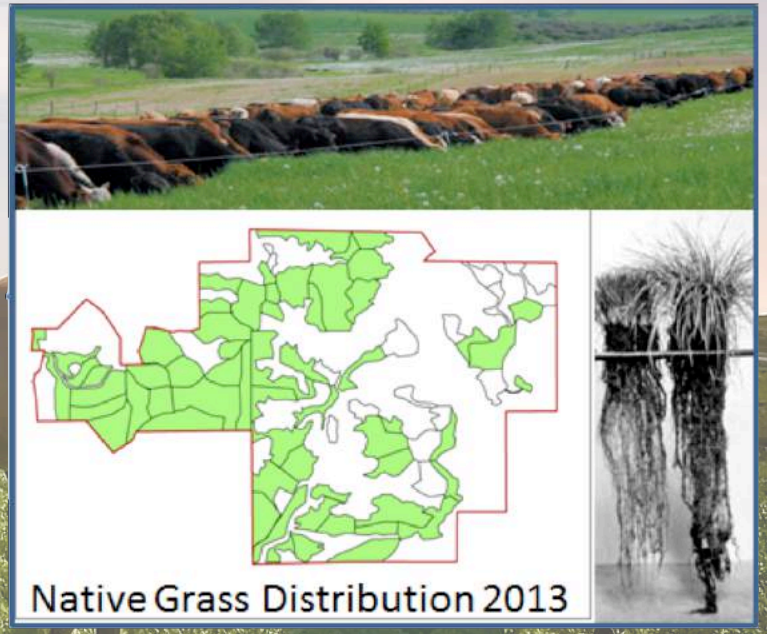
Improved Flow Through Drought



TomKat Ranch
Educational Foundation

"Restoring Native Perennial Grasses by Changing Grazing Practices in Central Coast California." Point Blue Conservation Science 2014



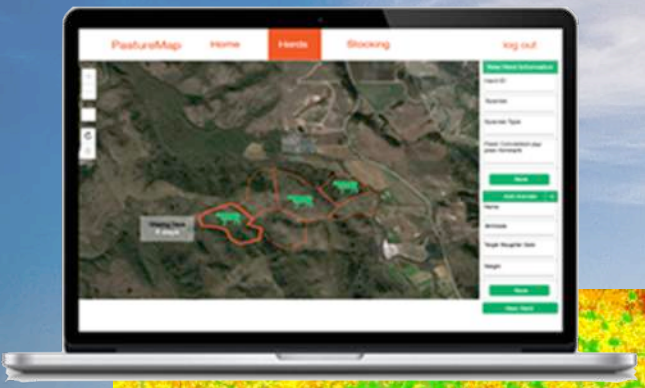


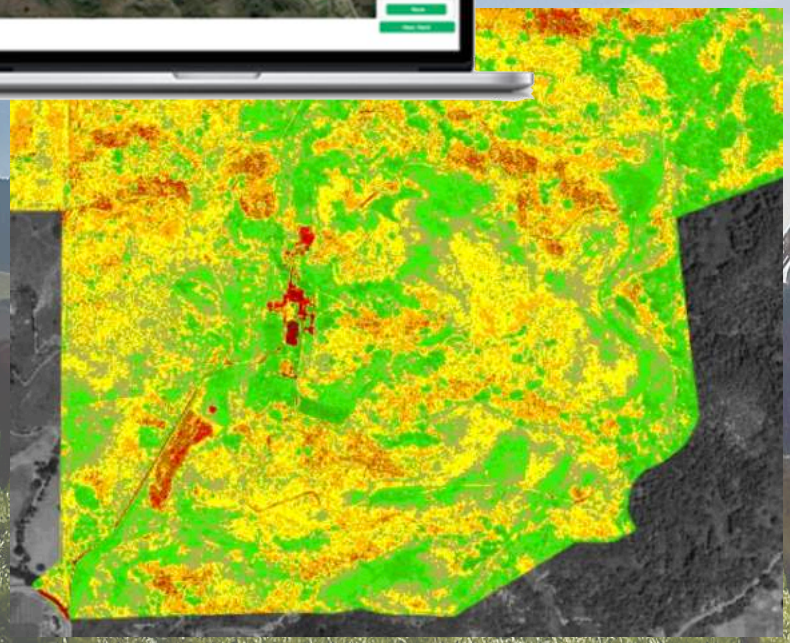
PastureMap

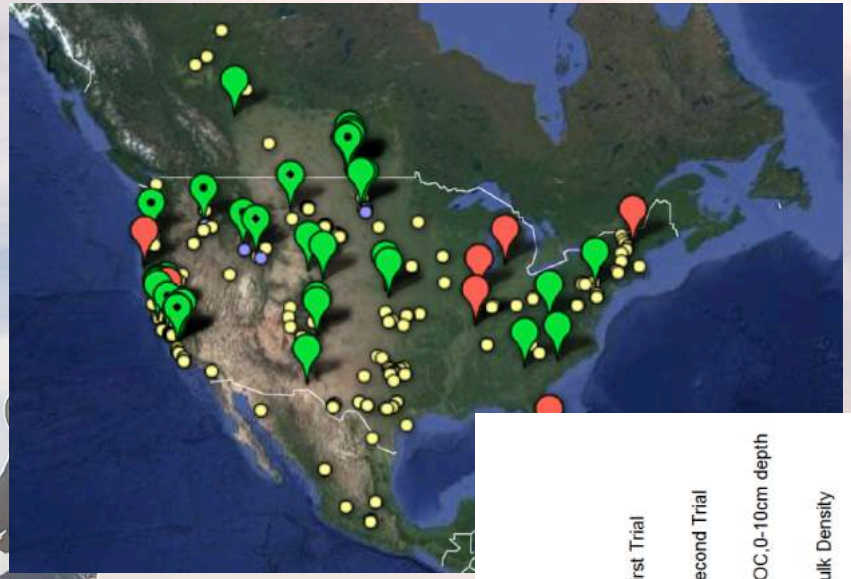
TerrAvion

soil Carbon coalition

Point Blue Conservation Science







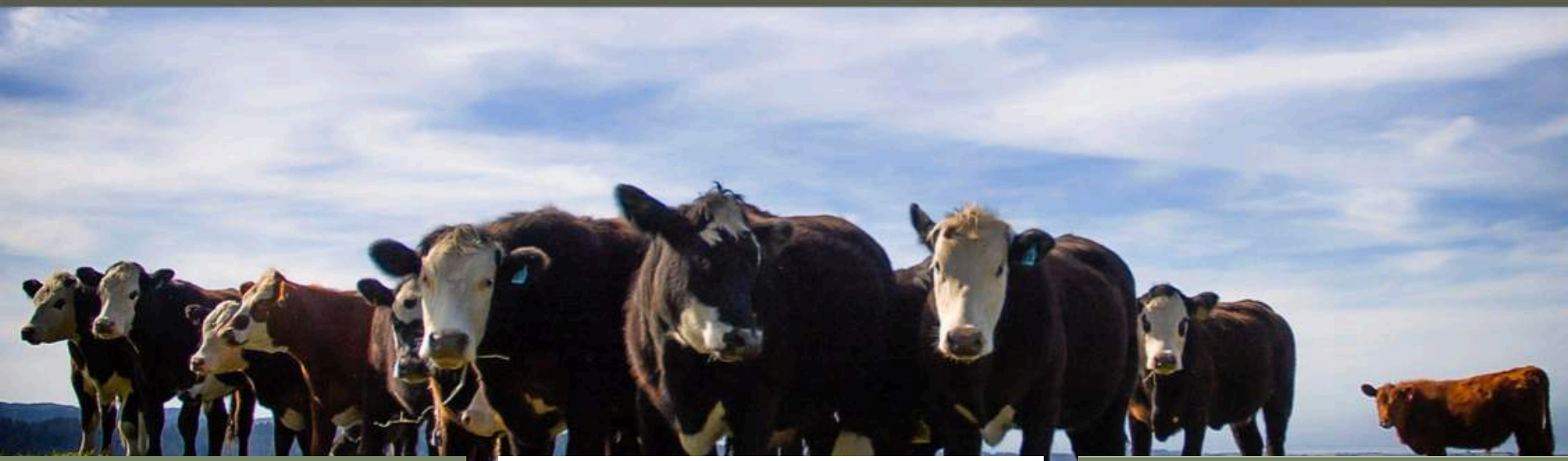
	First Trial	Second Trial	SOC,0-10cm depth	Bulk Density	Water Content	Texture
First Trial	1*	0.85*	-0.18*	0.34*	0.01	-0.07
Second Trial		1*	-0.18*	0.27*	-0.04	-0.02
SOC,0-10cm depth			1*	-0.29*	-0.07	0.22*
Bulk Density				1*	0.07	-0.28*
Water Content					1*	0.11
Texture						1*

n=134

Growing Abundant Rangelands

AN INTRODUCTION TO REGENERATIVE RANCHING

TomKat Ranch
Educational Foundation



Co-Benefits of Regenerative Ranching

Regeneratively managed rangelands provide significant benefits for producers, conservationists, and the local and global community.

Potential Benefits for Land, Conservation, and Production

- Increase Atmospheric Carbon Sequestration
- Increase Forage Production
- Increase Plant and Animal Diversity
- Decrease Soil Compaction
- Increase Forage Quality and Diversity
- Increase Soil Microbiome Health
- Increase Water Infiltration
- Support Livestock Health
- Decrease Invasive Plants
- Increase Soil Water Holding Capacity
- Increase Drought Resilience
- Support Wild Pollinators and Beneficial Insects
- Improve Watershed Water Quality and Reduce Nutrient Runoff
- Decrease Risk of Flooding
- Increase Biodiversity
- Reduce Dependency on Chemical Fertilizers, Pesticides, and Herbicides
- Decrease Predation Risk
- Lower Risk of Land Development

BROWN DORMANT GRASS | FIRM SOIL

- Primary Goal: Maximize future biomass growth: prepare for rain by protecting the soil with biomass and clearing old growth out of the way to make way for new growth.
- "Graze half/ Mulch half" strategy to trample standing residual dry matter onto the soil's surface and minimize bare ground.
- Long recovery periods (90–120 days) for well-grazed areas to avoid creating bare ground or over-impacting perennial grasses.

BROWN DORMANT GRASS | SOGGY SOIL

- Primary Goal: Minimize the impact of livestock on wet, easy to compact soil.
- Low or no grazing density in areas that have already been trampled by livestock.
- Long recovery periods (90–120 days) for areas that have already been mulched to avoid creating bare ground or over-impacting perennial grasses.

Process

The foundational process for developing a regenerative ranching program is creating an on-going cycle of defining clear goals, tracking outcomes of management choices, and adapting management to suit realities on the ground. Acknowledging and responding to feedback from the land, animals, business, community, stake-holders, etc. is critical for growing abundant rangelands and resilient operations. Feedback is paying attention through careful observation and systematic monitoring to see which strategies are and are not helping you achieve your goals

Reliable feedback is crucial for developing economic, ecological and social resiliency

RESOURCE CONSERVATION DISTRICTS

NRCS Natural Resources Conservation Service

Carbon Cycle Institute

PRACTICE	DESCRIPTION	20 year SOM Increase (Mg)	ANNUAL WHC INCREASE BY YEAR 20 (AF)
Compost application on Rangeland (NRCS practice standard in development)	Application of 1/4" of compost to 4300 acres of permanent pasture.	53867 Mg	493.78
Compost application on Cropland (590)	Application of 1" of compost to 617 acres of cropland.	23637.05 Mg	216.67
Shelterbelt (380)	13.6 miles (90 acres) of 50' wide shelterbelts	1068.12 Mg	9.79
Prescribed Grazing (528)	Grazing management to favor perennials and improve production on 7300 acres.	15912.80 Mg	145.86
Riparian Restoration	Restoration of 94 acres of riparian system along 7.75 miles of stream corridor Planting of native trees and shrubs.	3043.23 Mg (derived from Lewis et al 2015)[1]	27.89
No-till system-Tillage Management (512).	Convert tilled forage fields to permanent pasture; minimize tillage on croplands	425.06 Mg	3.89
Minimum-Tillage (345)	Conversion of tilled crop fields to minimum tillage on	1089.91 Mg	9.99
Silvopasture (381)	Establish trees on approximately 1,000 acres) of treeless pasture.	4027.24 Mg (derived from Gaman 2008)	36.91
TOTAL		**103,070.36**	**917.52**

Let's Start A Grass Roots Movement…Together