Spotted Frog Ranch

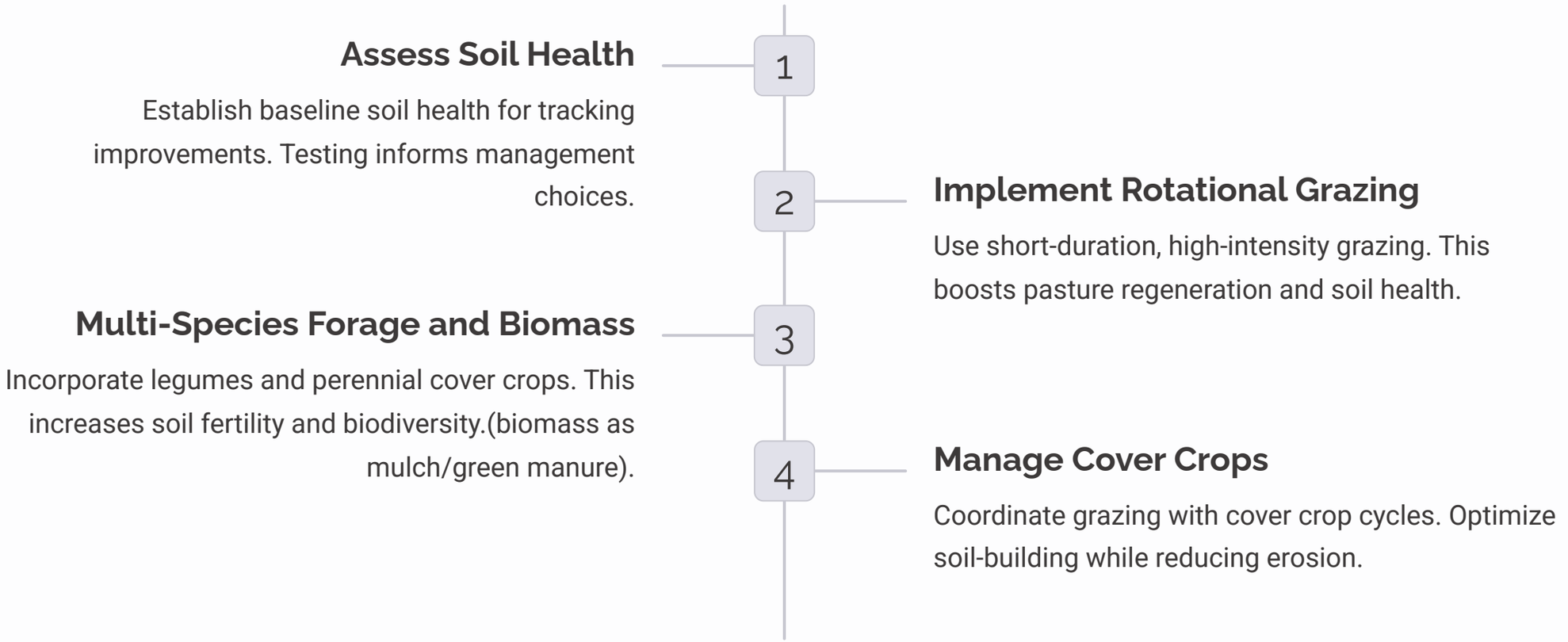
Regenerative Ranch Vision & Implementation Outline

by Bruce Weaver



1. Regenerative Grazing

Objective: Establish a rotational grazing system that enhances soil health, promotes biodiversity, and reduces dependence on external inputs by fostering self-sustaining soil fertility, microbial vitality, and organic matter recycling through managed grazing practices, alongside a diverse multi-species forage system integrating legumes and cover crops.



- **Current Notes**: Need to establish baseline soil health assessments to track improvements. I'm currently enrolled in UVE online course Holistic Grazing Course.

People-Partner:

OSU **Klamath Basin Research & Extension Center (KBREC),** NRCS, **UVE**



Gerald Owens, current tenant for the 100-acre east side, 3 possible options for 2025

1. Cancel his contract if allowable and let the land to go fallow, using 2025 as an experiment and planning period for regenerative grazing in 2026.
2. Utilize my current **Holistic Grazing enrollment through UVE** to develop a collaborative plan helping him transition his cattle to a regenerative grazing model for 2025.
3. Do nothing. Allow him to manage based on what works for him while concurrently developing a Fall-Winter 2025/26 plan after he concludes summer grazing.

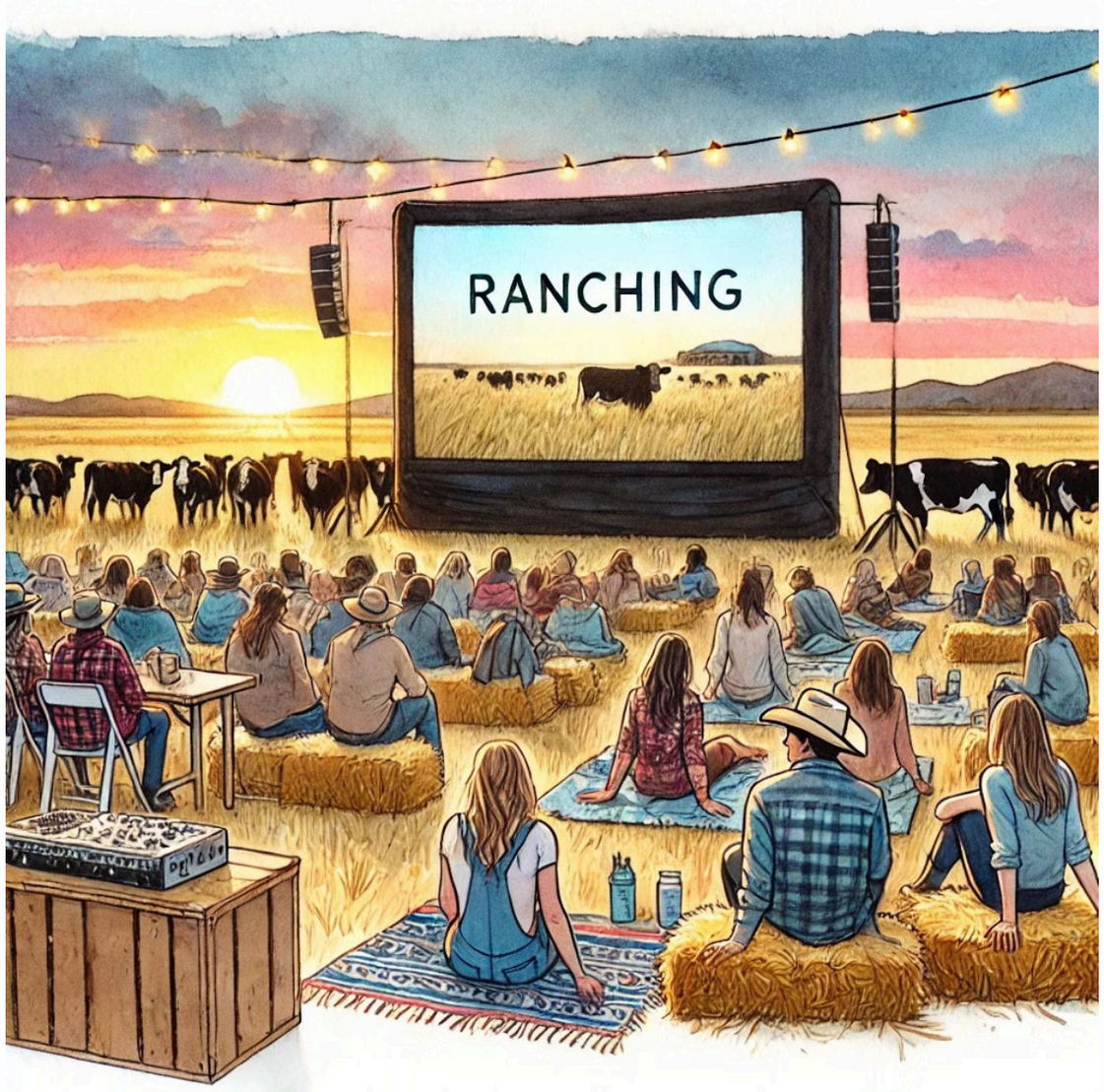
2. Regenerative Agriculture & Community Education Demonstration Site

Objective: Develop an educational demonstration site that showcases regenerative agriculture, conservation techniques, and ecosystem restoration.

1. **Financial Transparency**
   Ensure financial transparency in the development and operation of the demonstration site.
2. **Realistic Models**
   Create realistic models that are adaptable for surrounding grazers and landowners.
3. **Showcase Best Practices**
   Use the site to showcase best practices in regenerative farming, habitat restoration, and conservation grazing.
4. **Hedgerow and Agroforestry Systems**
   Develop hedgerow and agroforestry systems to increase biodiversity, create natural windbreaks, and carbon sequestration
5. **Interactive Educational Programs**
   Implement interactive educational programs for landowners, students, and conservationists.
6. **Native Planting Projects**
   Integrate native planting projects, including hedgerows, first foods, and pollinator-supporting flora.
7. **Local Partnerships**
   Build partnerships with local organizations to strengthen outreach and engagement.

Current Notes: The demonstration site should be scalable and adaptable for various land management scenarios. Consider opportunities for grant funding to support infrastructure and educational programming.

People-Partner: OSU **Klamath Basin Research & Extension Center (KBREC)**, Sustainable NW, Ed with IWJV



Sow the Seeds of Change Under the Stars

Fort Klamath's 2025 Regenerative Film Nights — Where Soil, Story, and Community Root a New Future for Ranching and Farming.



Sponsored by Kiss the Ground & Rural Cinema Project

Two nights of groundbreaking films igniting ranchers, stewards, and dreamers to cultivate hope—and healthier land.

3. Ecological Water Restoration & Water Conservation

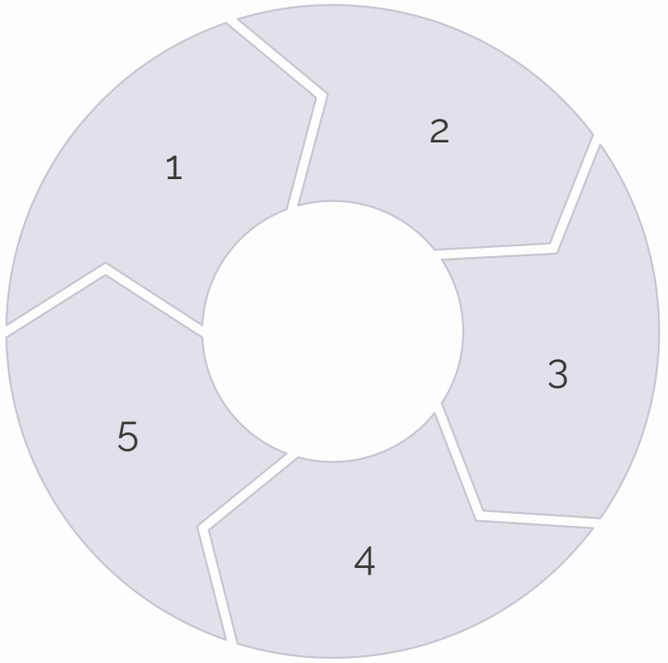
Objective: Restore and enhance the natural ecosystems within Spotted Frog Ranch by improving water quality, supporting biodiversity, and reinforcing land resilience.

Enhance Riparian Corridors

Improve water retention, prevent erosion, and support fish and wildlife habitats.

Remove Drains and Ditches

Lengthen hydroperiod and support groundwater recharge.



Develop Hedgerow Systems

Increase biodiversity and create natural windbreaks.

Implement Wildlife-Friendly Fencing

Balance conservation efforts with livestock management.

Conduct Wetland Restoration

Ensure long-term water security and habitat integrity.

Current Notes: Work with Trout Unlimited, US Fish & Wildlife, and Oregon Fish & Wildlife to align projects with regional conservation goals. Identify key zones for water retention improvements and erosion control. Assess potential funding sources such as conservation grants and environmental incentives. Some drains and wallows in the North End of Field 3 have already been modified, showing progress. Removal of drains and canals carries risk, as past examples have shown unintended consequences—additional feasibility studies may be needed. Restoration of depressional wetlands is critical for improving shallow groundwater availability.

People-Partner: Trout Unlimited, US Fish & Wildlife, Oregon Fish & Wildlife. Orvis, Klamath Tribe

4. Oregon Spotted Frog Recovery and Habitat Restoration Plan

Objective: Implement habitat and population support strategies to stabilize and expand the Oregon spotted frog population across Spotted Frog Ranch.

Spring Grazing for Habitat Management

1

Implement managed spring cattle grazing in designated wetland zones to reduce invasive vegetation like reed canarygrass, which can hinder frog habitat and breeding cycles. Adjust grazing intensity to promote open water areas while preventing overgrazing.

2

Habitat Restoration

Utilize North Oxbow as a primary focus area for frog and habitat monitoring via underwater cameras. Restore shallow breeding pools and maintain hydrology to ensure water availability. Reconnect fragmented wetlands to enhance movement and genetic diversity. Manage invasive vegetation (e.g., reed canarygrass) while maintaining grazing as a habitat tool.

Species Protection

3

Conduct targeted removal of invasive predators such as bullfrogs and non-native fish. (Nighttime Bullfrog Hunts Summer - Froglegs for food?) Modify property drainage systems to reduce bullfrog populations. Work with irrigation districts to carefully dry out ditches in winter to disrupt bullfrog breeding. By draining these habitats in winter, you strand and kill the tadpoles, preventing them from maturing into adults and reproducing the following spring/summer.

Current Notes: Work closely with USGS, Fish & Wildlife Service (FWS), and Trout Unlimited (TU) as lead partners on conservation efforts. Implement adaptive management strategies based on seasonal population data and environmental changes. Partner with Klamath Outdoor Science School to develop educational programs and volunteer restoration initiatives, utilizing Google Earth Pro and iNaturalist for mapping and biodiversity documentation.

People-Partner: USGS, Fish & Wildlife Service (FWS),Trout Unlimited (TU)

Model Project: SAMISH INDIAN SPOTTED FROG EDUCATIONAL TOOL

5. Beaver Habitat Enhancement and Monitoring Plan

Objective: Establish a baseline understanding of beaver activity and habitat conditions before implementing active restoration strategies.

Year 1 Focus: Monitoring and Data Collection

1

Monitor existing beaver populations and habitat usage across the ranch. Conduct seasonal site assessments to track water retention, dam locations, and vegetation use. Utilize trail cameras, aerial mapping tools and drone photos to document movement patterns and activity levels.

2

Year 2+ Focus: Habitat Improvement

Restore and expand aspen and willow communities to increase forage and dam-building material availability. Improve hydrological connectivity between wetland and riparian zones to enhance natural water retention. Identify and mitigate barriers to natural beaver movement that may restrict dam-building activity.

Current Notes: No beaver reintroduction planned at this time—monitoring and assessment will guide future decisions. Collaborate with Klamath Tribes and conservation agencies for guidance on beaver habitat restoration best practices. Explore grant opportunities that support beaver-related wetland conservation.

People-Partner: USGS, FWS, TU

6. Birds Thrive Here: Multi-Layered Habitat Restoration

Objective: Enhance bird habitat through native plant restoration, increased nesting opportunities, and strategic landscape management.

Year 1 Focus: Monitoring and Data Collection

1

Establish baseline habitat assessments to identify key nesting areas and food availability.

Engage citizen scientists, local schools, and birding groups to help with population tracking. Document bird populations using iNaturalist and Wildlife Acoustics SM4 Song Meters.

2

Year 2+ Focus: Habitat Improvement

Increase cavity nesting sites through nest box installations and preservation of standing deadwood. Expand native plantings including: First foods such as camas, wapato, and native berries. Hedgerows to support shelter and food sources. Aspen/willow community restoration to improve habitat diversity. Create buffer zones around key nesting areas to minimize disturbances and include seed-bearing plants and insect corridors

Current Notes: Collaborate with Klamath Tribes and conservation organizations to ensure plant selection aligns with traditional ecological knowledge. Utilize technology such as **Wildlife Acoustics SM4 Song Meters** to analyze bird presence and diversity. Explore funding opportunities for nest box installations and large-scale planting projects.

People-Partner: NRCS

7. Restore First Foods, Pollinators, & Traditional Ecological Knowledge TEK

Objective: Strengthen native plant diversity and pollinator habitat while revitalizing access to traditional first foods within the **Wood River Watershed, a vital part of the Klamath Basin "Everglades of the West."** This effort supports Indigenous food sovereignty, ecological resilience, and cultural restoration within a **75-acre conservation easement on Spotted Frog Ranch.**

1 Partner with Klamath Tribes Food First Initiative

Establish wild food planting areas for Indigenous community harvest, supporting traditional food sovereignty initiatives.

2 Increase Aspen/Willow Communities

Support wildlife and ecosystem health, while incorporating species used for traditional craftwork such as basketry and tool-making.

3 Expand First Foods Plantings

Plant camas, wapato, and native berries, ensuring their availability for both ecological benefits and cultural significance.

4 Integrate Aquaculture and Agriculture

Explore wetland-compatible crops like wapato and Wacos while supporting water management practices that benefit both fish and plant ecosystems.

5 Encourage Wild Fruit Growing

Plant native species such as elderberry, Oregon grape, and serviceberry to enhance food security and habitat resilience.

6 Enhance Pollinator Habitat

Establish hedgerows and diverse wildflower plantings that support bees, butterflies, and other beneficial insects.

7 Incorporate Traditional Ecological Knowledge (TEK)

Align plant selection and restoration strategies with Indigenous land stewardship and agroforestry practices.

People-Partner:

Cristina Eisenberg , PhD - OSU Traditional Ecological Knowledge Lab
Frank Kanawha Lake - Research Ecologist, and the Tribal Liaison/Climate Change contact for the Pacific Southwest Research Station, USDA Forest Service.

Jeff Mitchell, chairman of the Klamath Tribes Culture and Heritage Committee Klamath Tribal elder's Kathleen Hill, J.D., LL.M and Garin Kohl Riddle

Indigenous Rewilding Network - **Pacific Northwest Tribal Agroforestry** - Stephanie Gutierrez, Ecotrust's forest and community program director. NRCS

Model Project: Pacific Northwest Tribal Agroforestry Educational Tool - Agroforestry - Tribal Agroforestry

8. Building Fire-Adapted Forest Ecosystems

Objective: Reduce wildfire risks while promoting a resilient forest ecosystem through strategic wildfire mitigation.

1

Implement Thinning and Fuels Reduction

Focus on fire-prone areas to reduce wildfire risks.

2

Increase Fire-Adapted Native Plants

Contribute to ecosystem resilience through strategic planting.

3

Conduct Seasonal Thinning Operations

Minimize wildfire fuel loads in late fall and winter, when most bugs and worms are in dormancy.

4

Develop Small-Scale Biochar Production

Enhance soil health and carbon sequestration using thinnings.

Current Notes: Partner with the US Forest Service to expand fire resilience strategies onto adjacent forest lands along the eastern boundary of the ranch.

People-Partner: NRCS, Klamath Tribe, US Forest Service, USDA

9. Aquatic Habitat Enhancement and Rare Redband Trout Conservation

Objective: Enhance aquatic habitat throughout the SFR Wood River watershed and within the conservation easement to support Rare Redband Trout and other native trout species while also benefiting amphibians like the Oregon spotted frog.

Year 1 Focus: Monitoring and Data Collection

1

Conduct baseline water quality assessments to evaluate temperature, oxygen levels, and sediment load. Implement seasonal monitoring for Rare Redband Trout and other trout species through partnerships with ODFW for electrofishing, tagging, and eDNA sampling.

If ODFW partnerships are unavailable, utilize visual surveys and underwater trail cameras for fish population tracking. Assess frog and trout interactions to understand habitat-sharing and potential risks. Utilize citizen science programs to engage the public in species monitoring.

2

Year 2+ Focus: Habitat Improvement

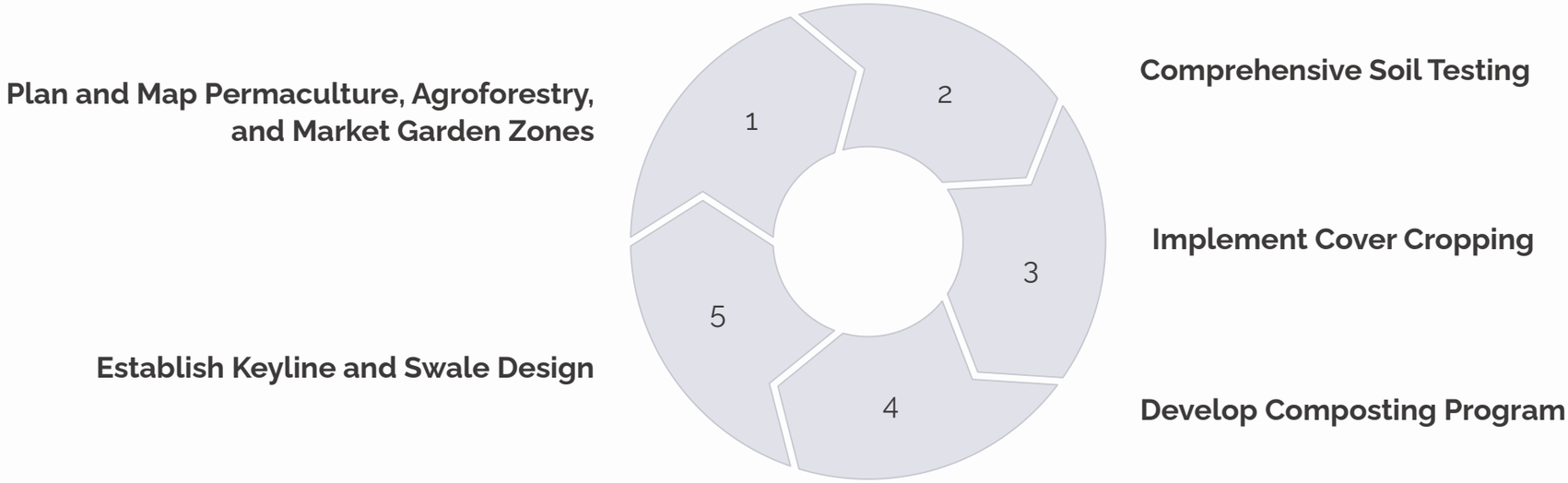
Enhance instream habitat by installing large wood, boulders, and gravel beds to create spawning and refuge areas. Improve riparian shading to lower water temperatures and reduce heat stress on trout populations. Restore side channels and oxbow connectivity to provide year-round refugia for juvenile and adult trout. Manage invasive species that compete with or threaten native fish populations.

Current Notes: Utilize North Oxbow as a primary focus area for habitat improvement, species monitoring, and long-term restoration efforts. Consider installing underwater monitoring cameras to track fish movement and spawning behaviors. Identify and secure funding opportunities for restoration projects through grants and conservation partnerships.

People-Partner: ODFW (Oregon Department of Fish and Wildlife) Trout Unlimited US Fish & Wildlife Service Local conservation groups and watershed councils Samantha Adams (contact for conservation alignment)

10. Integrated Regenerative Ranch Management: Permaculture, Agroforestry, and Market Gardens

Objective: Develop a comprehensive regenerative ranch model on 125 acres incorporating **permaculture principles**, **agroforestry zones**, and **market gardens**, ensuring **long-term resilience, productivity, and economic sustainability**.



Year 1 Motto: **Grow Soil Before Food**

- Implement cover cropping, composting, and soil-building practices to enhance fertility before large-scale planting.
- Develop a robust composting program utilizing organic waste, manure, and crop residues to restore soil health.
- Establish keyline design and swales for optimal water retention and land contouring.
- Introduce pollinator-friendly plants to prepare ecosystem diversity for future food production.
- Plan and develop perennial profit systems integrating tree crops, shrubs, and livestock-friendly foraging species.
- Plan and Develop agroforestry zones incorporating silvopasture models and multi-use plant species.
- Plan and Implement hedgerows for erosion control, windbreaks, and most importantly for carbon sequestration.
- Establish Garden-to-Market featuring organic vegetables, herbs, and perennial crops for local sales.
- Incorporate natural fence boundaries using multifunctional plantings for biodiversity and soil regeneration.
- Establish permanent Walpini style greenhouse possibly attached to back barn/shed

MODELS:

Permaculture Model

Verge Permaculture and 5th World Consultation

Verge model uses the 5SP Process for mapping to help organize information in Google Earth Pro. The 5SP Filestream provides folders for eleven property categories and subcategories. The planner includes tools for resource inventory, SWOT diagnosis, and vision and values assessments

[Verge Permaculture]

[5th World]





Regenerative Agriculture Model: Gabe Brown's Ranch

1

Faith, Family, and Natural Resources

Focuses on faith, family, and working with natural resources to regenerate landscapes.

2

Holistic Management

Practices holistic management and farming in nature's image.

3

Soil Health Priority

Soil health is a priority with no-till farming, diverse cropping strategies, and elimination of synthetic fertilizers, fungicides, and pesticides.

BROWNS RANCH



Market Garden Model: Neversink Farm

Intensive Planting Techniques

This agrarian model uses intensive planting and growing techniques to achieve high production on a small scale.

Year-Round Production

Neversink Farm maintains fertile soil, replanting beds from early April through late fall, and using hoop houses to produce vegetables year-round.

Reduced Soil Disturbance

The farm prioritizes reduced soil disturbance by using manual tools and broadforking permanent beds.

High Production

According to Conor Crickmore, Neversink Farm's farming practices have resulted in it being one of the highest production farms per square foot in the country.

Accessible Educational materials and great innovative farming tools

NEVERSINK FARM

Agroforestry and Silvopasture Model: New Forest Farm and TEK

Oak Savanna Biome Mimicry

Mark Shepard's New Forest Farm aims to mimic the oak savanna biome by planting trees, shrubs, vines, canes, perennial plants, and fungi in association with one another to produce food, fuel, medicines, and beauty.

Integrated Livestock Grazing

New Forest Farm integrates livestock grazing with tree crops.

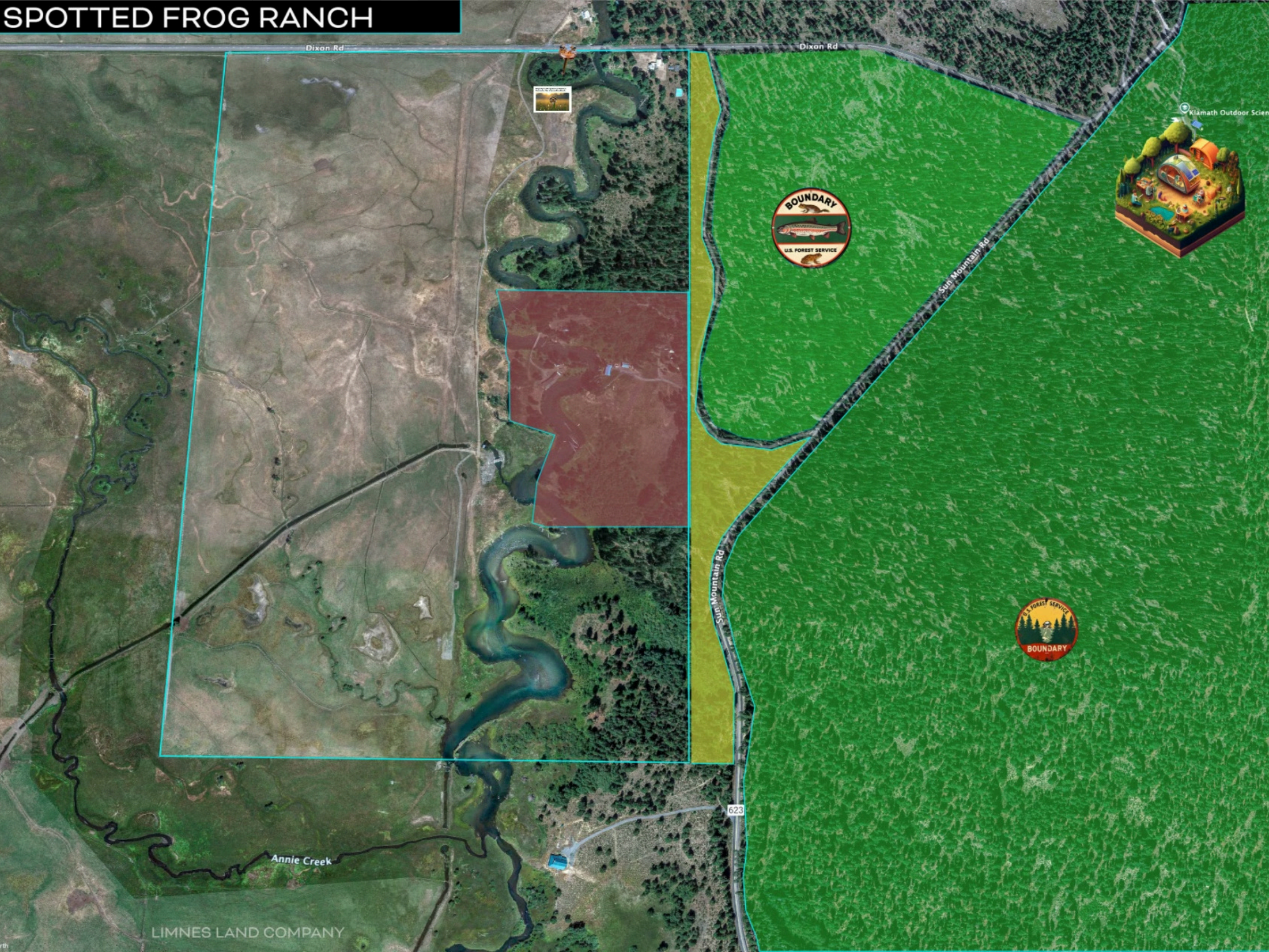
Traditional Ecological Knowledge (TEK)

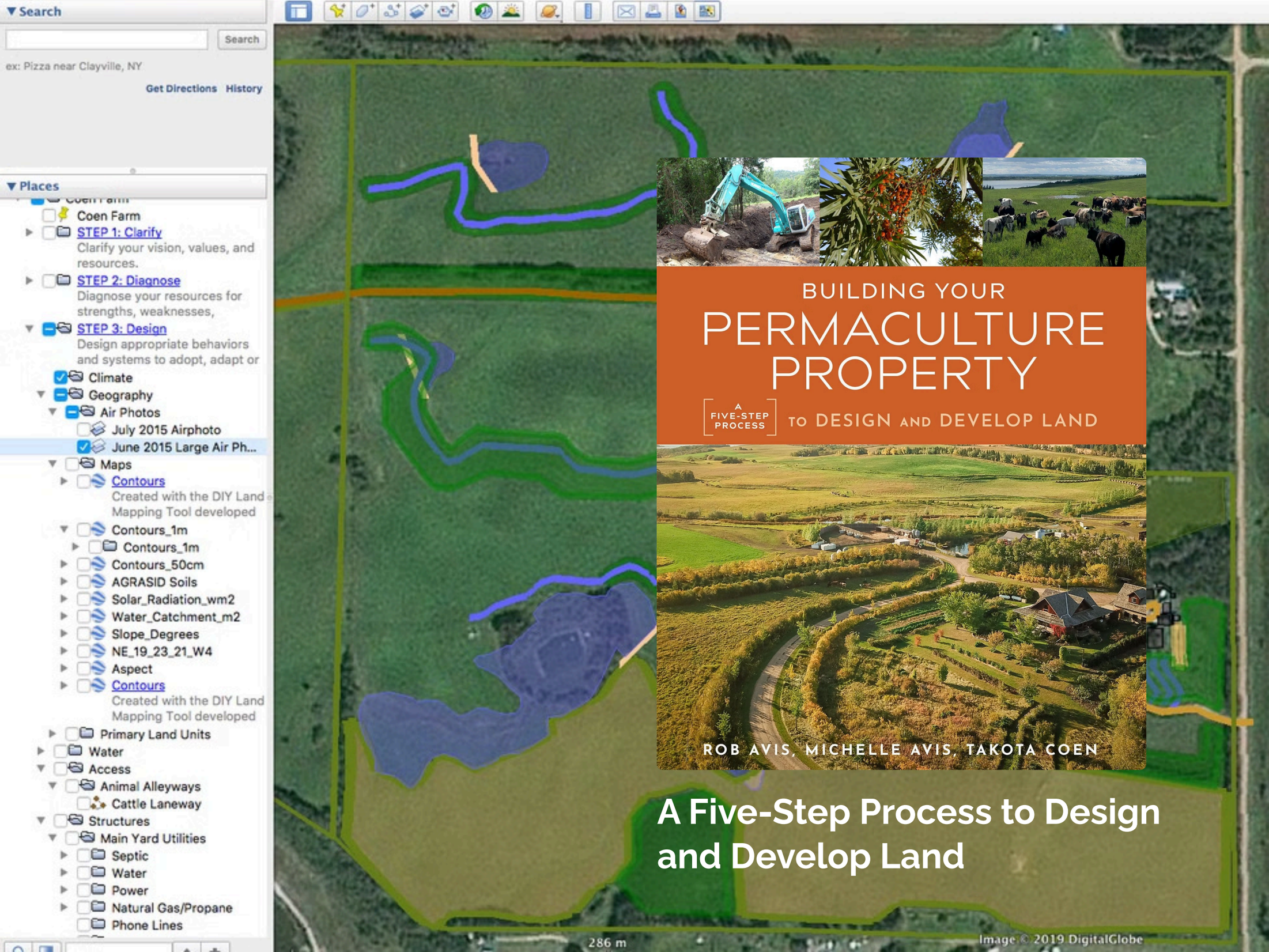
TEK refers to the evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment. TEK encompasses the world view of indigenous people which includes ecology, spirituality, human and animal relationships, and more.

NEW FOREST FARM

TEK - Traditional Agroforestry

SPOTTED FROG RANCH




Search
Search
ex: Pizza near Clayville, NY
Get Directions History
Places
Coen Farm
STEP 1: Clarify
Clarify your vision, values, and resources.
STEP 2: Diagnose
Diagnose your resources for strengths, weaknesses,
STEP 3: Design
Design appropriate behaviors and systems to adopt, adapt or
Climate
Geography
Air Photos
July 2015 Airphoto
June 2015 Large Air Ph...
Maps
Contours
Created with the DIY Land Mapping Tool developed
Contours_1m
Contours_1m
Contours_50cm
AGRASID Soils
Solar_Radiation_wm2
Water_Catchment_m2
Slope_Degrees
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Aspect
Contours
Created with the DIY Land Mapping Tool developed
Primary Land Units
Water
Access
Animal Alleyways
Cattle Laneway
Structures
Main Yard Utilities
Septic
Water
Power
Natural Gas/Propane
Phone Lines
BUILDING YOUR
PERMACULTURE PROPERTY
A FIVE-STEP PROCESS
TO DESIGN AND DEVELOP LAND
ROB AVIS, MICHELLE AVIS, TAKOTA COEN
A Five-Step Process to Design and Develop Land
286 m
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