
CHAPTER 1: INTRODUCTION

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WHAT IS LANDSMART™?

LandSmart™ is a regional collaborative program that helps land managers meet their natural resource management goals while supporting productive lands and thriving streams.

LandSmart™ was developed by the Sonoma Resource Conservation District (RCD), Napa County RCD and Mendocino County RCD in collaboration with the USDA Natural Resources Conservation Service (NRCS), land managers, and environmental agencies.

By working together, we can offer an enhanced program that draws upon the skills and expertise of each RCD. Through this collaboration we provide our communities with a unique, cost effective conservation service that is specific to the region and offered through a trusted and local organization.

The LandSmart™ Program involves the RCD working with agricultural producers to develop Farm Conservation Plans and to implement Beneficial Management Practices. Farm Conservation Plans are a time-tested strategy that producers can use to set priorities for Beneficial Management Practices, comply with local, state, and federal regulations, and keep their land productive in the long term. LandSmart On-the-Ground assists growers and ranchers improve water quality and wildlife habitat on their property by implementing nutrient management, erosion control, stormwater management, water conservation, and other practices designed to achieve resource and land management goals.

WHAT ARE RESOURCE CONSERVATION DISTRICTS (RCDs)?

Resource Conservation Districts are non-regulatory, local, special districts empowered to manage soil, water, fish and wildlife resources for conservation. RCDs are legal subdivisions of the State that were formed under Division 9 of the Public Resources Code in the late 1930s. RCDs exist in all fifty states with 100 RCDs located in the state of California.

The purpose of RCDs is to focus on soil, water, and related natural resource problems within the District; to develop programs to help solve those problems; and to enlist and coordinate assistance from private and public agencies that can contribute to accomplishing sound land use. Being non-regulatory, RCDs are the original grassroots conservation organization that work cooperatively with multiple agencies and interest groups to identify problems and guide solutions voluntarily. RCD funding comes from grants, fundraising, local property taxes, and/or Special Augmentation funds. By pursuing diverse funding sources, RCDs typically leverage their constituents' tax dollars into hundreds of thousands more for on the ground projects in their districts.

WHAT IS THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS)?

The Natural Resources Conservation Service, (NRCS, formerly the Soil Conservation Service) is a very close working partner with the RCDs. Although the NRCS is an agency of the U.S. Department of Agriculture, it tailors services to community need as informed by the local RCD and other partners. NRCS is the primary federal agency that works with private landowners in a voluntary way to help them conserve, maintain and improve their natural resources. The Agency emphasizes voluntary, science-based conservation; technical assistance; partnerships; incentive-based programs; and cooperative problem solving at the community level.

NRCS provides technical assistance to landowners, RCDs, and other state, federal, and local agencies. The Web Soil Survey, (available on-line) was created by NRCS soil scientists, and is supported as an ongoing public information technology effort by local staff. NRCS also administers the Environmental Quality Incentives Program (EQIP) which involves Farm Bill cost share programs.

WHAT IS EQIP?

EQIP is a continuous sign-up, voluntary, conservation program that provides financial and technical assistance for approved conservation practices based on a current conservation plan. The purpose of EQIP is to promote agricultural production, forest management, and environmental quality as compatible goals; optimize environmental benefits; and help farmers and ranchers meet Federal, State, Tribal, and local environmental regulations.

Applications for EQIP are accepted at any time and are ranked for funding at periodic application ranking cut-offs. The basis for an EQIP application is a conservation plan. The conservation plan describes the conservation practices to be implemented, the timing of implementation, the practice location, and the conservation benefit to be achieved. EQIP's funding opportunities are created to assure funds are available to resource priorities across various land use types, for special emphasis resource needs, and to assure that underserved groups have access to assistance. Underserved producers include limited resource farmers/ranchers, beginning farmers/ranchers, socially disadvantaged producers, and Tribes, which may be eligible for a higher practice payment rate for the implementation for conservation practices and conservation plans. For more information, contact your local NRCS office.

FARM PLANNING WITH LANDSMART™

LandSmart planning is designed as an “open-source” process, whereby growers have many options for completing a farm plan that builds off of their expertise and resources. LandSmart plans can be developed through a number of avenues, with varying levels of involvement from RCD staff or other conservation professionals.

In any case, growers who want or need to have their LandSmart plans certified will have the option to do so through a visit and correspondence with RCD staff (and potentially private consultants if applicable, e.g. if the plan involves significant engineering considerations). Generally speaking, greater involvement of RCD staff in the planning process may make the certification process more efficient, as the RCD will already be familiar with the property and the BMPs recommended.

Table 1 provides several options for how one may choose to utilize the LandSmart™ planning program.

Table 1. LandSmart Planning Process Options

Most RCD Involvement	<p>Grower contacts the RCD for full assistance with their LandSmart plan. RCD staff visit the site to discuss each question in the plan template with the grower and tour the site. RCD staff conduct follow-up visits to assess specific features of the property (e.g. roads and streams). RCD staff draft the LandSmart plan and present it to the grower for discussion and finalization.</p> <p>This option is most useful for growers who:</p> <ul style="list-style-type: none"> • Want to limit the amount of time they spend preparing their farm plan • Desire ample professional input on BMPs to implement • Are subject to water quality permits such as Waste Discharge Requirements or Waivers and desire ample guidance on how to comply with these permits
	<p>Grower attends a series of workshops offered periodically by the RCD. In these workshops the grower can work through the farm plan template questions in a group setting, asking questions where needed. The workshop series includes both classroom-style sessions and field visits to demonstrate key planning concepts. After attending the workshop series, the grower may request assistance from RCD staff in completing specific elements of their plan, e.g. digital maps, road and stream assessments.</p> <p>This option is most useful for growers who:</p> <ul style="list-style-type: none"> • Are able to attend the workshops as scheduled, and for whom the timing of offered workshops coincides with time for desired plan development • Desire the assistance of professionals and want to use this assistance most efficiently • Are subject to water quality permits such as Waste Discharge Requirements or Waivers and desire ample guidance on how to comply with these permits
	<p>Grower downloads the LandSmart Farm Plan template off of the LandSmart website and starts the plan independently. When the grower has completed as many sections as he or she feels capable of completing, he or she contacts RCD staff for assistance completing the remaining elements.</p> <p>This option is most useful for growers who:</p> <ul style="list-style-type: none"> • Do not find it feasible to attend scheduled workshops, or do not like working in a classroom setting • Desire the assistance of professionals and want to use this assistance most efficiently • Are subject to water quality permits such as Waste Discharge Requirements or Waivers and desire ample guidance on how to comply with these permits
Least RCD Involvement	<p>Grower downloads the LandSmart Farm Plan template off of the LandSmart website, and completes the entire plan independently. The LandSmart website also includes a guidebook with ample reference material to help landowners understand the questions and BMP options within the farm plan template.</p> <p>This option is most useful for growers who:</p> <ul style="list-style-type: none"> • Have in-house staff with conservation expertise • Already have a clear idea of the BMPs they would like to implement, but want to get them down on paper in an organized manner • Are not subject to water quality permits such as Waste Discharge Requirements or Waivers

THE BENEFITS OF LANDSMART™ PLANNING

There are several benefits to a Vineyard Plan. A plan can help comply with the requirements of current and future environmental regulations, including water quality Waste Discharge Requirements, Conditional Waivers and TMDL's (Total Maximum Daily Loads); a plan can also address concerns the landowner has about specific areas on the property; solidify priorities for land management activities and determine a timeline that is feasible for implementation of priorities; implement land management practices that improve the long term productivity and profitability of the land while protecting natural resources; and to help prepare for opportunities to take advantage of cost-share programs that can help meet goals for the property.

BASIC WATERSHED CONCEPTS

When considering whether to develop your own LandSmart plan, a number of questions may arise. One of these may be how compiling all this information can help natural resources or benefit the watershed. Other questions may concern some of the terms used or the reasons for selecting various Beneficial Management Practices around the property. Perhaps the best approach is to take a step back and look at the big picture, which begins with the watershed where the vineyard is located.

WHAT IS A WATERSHED?

A watershed is the entire area of land that drains into a distinct creek or river system. It includes creeks, drainage areas, ditches, storm drains, flood plains, and land that water flows over or under on the way to a creek or a bay. Watersheds catch and store rain. Climate, elevation, soil, plants, steepness of the land, and size of the watershed affect the rate at which stored water is released from the watershed into creeks.

Natural conditions and human activities influence the condition of a creek. What takes place in the upstream areas will affect the downstream area. Changes may happen suddenly as the result of a storm (such as new stream bank erosion), or accumulated problems in the watershed may take many decades to develop (such as pools in the creek becoming filled with soil that has washed off the land). Plants and animals that live in or near the water are highly susceptible to changes caused by human actions.

Healthy creeks reflect a healthy watershed. Creek channels are constantly being reshaped through natural processes. All creeks are important, whether they flow year-round (perennial), part of the year (intermittent), or just during storms (ephemeral). Even the small grass-lined

ditches, known as swales, are important because they eventually carry water, soil, and food for aquatic animals into larger creeks.

HYDROLOGY 101

In our northern coastal California hydrologic cycle:

- Water enters the system as rainfall and leaves the system as either runoff to a bay or river, or evapotranspiration. Evapotranspiration is the process by which water return to atmosphere (evaporation from free surfaces + transpiration by plants)
- Water balance within a watershed can include imported and exported water
- Conservation efforts, groundwater recharge and recycling can be used to assist with balance between water inflow and outflow
- Annual hydrology generally consists of rain mainly in the winter, dry summers
- Surface runoff increases as infiltration decreases, with intensified land use.
 - rain falling on undeveloped land surfaces infiltrates more
 - developed land has more impervious surfaces (pavement & roofs)
 - more human development means more runoff & a faster response to rain
 - more runoff means more sediment & pollutants, and it alters receiving channels
- Channel flow is concentrated in winter; summertime flows are low
- Spring and summer flows in river & creeks may be critical for fish
- Many local rivers and creeks have unstable bed & banks
- Groundwater is important to agriculture and increasingly in demand
- In many areas, recharge of groundwater is not keeping up with human use

STREAMS AND RIPARIAN AREAS

The riparian area or riparian corridor includes the stream channel and that portion of the adjoining landscape where the vegetation is influenced by elevated water tables, flooding, or the ability of soils to hold water. Because they provide a protected transition zone between uplands and water, riparian corridors support a rich diversity of birds and other wildlife. Riparian habitat, the vegetated area growing along the river or stream, supports the greatest diversity and abundance of wildlife in California. The roots of the riparian vegetation grow in the water table of the river or stream, acting as a transition zone between the river and the land next to it. Riparian forests provide an essential link from upland habitats to food and water sources. The shade, soil stabilization, and organic matter they provide are key ingredients to health river systems. Protecting, enhancing, and restoring riparian habitat is one of the most effective ways to protect endangered wildlife and improve water quality.

NAVIGATING THE PERMITTING PROCESS

Some of the management practices that you identify in your LandSmart Plan may require permits from various resource agencies. “Navigating the Permitting Process,” below, explains how and why one would obtain a permit or permits for a project. Please contact your local RCD for more information.

Navigating the Permit Process

What is a Permit?

A permit is an agreement between a landowner and a resource agency stating that the landowner will follow certain guidelines when carrying out a project on their property. Examples of permit conditions/requirements include:

- Timing of work during the dry season
- Use of erosion control measures during and after construction
- Use of proper handling guidelines for hazardous materials
- Measures to protect fish and other native species present in the work area



Permits stem from regulatory agency mandates that are established to ensure land use practices and construction projects do not have adverse impacts on the environment.

When do I need a permit?

Some common projects that require permits include:

- Streambank restoration, repair and stabilization
- Projects that change the use of a wetland or add fill to it
- Some road improvements
- Diversion or storage of surface water

Projects may require multiple permits from County, State, and Federal agencies. If you are unsure whether your project requires a permit from a certain agency, call that agency and they will be able to tell you if a permit is required.

How Do I Get a Permit?

Contact permitting agencies early in the project planning process! It can take weeks and often months to obtain necessary permits, so waiting too long could delay your project. Consulting with permit agencies early on can also save you time and money by making sure that the project is designed in a way that is acceptable to these agencies.

Start with your local City or County planning department, then move to the regional (RWQCB), State (DFW), and federal agencies (USACE, NMFS, USFWS). See the table below for additional information.

With such a daunting list of potential regulators that may affect your project, landowners may be tempted to work without permits. Don't do it! Violators incur fines for illegal work, must repair work to satisfy regulators, and may be required to mediate for damage done to the environment.



Agency	Permit
Local Planning/Permitting Department	Grading & Drainage, Zoning, Building
CA Department of Fish and Wildlife (DFW)	1600 Streambed Alteration Agreement
Regional Water Quality Control Board	401 Certification, Waste Discharge Requirement
US Army Corp of Engineers (USACE)	404 Permit, Section 10 Consultation
US Fish and Wildlife Service (USFWS)	Incidental Take*
NOAA National Marine Fisheries Service (NMFS)	Incidental Take* or Sect. 10 of ESA

* An incidental take permit is generally acquired through the USACE, so there is generally no need to contact USFWS or NMFS directly for a project permitted by USACE.