

Pride and Prescription

What Makes a Good Habitat Management Plan

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A habitat management plan puts in writing what you want from your land, what the land can support, what you will do, and how you will know it worked. Use these fifteen parts, the outline I taught in my university habitat management course, to write a plan or to judge one; their order broadly follows the USDA's nine-step conservation planning process.¹ The goal and its objectives, parts 1 and 2, are the most important. If fifteen parts seem like a lot, start with those two.



The fifteen parts in four stages. Everything after parts 1 and 2 answers to them, and part 13 checks the land against them each year. Guide 2, *Census and Sensibility*, goes deeper on part 13; Guide 3, *Other People's Money*, on part 14.

I Decide what you want

START HERE

- 1 One clear goal.** One or two sentences on what you want from the land and its wildlife, such as more quail, turkeys, or wintering ducks on land that is still farmed, grazed, or logged.
- 2 Objectives that meet the goal.** A list of accomplishments, each needed before the goal counts as reached; they need not be connected to one another. Give each a number, so it plainly succeeds or fails and gives you data.²

Then, reached or not, you know what went right and what went wrong, with numbers to judge the goal by. A pattern: by year, change what you measure in which area from today's level to the target.

Write the objectives right after the goal. Each names what part 13 will measure and what part 14 will pay for, so the rest of the plan follows from them.

THE GOAL *More bobwhites on a working cattle ranch.*

THREE OBJECTIVES, EACH NEEDED

by year	change what you measure	in which area	from today's level	to the target	○ today ● target
1 2028	bunchgrass nesting cover, share of the ground, each May	the north pasture	15%	30%	0 — ○ —> ● —
2 2029	redcedar canopy cover, each summer	240 acres of the south pasture	about 20%	under 5%	0 ● —< — ○ —
3 2031	coveys heard per October morning	six listening points	3	8	0 — ○ —> ● —

Part 2's pattern, filled in for an invented ranch; the numbers are for illustration. Guide 3 prices objective 2, and Guide 2 shows how to count the coveys in objective 3.

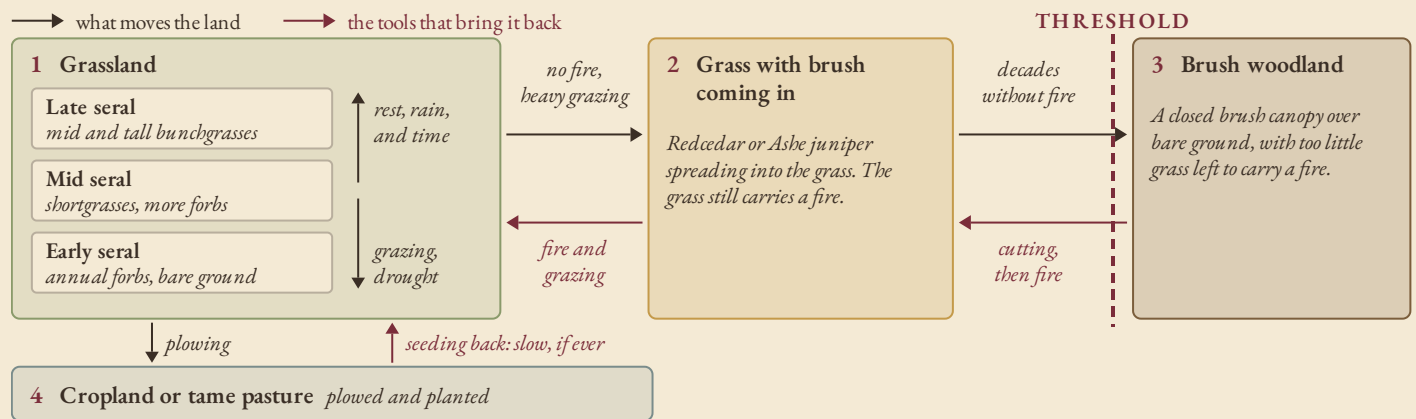
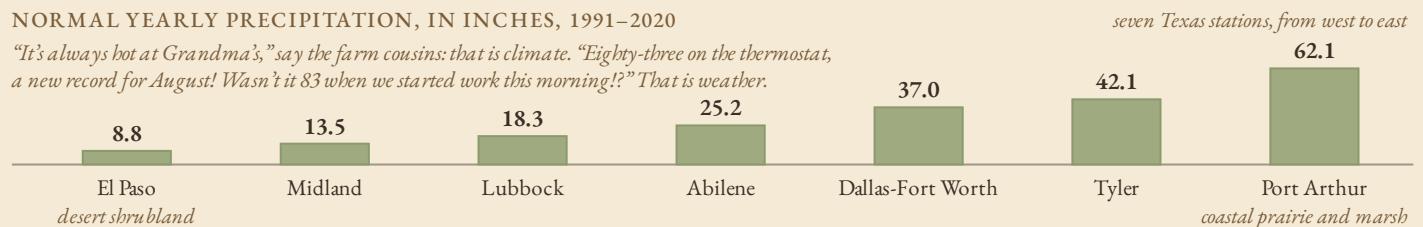
Your objectives, one sentence each. By year, change *what you measure* in *which area* from *today's level* to *the target*. Write one for each accomplishment the goal needs; if you cannot fill a blank, that objective is not ready.

II Inventory the land

- A description of the property.** Maps and facts: boundaries, acres, fences, water, roads, buildings, current uses, and past grazing, farming, logging, and burning.
- Climate, soils, and terrain.** The 30-year rainfall and temperature averages,³ soils by map unit,⁴ and slope, elevation, and aspect. These set what the land can grow.
- The natural drivers.** The forces that historically shaped the land, such as fire, flooding, drought, storms, grazing, and browsing, and how often and how severely each came.^{5,6}
- The plant communities each site can support.** Its seral stages, from early to late, with their species and structure, and what moves the land between them. Ecological site descriptions⁵ and LANDFIRE's models of historical vegetation⁶ describe them.
- A map of what is there now.** Mark the current seral stage on every part of the property. Where no map exists, walk the land, measure the plants (and in woods, the trees), and assign each area to a stage. Mark, too, any land past a threshold: it takes other tools, and more money, to bring back.

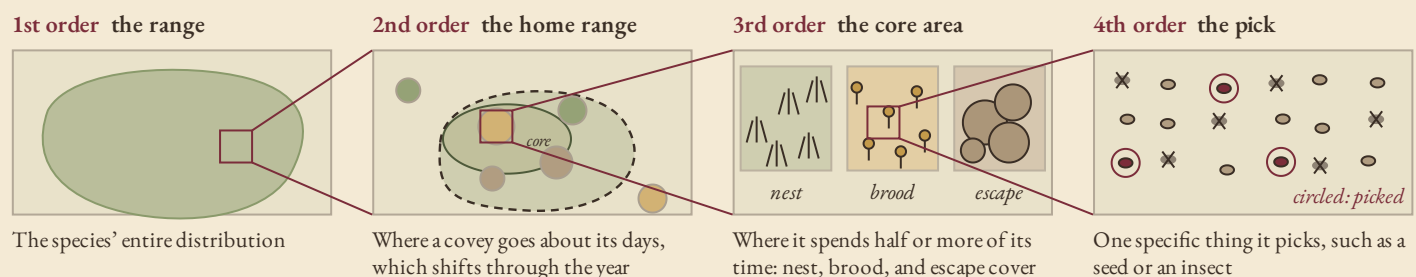
NORMAL YEARLY PRECIPITATION, IN INCHES, 1991–2020

"It's always hot at Grandma's," say the farm cousins: that is climate. "Eighty-three on the thermostat, a new record for August! Wasn't it 83 when we started work this morning!?" That is weather.



How an ecological site's model reads, simplified, for an invented Southern Plains grassland site.⁵ Past the threshold, fire and grazing alone no longer bring it back.

III Match the animals to the land



The four orders of habitat selection, drawn for a bobwhite.^{7,8} A plan needs the facts at every order: cover a covey cannot reach does it no good.

- The facts on each animal.** Habitat is species-specific; to professionals, there is no such thing as "wildlife habitat." It is what lets one species live, survive, and reproduce in a place.⁹

For each species, note what research shows it selects at four scales, from its range to the foods it picks at a feeding site.⁷ Needs change with season, sex, and age.

- 9 The match.** Compare each species' needs with the map from part 7. Where they are met, the habitat exists; where they are not, the plan must provide them.
- 10 How to create what is missing.** For each need, state what will be done, where, when, by whom, how, and why, tied to parts 1 to 9. Use tools that are, or copy, the land's natural drivers (Leopold's five, in the table below), and keep herbicide among the last choices: of all the ways to manage land, herbicide misused does the most severe and lasting harm. No plan can meet every need, so choose which to meet first, and say why.
- 11 How to keep what exists.** The same who, what, where, when, how, and why for habitat you already have: for each tool, the method, its purpose, how often, and how much.
- 12 A plan that fits the operation.** Check parts 10 and 11 against how the land is used now and the owner's time and money. A recommendation you know is unachievable going in makes a bad plan by default. In class I called the quick fixes duct tape and WD-40: they work long enough to buy time to find the real solution. If you apply either, write down who, what, when, where, why, and how. Check the law as well: protected species, burn rules, and herbicide labels.¹⁰

LEOPOLD'S FIVE TOOLS, AND WHAT EACH COPIES

the tool	Axe	Plow	Cow	Fire	Gun
what it copies	wind, ice, insects	floods and bison wallows	bison and elk	wildfire	predator/prey dynamics
on the land today	cutting, thinning	disking, seeding	prescribed grazing	prescribed fire	regulated hunting

Leopold named the tools.¹¹ What each copies is my shorthand. Use each the way its natural driver worked: as often, as hard, and in the same season (part 5).

ONE PLAN, TWO KINDS OF LAND

		 Semi-arid Texas <i>High Plains, Rolling Plains, Edwards Plateau</i>	 Southern forests <i>Arkansas standing in: the Ozarks and Ouachitas to the Delta</i>
part			
4	Normal yearly rain	18 to 31 inches: Lubbock 18.3, Abilene 25.2, Kerrville 30.6	47 to 50 inches: Fayetteville 47.0, Little Rock 50.4
	What limits plants	water	light, under the canopy
5	What shaped the land	fire every few years, drought, and bison	fire in the pine and oak woods; floods in the bottoms; wind, ice, and insects
6, 7	Without its fire	heavy grazing starves the fire; juniper and mesquite close over the grass, past a threshold	a hardwood midstory shades out the ground layer, and shade-tolerant trees replace oak and pine
8	Animals often named	bobwhite and Scaled Quail, Lesser Prairie-Chicken, Rio Grande Wild Turkey, pronghorn, mule deer, and white-tailed deer	Eastern Wild Turkey, white-tailed deer, bobwhite in open pine, Red-cockaded Woodpecker, ducks in flooded timber
10, 11	The main tools	cow and fire, with the axe and plow for brush	axe and fire: thinning, midstory removal, and burning
12	Fits the operation	a cattle herd: stocking rates and rotations	a timber stand: harvests and rotations
2, 13	How fast it answers	the grass, in a few growing seasons, rain willing	the ground layer in a year or two; the stand, in decades

In both, take fire away and wood wins over the grasses and forbs on the ground, the layer quail and turkey broods need.

Semi-arid Texas, deserts aside, beside the southern forests, with Arkansas standing in for them.^{3,12-14} Rain from NOAA's 1991–2020 normals; fire before settlement from Frost; what its loss does from Van Auken and from Nowacki and Abrams.

IV Check it and pay for it

- 13 A monitoring plan.** Measure the plants and animals the same way, in the same places and seasons, at more than one scale, for enough years to show a trend, and compare the results with the objectives. Retake photos from fixed points.¹⁵ For animals, measure survival and reproduction, not only numbers.¹⁶ Then adjust the plan; this cycle is called adaptive management.¹⁷ Guide 2, *Census and Sensibility*, shows how to count.
- 14 A budget.** The cost of each practice by year: equipment, labor, seed, fuel, and follow-up. Cost-share programs, such as the Environmental Quality Incentives Program¹⁸ and Partners for Fish and Wildlife,¹⁹ can pay part of it. Guide 3, *Other People's Money*, shows how to price the work and find the money.
- 15 The sources.** A good plan cites the research and guidance behind each recommendation, so anyone who follows can check it. This guide's sources are on page 4.

Judge a plan: the fifteen parts

- ☐ One goal, in a sentence or two.
- ☐ Objectives, each with a number that plainly passes or fails.
- ☐ Maps and facts on the property and its history.
- ☐ Climate normals, soils by map unit, and terrain.
- ☐ The natural drivers: how often and how severely each came.
- ☐ Each site's seral stages, and what moves the land between them.
- ☐ A map of today's stages, with thresholds marked.
- ☐ The facts on each species, at all four orders.
- ☐ Where each need is met, and where it is not.
- ☐ For what is missing: what, where, when, who, how, and why, with priorities.
- ☐ The same for what already works.
- ☐ A check against the operation, its time and money, and the law.
- ☐ Monitoring tied to the objectives, and a date to adjust.
- ☐ A budget by practice and year, with cost-share named.
- ☐ A source behind every recommendation.

Words worth knowing

Adaptive management. Plan, act, measure, compare with the objectives, adjust, and repeat.

Ecological site. A kind of land with its own soils, climate, and plant potential, each described by the USDA in an ecological site description.

Habitat. The resources and conditions that let one species live, survive, and reproduce in a place: food, water, and cover, arranged in space and time.

Habitat selection. The choices an animal makes among the places and resources open to it, at each of four orders.

Midstory. The young trees and shrubs under a forest's canopy.

Natural driver. A force that shaped the land before us: fire, flood, drought, storm, grazing, or browsing.

Prescription. A written plan for one practice: where, when, under what conditions, and to what end, as in prescribed fire and prescribed grazing.

Seral stage. A step in plant succession, from early (annual forbs, bare ground) to late (the long-lived plants a site holds under its natural drivers).

State-and-transition model. A diagram of the states a site can be in and what moves it between them.

Threshold. The point past which land will not come back on its own, or with the usual tools.

Sources

Each source is shortened to its authors and year, where it was published, and its subject; the journal, volume, and pages, or the publisher or web address, find it.

- 1 **USDA NRCS 2021.** *National Planning Procedures Handbook*, title 180, part 600. The nine-step conservation planning process.
- 2 **Aldridge and Colvin 2024.** *Ecological Solutions and Evidence* 5:e12313. Writing SMART objectives.
- 3 **NOAA 2021.** U.S. Climate Normals, 1991–2020. ncei.noaa.gov
- 4 **USDA NRCS.** Web Soil Survey. websoilsurvey.sc.egov.usda.gov
- 5 **USDA NRCS.** Ecosystem Dynamics Interpretive Tool. edit.sc.egov.usda.gov
- 6 **LANDFIRE 2020.** Biophysical settings models of historical vegetation. landfire.gov
- 7 **Johnson 1980.** *Ecology* 61:65–71. Usage, availability, and the orders of selection.
- 8 **Hernández and Guthery 2012.** *Beef, Brush, and Bobwhites*. Texas A&M University Press.
- 9 **Hall and others 1997.** *Wildlife Society Bulletin* 25:173–182. The habitat concept.
- 10 **U.S. EPA.** Introduction to pesticide labels. epa.gov
- 11 **Leopold 1933.** *Game Management*. Charles Scribner's Sons.
- 12 **Frost 1998.** *Tall Timbers Fire Ecology Conference Proceedings* 20:70–81. Fire before settlement.
- 13 **Van Auken 2000.** *Annual Review of Ecology and Systematics* 31:197–215. Shrub invasions of semiarid grasslands.
- 14 **Nowacki and Abrams 2008.** *BioScience* 58:123–138. The loss of fire in eastern forests.
- 15 **Hall 2002.** USDA Forest Service, PNW-GTR-526. Photo point monitoring.
- 16 **Van Horne 1983.** *Journal of Wildlife Management* 47:893–901. Density as a misleading indicator of habitat quality.
- 17 **Williams and others 2009.** U.S. Department of the Interior. Adaptive management.
- 18 **USDA NRCS.** Environmental Quality Incentives Program. nrcs.usda.gov
- 19 **U.S. Fish and Wildlife Service.** Partners for Fish and Wildlife. fws.gov

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