

# The Three Steps to Avoid and Resolve Environmental Issues\*

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## 1 Introduction

We live in a time of rapid changes and uncertainties in our climate, health, and economy. The “new normal” is not likely to stabilize for at least another year.

The western US is entering the third decade of a megadrought that Columbia University’s Lamont Geological Observatory considers to be the worst in 1,200 years. The megadrought affects the area bounded approximately by the Columbia River on the north, northern Mexico to the south, the Rocky Mountains to the east and the Pacific Ocean on the west.

Effects of the drought are seen in natural ecosystems, the economy, and society in ways we’ve not before experienced. Everyone will see changes regardless of location: temperate, semi-arid, or arid climatic zone. For example, if all storm water pollutant dischargers (point and non-point) contribute the same quantity of a regulated water chemistry constituent while surface and ground water quantities decrease the concentrations of that constituent will increase and, perhaps, cross a regulatory compliance threshold. What was a non-issue has now become a permit compliance issue through no change in permit holder behavior.

The global covid-19 pandemic has impacted business and personal lives in ways for which we were not prepared and with which we all struggle day-to-day. With all life fraught with uncertainties the relationships between businesses and their environments can be a very low priority. Taking actions now to prepare for future changes on your operation’s relationships with the natural environment allow you to focus on more immediate needs such as market, supply chain, and productivity changes as they occur.

My goal as an environmental consultant has always been for my clients to avoid environmental compliance issues, and quickly and efficiently resolve existing ones. Avoidance is better than having to resolve an issue. This tutorial helps you understand what to do and why it’s good to take these actions now.

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## 2 Understand ecosystem dynamics

All businesses regardless of size or location have the potential to negatively affect natural ecosystems. For example, renewable energy generation by solar and wind farms can impede avian and mammalian migrations while agrichemicals can make surface waters harmful to humans, livestock, and wildlife. Urban industry, such as ready-mix concrete plant truck wash-out can make receiving waters very alkaline if not treated prior to discharge. Much more common are surface and shallow ground water runoff from storms and non-storm discharges into receiving waters or municipal sewer systems.

Storm water discharge and industrial chemical regulations under the Clean Water Act (CWA) and Toxic Substances Control Act (TSCA) focus on source control. These controls can be based on the best available technology or on water quality effluent limits. In terms of environmental compliance the latter is more important because decisions are based on the operation's impacts on the receiving waters, directly or indirectly. And, technological limitations might lead to litigation which is costly in time, effort, and money while water quality based discharge decisions are based on project- and location-specific scientific knowledge.

Everyone who owns, or works for, an operation either requiring an environmental permit or that has the potential to adversely affect the natural environment in which it's located pays close attention to all the business and financial forces that affect its operations and profitability. Market conditions for its product, the condition of sources of materials needed for operations, financial and labor markets, transportation, and more are carefully monitored. Too often, however, environmental conditions and regulatory compliance are considered a cost and not considered as important as are other business factors. Most of the time this does not matter. But, when it does matter, such as with the current uncertainties caused by climate change, a global viral pandemic, and extensive economic disruption across all business sectors, taking active steps to avoid environmental issues makes strong business sense.

Every operation is unique in its relationship to the environment. There is no one-size-fits-all procedure to avoid and resolve environmental issues.

Informed decisions based on detailed knowledge are necessary for businesses to survive and thrive. This includes information about the natural environment as well as the business environment. Unfortunately, while environmental permits specify the data to be collected and the frequency of collection this is rarely based on established ecological theory. As a result, the permit holder could be in total compliance with permit monitoring requirements yet unable to defend the operation and its practices if challenged by the regulator or outside interests.

Knowing the conditions of waters entering and leaving your areas of operation, how variable they are and being able to separate natural variability (which can be very high) from any operational impacts is a necessary key to avoiding and resolving environmental issues.

## 3 Understand the regulator

Regulatory agency staff have a wide range of backgrounds, experiences, and knowledge of the industries they regulate. Each agency narrowly defines jobs within the agency, including permit writing and compliance enforcement. Their employees' responsibility is to the agency and their own position. They take care to avoid challenges to their decisions and to prevent lawsuits with

the agency as defendant. This can lead to the extreme of paralysis by analysis. Quite often this arises because the environmental issues with their supporting data and their analyses are quite complex and not sufficiently understood by the regulators who need to make a decision about permit issuance or compliance.

Holders of environmental permits need to understand the regulatory agency's culture and understand the differences between their business needs and those of the regulators with whom they interact. The goal is to establish a solid working relationship where both the permit holder and the regulator find common ground that works for both. These relationships are not zero-sum; that is, there is not a "winner" and a "loser" but two sets of needs that are met even though both sides give up some of what they they would like in an ideal world.

Regulatory agency staff are immune to consequences. In many agencies a permit writer or compliance enforcement agent cannot be promoted or given a raise for outstanding efforts to help permit holders comply with all regulations. The agency has established criteria for promotion and pay steps and does not accommodate actions out of step with these criteria. On the other side of the issue it is very rare for an agency staffer to be fired for not performing the job they were hired to do.

It's necessary to work with bureaucrats to find "wins" that work for both because the alternative risks fines, penalties, cease-work orders, or delays.

Often solutions that meet regulatory objectives are highly beneficial to the permit holder, too. The common ground could save money and time for the permit holder or provide other benefits such as gaining a social license to operate.

## 4 Communicate clearly and effectively

Natural ecosystems are very complex and highly variable. Their dynamics can be difficult to explain to non-technical decision-makers which include finders of fact in litigation (juries and judges), regulators, project opponents, and the general public. The environmental relations between industrial activities and these ecosystems is equally difficult to clearly and effectively communicate because there are often high emotions affecting the audience's receptivity.

Natural resource industries are caught in the middle of two opposing belief systems about ecosystems. One side believes that natural ecosystems have intrinsic values (also referred to as "ecosystem services."). That is, wilderness, forests, grasslands, sage-brush steppes, streams, and rivers have value in-an-of themselves. The other side believes that ecosystem have only extrinsic value. That is, they have value only in extracted minerals, harvested trees, and the food crops and livestock grown on them. Too often, both sides see ecosystems as a zero-sum game: either leave them all alone or extract from them the maximum possible economic value.

Both sides are correct in the values of natural ecosystems and, when well managed, there are values obtained from both their intrinsic value and their economic value. Now, more than before, climate change is making its effects on water quantity and quality, weather patterns, and shifting abilities of geographic areas to provide for people and wildlife more widely accepted. Understanding these two belief systems and how your business operations fit into a changing world allows effective adjustment to a changing world. It also supports resolution of environmental issues, and clearly and effectively communicates this to regulators and the public.

## 5 Making these steps work for you

Permit holders and regulatory agency staff have different perspectives (sometimes completely opposite agendas). This can make it difficult for them to agree on a compromise that works for both. What benefits both parties by more quickly reaching common ground is using a disinterested third party arbitrator; a environmental science expert with extensive knowledge of the regulated industry. The arbitrator has no vested interest in one party “winning” and is focused on both parties being satisfied with a solution acceptable to each.

To be effective the arbitrator needs to be experienced in environmental regulatory science, be a good listener and communicator, and be able to create working compromises that are technically sound and legally defensible.

I’ve been applying these steps to facilitate clients and regulators agreeing that issuing a permit or resolving a compliance issue will not adversely impact water quality, fish and other animals of concern, and the solution benefits them both. As Gail McEwen (an Oregon Department of Fish and Wildlife Land Use Coordinator) wrote in her testimonial letter to me, “I particularly appreciated his willingness to listen to and address our Department’s concerns. . . . I am confident that his attention to detail in the revegetation program will avoid future misunderstandings between our Department and his client.”

When you want the benefits of an experienced and effective expert to assist you in avoiding and resolving environmental issues contact me by phone (503-667-4517) or email <rshepard@appl-ecosys.com>. For more than 25 years I’ve unconditionally guaranteed that my work products are technically sound and legally defensible.