Integrated Environmental Planning and Permitting Enables Project Success

Shane Latimer

It is clear, sometimes painfully so, to anyone experienced with siting new utility infrastructure that environmental planning and permitting is often a complex undertaking. This article provides guidance to help smooth the process and keep your project on time and on budget.

Project permitting, especially for linear infrastructure, generally requires planning at federal, state, and local levels, often spanning multiple jurisdictions. Integrating all of the planning and permitting processes of each level, and each community, into a cohesive plan is crucial in managing budgets and timelines and, most important, stakeholder expectations. Changing regulations or government agencies may further complicate the process, because they do not have specific permitting timeframes or their decisions are subject to legal challenges.

In this article, we discuss the current general environmental regulatory context, followed by an integrated approach to permitting we use, which consists of three main pillars: (1) constraints analysis, (2) development of a comprehensive permitting plan, and (3) managing stakeholder expectations. Along the way, we'll share typical pitfalls that often befall project managers that may not be well-versed in environmental permitting. Last, we'll list the top permitting issues that seem to be challenging practitioners most.

CURRENT ENVIRONMENTAL PERMITTING CONTEXT

A little over a year into the Trump administration, not much has changed in the realm of environmental planning and permitting for siting energy infrastructure. The wheels of federal government turn slowly regardless of the fervor or efficacy of the White House. This is by design: moving regulatory targets, even if seemingly in your favor, could likewise move in another direction every two to six years.

This is particularly important for projects with extended timeframes, such as long energy alignments. Thus, one could argue that it is better to have a certain target rather than one subject to governmental whims, even if in your favor. In the same fashion, regulatory "windfalls" should be viewed with caution.

Regardless of federal politics, the basic framework of permitting will likely remain as it is for some time.

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NEPA

The National Environmental Policy Act (NEPA) forms the backbone of the federal permitting system, as well as paralleling permitting frameworks of many states. President Richard Nixon (yes, a Republican) signed NEPA into law in 1970, arguably for political rather than environmental reasons. NEPA is not a permit or permitting system; NEPA provides a framework in which project proponents for federally funded projects or those requiring federal permits are required to take a hard look at a project and show that the proponents are choosing the least environmentally impactful project. In fact, project managers are required to clearly document all "practicable alternatives" regardless of the preferred project design.

Analysis of Alternatives

It is typically the analysis of alternatives part of the NEPA process that tends to frustrate proj-

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ect managers the most. Too often, environmental professionals are brought into the permitting process after project managers are already far down the planning and design process and have either not documented alternative designs or have not even considered viable alternatives. This situation often creates an uncomfortable situation where it is clearly obvious to all involved, particularly to the federal "lead agency" responsible for reviewing project alternatives, that the analysis of alternatives has been "reverse engineered" and ad hoc alternatives developed to meet the NEPA requirement and still arrive at the proposed project design.

This pitfall is avoided by following the process outlined below.

Broader Meaning of "Environment"

The other important aspect of NEPA (and its state equivalents) is that "environmental" has a wider meaning than one might expect. In fact, NEPA requires evaluating alternatives in light of many federal acts, executive orders, and standards. Those most often unexpected include requirements to evaluate impacts to cultural resources (i.e., historic buildings, Native American archaeological sites and sacred places, and others), environmental justice, and climate change. NEPA also requires federal review to include cumulative impacts of the project on all resources at the applicable geographical contextual level (local, regional, global).

This unexpected array of potential issues leads us to the first pillar of our discussion: environmental constraints analysis.

CONSTRAINTS ANALYSIS

Constraints analysis is arguably the most important of the three pillars, because it shapes all future planning and initially tells us whether the project is viable. It is essential that the initial analysis be as thorough as possible in determining all applicable constraints. A solid plan that addressed the potential implication of all constraints is the only tool we have to avoid surprises and effectively manage expectations. But what constraints should we expect?

For presentation, we divide constraints into three general types: environmental, developmental, and a combination of the two. **Exhibit 1** lists some constraints associated with each type. Opinions vary regarding which constraint belongs in which list: the list is meant to be representative, not exhaustive.

One of the reasons for the divisions is to help identify which level of government typically requires permitting for which constraint: federal and state more to the left, local more to the right. Clearly, there may be substantial over-

Exhibit 1. Constraints by Type

ENVIRONMENTAL	COMBINATION	DEVELOPMENTAL
Wetlands	Land Ownership	Dust
Waters	Land Use	Noise
Water Quality	Floodplains	Traffic
Wetland Mitigation	Stormwater	Road Access
Endangered Species	Toxic Waste	Utilities
Fish and Wildlife	Environmental Risk	Railroads
Ground Fish	Human Health Risk	Seismic Hazards
Migratory Birds	Cultural Resources	Water Rights
Bald and Golden Eagles	Coastal Zone	Mineral Rights
Marine Mammals	Greenways	Surface Mining
Protected Lands	Climate Change	Energy Rights
Riparian Areas	Environmental Justice	Other Planning
In-water Work Period	Air Traffic	
NEPA/"Little" NEPA	Depredation	
	Specialty Agriculture	

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lap and duplication as to which agencies address which constraints; the important point is that the list is comprehensive and that you understand which agencies are responsible for which permits. We offer our clients a comprehensive but simple questionnaire to assist with beginning the listing process. This step helps the project manager identify those constraints of which they are already aware, as well as potential gaps.

At this point, it may also be prudent to develop a planning-level map of the various constraints, the level of detail or effort dependent on the scale of the project. Many jurisdictions have substantial databases of readily available geographic information, and many have online mapping tools that will build an initial map of at least some of the constraints, via an internet browser, in just a few minutes. Eventually, a formal map will likely be prepared using higher-level Geographic Information System (GIS) software that will allow various constraints to be viewed as individual layers. These may then be used to develop "heat maps" by overlaying the layers atop one another to show where overlapping constraints may combine to present real challenges. We have found this process to be extremely valuable in helping with initial project siting, particularly with linear projects.

The figures in **Exhibit 2** illustrate an example where we considered three constraints—viewshed position, slope, and conflicting land-use zoning—as part of siting a new gas pipeline. These individual layers were then overlaid to form a cumulative constraints map (**Exhibit 3**) that highlights areas to avoid or target for a pipeline alignment. In this case, the black corridors constitute areas that minimize these three constraints. Final mapping was actually more complex than what is presented here, including at least 23 composite layers of constraint information.

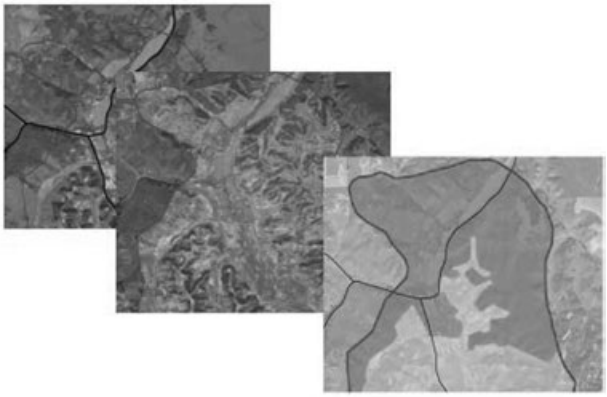
However, identifying and mapping a few key constraints early in the process may yield results that cascade through the planning process and ultimately save substantial time and money.

The Public

As experienced in a number of recent instances, all the planning in the world may not help in the face of disgruntled or concerned public stakeholders, or outright opponents.

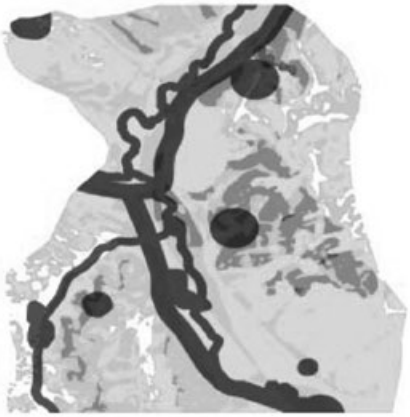
Because "all politics is local," agencies are required to consider public comments, and because many decisions are subject to legal challenge, public opinion may often be the most important constraint in the permitting process. Granted, you may ultimately prevail, but at what additional cost or timeframe? Problems may arise simply because stakeholders feel they have been overlooked or not included in the process. The need for up-front public involvement scales with the significance of the project, but it is crucial that project proponents have a reasonable

Exhibit 2. Various Environmental Constraints (Viewshed, Slope, Conflicting Land Use)



Source: Nathan Eady, SCS Tracer.

Exhibit 3. Combined Cumulative Constraints Map



Source: Nathan Eady, SCS Tracer.

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understanding and comfort level with the level of public support or opposition.

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If one waits until the required public comment period(s) during each agency permitting process, it may already be too late; stakeholders may feel you are trying to slip the project through quietly or that they were purposefully left out of a planning process in which they should have had a role. Whether either of these suppositions is true often does not matter: perception is reality. History, recent or otherwise, tells us project failure is most often due to politics rather than its technical foundation. How do we address this potential problem?

The level of public involvement, prior to and during permitting, should be scaled to the *perceived* significance of the project *to the stakeholders*, not to the project team. Some level of preliminary public involvement may be necessary to identify and assess public perception and likely response to the project. For projects that span multiple jurisdictions, multiple assessments may be needed.

Without exception, every project I have seen fail over the past 25 years did so because of an unexpected negative public response. In most cases, early evaluation of the likely public response could have at least informed the decision to move forward or help define the degree of public involvement required to increase public support.

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PRELIMINARY PERMITTING PLAN

Once the initial list is in place, each likely constraint can be listed in a table with such items as the applicable regulation or code, the agency responsible (staff contact, as available), the approximate permit or process timeline, likely permit conditions, and any connection to other regulations. This table will form the basis of an integrated permitting plan.[1] The last two items are important in integrating the various permitting processes to the extent possible. But what values are derived from integration? The answer is consistency, time and cost savings, and improved control over the permitting process.

First, having an integrated process facilitates coordination between federal, state, and local permitting agencies and their requirements. Having a well-developed plan at the beginning of the agency coordination phase helps establish fair and consistent project objectives (purpose and need), a consistent range of practicable alternatives, and reasonable alternative evaluation criteria. In other words, meeting with the agencies with a plan in hand will help drive project permitting rather than having it driven for us, often in a scattered manner. Some groups of agencies in states or other jurisdictions offer pre-application meetings to help begin project planning. Some would argue for having a well-developed plan prior to such a meeting, or they may feel uneasy about revealing too much early in the process. Local experience may help determine to what degree a plan needs to be fleshed out before the meeting or whether agency staff will be helpful in crafting the preliminary plan. Regardless, we would argue that there is high value in building rapport with agency staff early, as you will be dealing with them throughout the process.

Second, many permits require submittal of the same or similar information to multiple agencies. The ability to cite or include documents rather than develop separate permit submittals (perhaps drafted by separate consultants) saves substantial time and money. It also allows for an ongoing review of likely permit conditions and helps the project manager facilitate minimization and unification of those conditions. Too often, agencies do not communicate, and projects may end up with contradictory or impractical permit conditions or a large number of various, disjointed conditions that unduly burden the project. If likely or proposed conditions are carefully tracked as part of the ongoing permitting plan, arguments can often be made to the agencies to keep the number and burden of conditions to a reasonable level, particularly if they are duplicative with those of other agencies.

Last, there is value in permitting agencies knowing that the same information is being presented to and approved by other agencies. This

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is especially helpful when agencies are lagging behind in issuing their permits. If they know a similar or related permit has already been issued by another agency, they may be more likely to issue their permit.

Ultimately, maintaining a solid permitting plan is the key to project success. The plan will likely need occasional, if not frequent, updates to facilitate efficient project management, especially when a team of consultants is involved, as is often the case. The plan is also the basis for managing stakeholder expectations as the project moves forward.

MANAGING STAKEHOLDER EXPECTATIONS

For those who have not routinely experienced the trenches of environmental permitting, it may be difficult to understand the various challenges that may arise before receiving a permit.

Developing a comprehensive permitting plan helps educate stakeholders as to all the moving parts involved in a process that may require several permits and certifications. It might even be prudent to include a section in the plan outlining the various challenges that are expected with each permit. Nobody wants delay or surprises. A comprehensive permitting plan helps insulate the project team from having to explain or defend the actions of agencies or other stakeholders. Moreover, if stakeholders understand potential challenges from the start, they may be able to use their influence to facilitate more efficient permitting or help alleviate delays.

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We often use several tools to help keep stakeholders in the loop. One such tool is a simple flowchart, which can be posted online so that stakeholders can be kept apprised of permitting progress. **Exhibit 4** is an example of a simple schematic we may use for our projects, this one being specific to Oregon wetland and floodplain permitting. These flowcharts can be far more complex and may span several pages depending on the number of permits and jurisdictions.

Regardless of the method one uses, managing stakeholder expectations is important for a smooth permitting project. Leaving stakeholders in the dark for undue periods of time or surprising them with changes is never good for the project (or a consulting business).

CURRENT TOP PERMITTING ISSUES

The following is our running list of issues for which we find clients coming to us for help.

1. *Compliance with Section 106 of the National Historic Preservation Act (tribal consultation).* Unless project managers and clients are in an area where tribal issues or historical properties are common, the need to survey for and address cultural resources may be unexpected.
2. *Phase I Environmental Site Assessment (property due diligence).* The need to complete a review of a site's history regarding what hazardous materials might have been or are present and could present future problems has become relatively routine. However, our experience shows this requirement still tends to surprise many project proponents.
3. *FEMA Floodplain Endangered Species Act (ESA) compliance.* The Federal Emergency Management Agency (FEMA) has added compliance with the ESA to the Letter of Map Revision process. This is particularly challenging in the Pacific Northwest due to the presence of listed species in many streams but may apply anywhere that listed species are associated with a floodplain project. This process is made more complex because of the way FEMA has delegated the responsibility of federal compliance to local floodplain managers who have no direct connection to receiving assistance from the US Fish and Wildlife Service or National Marine Fisheries Service (known collectively as "the services").
4. *ESA compliance*. Complying with the ESA can often be challenging for a number of factors—too many to detail here. Regardless, because much of the process is often relatively subjective, there may not be clear-cut criteria associated with compliance. The services are also generally not required to meet specific timelines.
5. *Section 401 water quality certification and stormwater*. Many projects requiring a federal permit must obtain "401 certification" demonstrating that the project will not degrade water quality. This responsibility is often delegated to state or local agencies by the Environmental Protection

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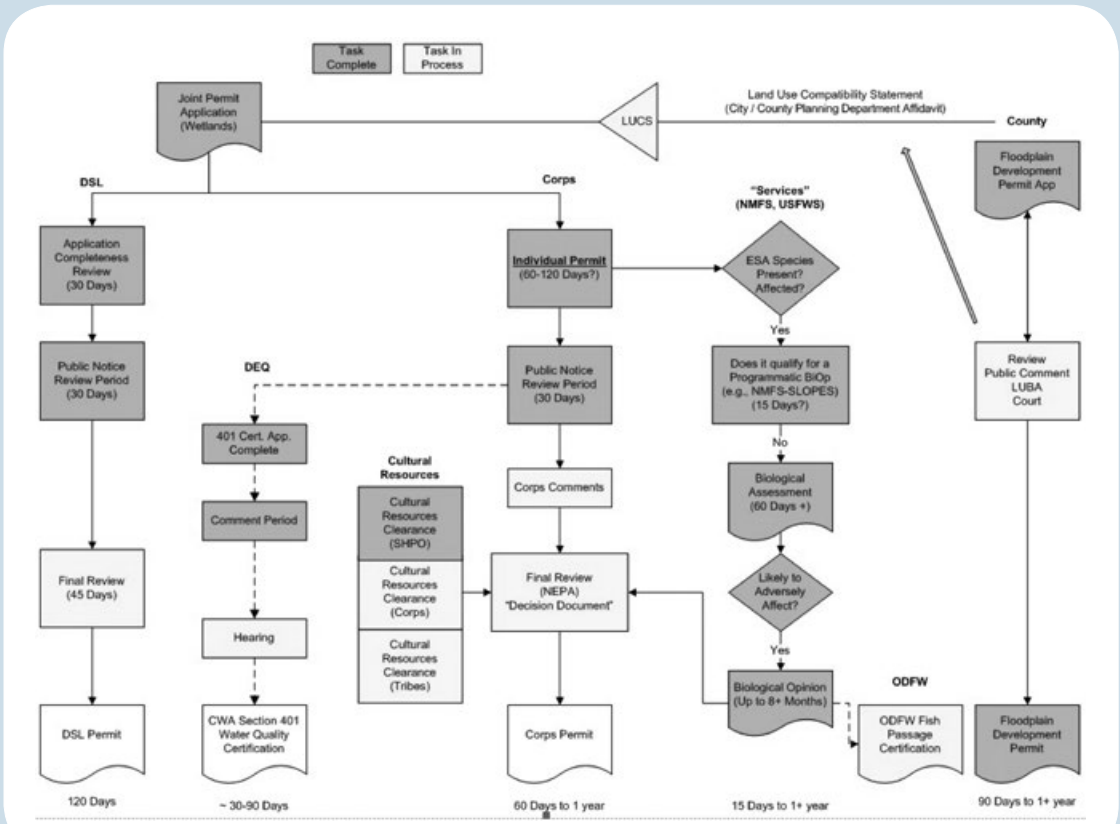
Exhibit 4. Wetland Permitting Schematic With Floodplain Development



Agency. Thus, requirements may vary by locality and usually require substantial stormwater- and other water quality–related planning and design prior to permit issuance.

6. *Inadequate alternatives analysis (Section 404(b)(1)).* We often have clients request help with crafting an analysis of alternatives that meet all of the criteria required by NEPA. Again, this can be challenging if the need for the analysis and documentation of alternatives was not understood prior to or during project design.
7. *NEPA—Cumulative effects and climate change.* NEPA's requirement for addressing cumulative effects and climate change as part of the analysis of alternatives is a commonly missed item. Developing a rationale for the contextual, spatial scale of the assessment may require experience.
8. *Inadequate agency coordination.* More often than not, we find that the problem underlying all of the above issues is that parties are unwilling to engage with agency staff early in the process to help develop a comprehensive list of constraints and expectations regarding compliance. You will eventually be dealing with these same agencies, if not the same staff. Why not begin developing a working relationship with them early in the process?

MAKE AN INCLUSIVE PLAN

To help facilitate a successful permitting process, know your constraints, develop and maintain a comprehensive permitting plan, manage stakeholder expectations, and communicate with the agencies. Including these elements in your earliest project development may not allow you to foresee every problem, but it will certainly make for a smoother, more resilient project experience.

NOTE

1. I once presented such a table as a large poster at a proposal interview. After the interview, one of the interviewers complimented us on our presentation but suggested the poster seemed superfluous, or at best, a "gimmick." In short, we won the project and over the three-year permitting process, we were often asked to pull that same, eventually well-worn poster out to see where we were.

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