

Three Reasons Every Conservation Commission Should Require Peer Review

by Patrick C. Garner, MACC President-Elect

Every conservation commission should require peer review for the majority of projects it reviews. That is a strong, but surprisingly accurate, statement. The exception is single-family houses, or small projects that lie more than 50-feet from a resource.

Many commissioners hesitate to require outside consultant reviews because they believe that doing so will force applicants to incur additional expenses. Yet experience indicates that, on the contrary, peer review often in the long run *saves* an applicant money—and often the savings are not insignificant. Further, peer reviews frequently minimize construction time and most importantly, enhance environmental protection.

In short, the peer review process can be a classic win-win for commissions *and for applicants*—and it is only the lack of experience with this tool that makes many commissions reluctant to require its use, even on large projects.

If your commission does not regularly use peer review services, these may appear to be provocative statements. But as a peer reviewer with many years of experience, I have repeatedly seen the win-win aspects of project reviews.

Overview

First, do commissions really require technical expertise? MACC is currently completing its most comprehensive “Needs Assessment” survey of conservation commissions in its history. Over 110 commissions across the state have been queried regarding their accomplishments, goals and challenges.

The findings are still being analyzed, yet there is one constant theme that jumps out from the raw data. Almost all commissions agree that the new DEP stormwater regulations require engineering and technical expertise that most commissioners do not have. The regulations are complex, and even experienced agents are frequently overwhelmed.

DEP’s regulations are increasingly riddled with acronyms and ambiguous terms: LID, TSS, BMP, FACU, OBL, first flush, infiltration (and exfiltration), hydrologic soil groups, freeboard, peak flow attenuation, proprietary separators, sediments, associated pollutants, forebays, filter fabric, bioretention, contamination, short-circuits, underdrains, level spreaders, risers, organic filters, pea diaphragms, redevelopment, plunge pools, check dams, anti-seep collars, filter strips—the technical terms can seem endless. Correct application of the regulations invariably requires experts. And correct *review* of any design invariably requires a similarly skilled expert.

Far too often a commission ends up relying on the professional certifications on an applicant’s plan, and on whether they “trust” the designer. Inevitably, a project is approved without a commission knowing with certainty whether a design is

environmentally sensitive, economical or even whether it is in full compliance with current regulations.

This sort of all too common blind approval is not necessary. G.L. Ch. 44 §53G permits conservation commissions to adopt regulations requiring applicants to pay for consultant review of permit requests. (See www.maccweb.org for extensive on-line materials regarding 53G.) As I have already stressed, requiring an applicant to pay for an outside review can be a win-win requirement.

A peer review often yields the following direct benefits:

1. Cost savings to the applicant,
2. Enhanced environmental protection and
3. Shortened construction time.

These are tremendous benefits for both an applicant and a commission. Reluctance by a commission to require peer review may ultimately cost an applicant a substantial amount of money. Hesitation to require a peer review may result in a far poorer design.

1. Cost Savings

Several months ago I was asked by a commission to review a medium-sized project. The applicant's designer required concrete infiltration devices in the vicinity of a new building that were intended to attenuate a 100-year storm. I suggested that smaller, less expensive devices be used. I also noticed that the designer had used an incorrect storm quantity. Upon redesign, the "footprint" of the infiltration area was reduced by a third, and materials costs were reduced by more than 50%.

In a similar project that I reviewed in another town, subsurface infiltration devices could be reduced through a combination of less expensive technology and vegetated swales. Similarly, the drainage on a proposed religious center was reduced from two large detention basins to a single combined detention-infiltration basin. A road crossing over a brook for a small commercial project was shifted from one location to another, shortening a proposed bridge by 50-feet, a cost savings of well over \$75,000. The applicants for each of these projects had initially resisted peer review.

2. Enhanced Environmental Protection

In the examples above, not only did projects cost less as a result of peer review, the construction footprint shrank. Relocating the length of a road crossing over a brook reduced resource area impacts. Reducing the number of basins from two to one reduced buffer zones impacts by more than 4,500 sq. ft. Smaller infiltration areas for one project allowed grading to be pulled back from 30-feet to over 45-feet from wetlands.

On a commercial project, the designer proposed to replicate several thousand square feet of wetlands in an upland area populated by 200-year old trees—one of the few areas on the site that had never been timbered. During peer review I found that the replication could be moved at no additional cost to another available location, saving the one

significant environmental feature on site. Upon discussion I also learned that the designer had never visited the proposed replication site, instead relying on CAD drawings.

Another proposal I reviewed showed a massive detention facility some 50-feet from the bank of a perennial river. Although the Riverfront regulations may allow drainage facilities within the Riverfront, following a site walk I was able to suggest a similar area outside of this resource. That relocation reduced project impacts by over 9,000 sq. ft.

There are many similar examples. My point is that a good peer reviewer sees the big picture—the forest for the trees, if you will—and is often able to make suggestions that are supported by technical expertise. These suggestions may result in substantial environmental enhancement.

3. Shortened Construction Time

Reductions in project infrastructure—particularly for drainage facilities—reduce the time required for construction. Less machine time also reduces costs. Shorter bridge spans, smaller infiltration areas, less tree cutting—all of these modifications allow a project to be built less expensively and more quickly. These benefits are common under peer review.

A constant developer critique of permitting in the Commonwealth is that increased regulations increase the time span of construction. Additional weeks, and even days, of construction contribute significant costs to any project. If using optimal design can *reduce* construction time, the applicant wins. The sooner a project is completed, stabilized and vegetated, the likelihood that a project may cause erosion to sensitive resource areas is decreased. Everyone gains when construction time is compressed.

The Flipside

Peer reviews may create very different results than I have indicated. A peer reviewer may be an expert in wetland delineation, but be unaware of the nuances of drainage design. Or may be over zealous. Or be skilled in hydrology but not in road design. A conservation commission should carefully choose peer reviewers so that their skills match a particular project. Further, a peer reviewer should be experienced. This seems self-evident, but larger review firms may assign a junior associate to provide peer review services.

For difficult or sensitive projects, commissions should always require a senior reviewer—an individual highly experienced in both applicable regulations and in construction techniques. A complex peer review assignment should not be an opportunity for a firm to train a new associate. A commission's intent when hiring a peer reviewer is to thoroughly vet a proposal—not to inadvertently penalize an applicant or unnecessarily increase hearings.

On occasion peer reviews can also reveal poor design by the applicant's team. When this occurs, a project may have to be substantially redesigned. Redesign may, at times, result in larger or unanticipated site impacts. Costs may rise. But in these circumstances, a conservation commission is fulfilling the very essence of its mission: to enforce

regulations and to protect resources. There is no downside to such a result. No commission wants to be party to approval of a poor design, particularly when a thorough review could have revealed alternatives.

The Takeaway

Using the recent 53G legislation, a conservation commission should consider peer review as an essential tool. 53G allows consultants to be hired—at the applicant’s expense—to assess resource area delineations, analyze resource area values, analyze hydrogeologic and drainage proposals, study impacts to municipal conservation lands and suggest environmental or land use law applications. Services may also include on-site monitoring during construction, or other services related to projects that are deemed necessary by the commission.

The consultant shall be chosen by, and report only to, the commission and/or its administrator. This last provision is critical to a commission’s independence, and to a reviewer’s neutrality.

Commissions should employ only experienced and highly qualified reviewers. Commissions should also emphasize to the applicant that a peer review might result in substantial cost savings, enhanced environmental protection and shortened construction times.

In short, get away from any reluctance to use peer review. Failure to do so may prove to be a disservice to the applicant, and worse, may ultimately leave a project’s merits and weaknesses a mystery to the commission itself. Unless an agent or one of the commissioners is an experienced engineer or hydrologist, a complicated project with difficult drainage cannot be understood without full peer review.

The bottom line? Peer review is a constructive process that frequently results in better projects. It is an exploration between the applicant and the commission. It asks the question, “Is this the ideal design that creates the least impacts?” And to the surprise of many applicants, peer review may result in substantial cost savings during construction.

The essential “takeaway” is that peer review is often a win-win for all parties. Neglecting to use this important tool is far more likely to result in poor project design and resource losses. Conservation commissions that do not use peer review do themselves—and applicants—a disservice.

Patrick C. Garner (Patrick C. Garner Co., Inc.) is a hydrologist, peer reviewer and senior wetland scientist in Northborough, Mass.