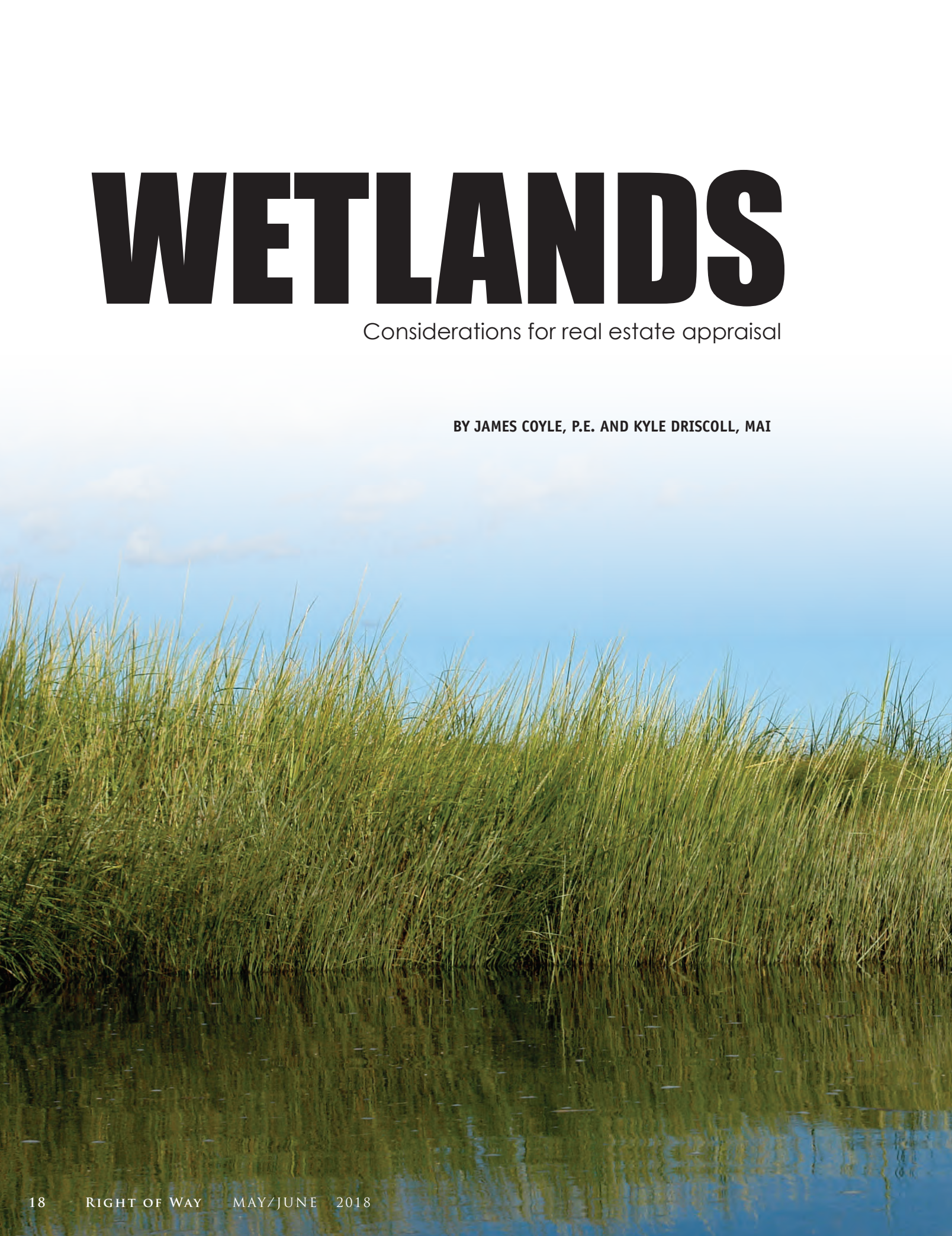
WETLANDS

Considerations for real estate appraisal

BY JAMES COYLE, P.E. AND KYLE DRISCOLL, MAI



The presence of wetlands on a property can significantly restrict its development potential, highest and best use, as well as its value. Filling, grading, dredging and other construction disturbance activities that impact a wetland are regulated by local, state and federal agencies, and the associated permitting process can be complex and costly. Wetland considerations related to appraisal work may include analysis of useable development area, multiple value conclusions for the various land types on a property and costs associated with permitted mitigation. In order to fully understand all that must be taken into consideration when appraisers encounter wetlands in an assignment, we must first understand what wetlands are and their potential impacts.

Defining Wetlands

Wetlands come in many different sizes and types. In general, wetlands have three primary characteristics: a dominance of hydrophilic plants, wet or saturated soils and evidence of water. Many wetland types are only wet part of the year, while some wetlands never have standing water in them at all. They demonstrate that wetlands may not appear wet, so thorough investigation is needed to identify them properly.

The Value of Wetlands

Wetlands provide many important functions. One of the primary functions is to store water and slowly release it over time, which reduces the effects of flooding. They also act as filters by retaining sediments and nutrients, resulting in healthier streams and lakes. Wetlands provide wildlife habitat and recreational opportunities such as hunting, fishing and trapping.

The degree to which a wetland serves any of these functions depends on its type, size, landscape position and the level of disturbance. Although a wetland may not serve all functions, each wetland works in combination with other wetlands or streams as part of a complex and integrated system. Because of the importance of these functions, federal regulations require permittees to avoid, minimize and mitigate adverse impacts to these resources.

Regulatory Oversights

Section 404 of the Federal Clean Water Act of 1972 authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material into "waters of the United States," including navigable waters, their tributaries and most wetlands. The following construction activities, among others, are candidates for wetland permit consideration:

1. **Filling:** Placing dredged or fill materials into a wetland.
2. **Excavating:** Removing material from a wetland.
3. **Grading:** Conducting earthwork to change the grade or contours of the land.
4. **Clearing:** Removing vegetation (shrubs and trees) from wetlands by bulldozing or grubbing, and removing the root structure.
5. **Other activities:** Such as placing structures within a wetland and temporary wetland impacts.

States generally work in conjunction with federal agencies to coordinate permitting activities in each state. Examples of such state agencies include the Wisconsin Department of Natural Resources (WDNR), the Ohio Environmental Protection Agency (OEPA) and the Michigan Department of Environmental Quality (Michigan DEQ).

Proper Identification

There are online tools available for public use that map potential wetland areas. These are based on aerial imagery studies of topography, drainage patterns and vegetation combined with agency fieldwork and soil studies. As wetland reports are submitted for respective agency review, those wetland boundaries can be incorporated in mapping database updates.

Appraisers must use caution when relying on these types of mapping tools to evaluate the extent of wetlands on a property. First, these are largely based on aerial imagery and analysis that is subject to seasonal fluctuation in water levels and vegetation. Second, there may be multiple mapping tools available for the same site, and each map may show different potential wetland areas. Additionally, wetland areas may even be shown in different sizes and shapes in each tool. Mapping tools often include a disclaimer that must be accepted in order to view the map, which indicates the map is only a guide to potential wetland areas. The following example shows how the same site in Wisconsin is shown in two different government-provided mapping tools.

The image below shows a recent development site as displayed in the WDNR online wetland mapping tool. Note that there is an approximate 0.6-acre wetland area mapped in the northeast quadrant of the site. The same site is shown on page 21using the U.S. Fish and Wildlife Service online mapping tool. Note that there is no wetland area mapped in the northeast quadrant.

This example demonstrates that it is important to check both the national mapping tool and the respective state tool if it's available. In some cases, there may also be a county or regional planning commission base map as well. In this example, the Wisconsin mapping tool showed an area with likely wetland characteristics that has a significant impact to the area of developable land. States agencies like the WDNR are generally the "front lines" of wetland permitting activities and may have more-updated data based on recent permit applications and more recent field work.

Source: WDNR Surface Water Data Viewer

Any wetland permit will require identification–also called *delineation*–of the wetland area by a qualified wetland professional. Requirements for professional qualification vary by state and local government, but generally include college education in an area of study such as environmental science or hydro-geology, as well as a record of successful submittals. Some states offer assurance certification programs to help identify consultants with an elevated level of experience and whose permit application reviews are less likely to be returned for missing or insufficient data.

Similar to appraisal reports, a permit-level wetland delineation report can range in cost from a few thousand dollars to tens of thousands of dollars, depending on size of the property, the complexity of the wetland ecosystem and the project impacts.

Permitting Process

The permitting process related to wetlands can be complex and varies by jurisdiction at the state level, with the U.S. Army Corps of Engineers acting as the top oversight agency at the federal level. In general, there are multiple types of permits available based on the extent of impact and quality/importance of a particular wetland.

Most states offer a "general" permit that may be used for less extensive impact areas. Other criteria must be met for this type of expedited permit, and some types of sensitive wetland impacts are not included. The foundational criteria for general permits is that the applicant has demonstrated—through a formal practicable alternatives analysis—that wetland impact has been avoided if possible. If wetland impact is unavoidable, it must be minimized to the greatest extent. Alternative actions include constructing entirely upland, selecting different sites, reducing the size of the faculty and even adjusting the timing of the project.

Source: U.S. Fish and Wildlife Service

If a wetland impact does not qualify for the simpler general permit, an "individual permit" is required. This type of permit is much more complex and includes a public notice period and a meeting with the U.S Army Corps of Engineers in conjunction with the state agency. Factors taken into consideration when making a decision on a wetland permit include wetland functions and values, fish and wildlife habitat, water quality, plant diversity, groundwater recharge/discharge, shoreline protection, aesthetics, recreation and education/science.

Mitigation

A major component of the individual permit is the likely requirement to provide mitigation. Think of mitigation as the replacement of the wetland value lost by a permitted activity. The extent of mitigation required is defined by applying a ratio of mitigation area to impact area. Typical ratios vary from 1.2 to 2.1:1. In other words, a permittee may be required to mitigate 1.5 acres to compensate for a one-acre impact area. The applicable ratio is based on formulas that take into account items such as impact size, wetland quality, functional value lost, impact on the balance of the site and watershed.

Generally, a permittee can fulfill mitigation requirements in one of three ways:

1. Mitigation banking: The permittee buys "credits" in a privately-owned, state-approved wetland area. Each credit generally corresponds to an acre. The mitigation bank is preferred to be in the same watershed as the impacted wetland, and the type of credit purchased should be commensurate with the type of wetland impacted (e.g. marsh credit for marsh impact). Many states are short on available, state-approved bank projects in some of its watersheds, so states have been adopting an in-lieu fee alternative as a mitigation requirement option.

Source: Google Earth

2. In-lieu fee: This is similar to mitigation banking, but the mitigation wetland project may or may not yet be in existence. The state collects a fee for required credits to be used to undertake wetland projects in the state with approval from federal agencies. The permittee essentially pays the state to take responsibility for the mitigation requirement. As an example, in Wisconsin, in-lieu fee credit costs range from $59,000 to $62,000 per credit, depending on the watershed. This is comparable to credit costs of mitigation banks, although individual mitigation banks are able to set their own prices.

3. Permittee responsible on-site: The permittee may be able to develop a plan to mitigate impact on-site with the creation of new wetland areas. The new wetland areas would be subject to an ongoing maintenance plan and state review to ensure quality goals are met and maintained. A benefit of this alternative is that the goal of keeping mitigation in the same watershed as impact is satisfied. However, because many permittees do not have expertise in maintaining such a facility, this is often the least-preferred method from the state's perspective.

Impacts on Development

The image above shows the extent of the potential wetland as shown by the mapping tool, with the addition of the City's code requirement related to wetland setback known as "protective area" in the City's development code. The "protective area" refers to an area of land that commences at the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands.

In this example, nearly the entire northeast quadrant of the site is essentially off limits to development without being subject to state and federal permitting. The site totals 7.8 acres, with 1.3 acres of wetland/protective area. Thus, approximately 17 percent of the site is impacted by the presence of the wetland. Local requirements vary widely with regard to protective areas associated with wetlands, and it is important to research the requirements in order to understand the potential impact on site development.

Real Estate Transactions

Because the presence of wetlands can significantly affect property values and could complicate sale transactions, many states have developed standard forms for use in transactions. For example, in cooperation with WDNR, The Wisconsin Realtors® Association has developed *Addendum W* for use in real estate transactions. The form requires the seller to indicate knowledge or lack of knowledge of wetlands, outlines that the buyer is responsible for providing a delineation report, and facilitates the potential calculation of a closing credit on a per wetland acre basis.

In Conclusion

Appraisal efforts should take into account the presence of wetlands and the impacts they may cause. Only a professionally prepared wetland delineation report will provide the "official" wetland area, but there are online mapping tools available to help estimate the presence and size of potential wetland areas on a subject property or a comparable sale property. The presence of wetlands may lead us to break up a site into different land types, each with a different value conclusion. Also, consideration may include extraordinary assumptions related to the presence and extent of wetlands when formulating value conclusions. Finally, it may be appropriate to include costs associated with wetland mitigation for a subject property or as a comparable sale price adjustment. ✪

James Coyle, P.E., is an Analyst for Duff & Phelps, Real Estate Advisory Group. He is a registered professional engineer in Wisconsin and has expertise in civil engineering with an emphasis on land development projects.

Kyle Driscoll, MAI is a Managing Director for Duff & Phelps, Real Estate Advisory Group.