



Transcript



Below is the course transcript for the Aquatic Resources Awareness Course for Real Estate Appraisers.

Aquatic Resources Awareness Course for Real Estate Appraisers

Welcome to the U.S. Environmental Protection Agency's Course on Aquatic Resources Awareness for Real Estate Appraisers. This course is designed for licensed real estate appraisers. The goal of this course is to increase awareness of aquatic resources, including why and how they are protected under environmental laws, what signs to look for that might indicate their presence in the environment, and how they can be documented as part of an appraisal.

After successful completion of this course, real estate appraisers should have a general awareness of aquatic resources and be able to accurately complete the portion of the Uniform Residential Appraisal Report form that deals with site conditions. A PDF version of the form is available in the Resource Tab of this course.

This course is approved for continuing education credits by the Appraisal Foundation's Appraiser Qualifications Board Course Approval Program.

Guide to the Course

Before we get started, let's go over a few features of this course.

I refer to a number of references throughout the presentation. You can always pause the course and access these references by clicking on the Resources Tab on the upper-right side of the course player.

I'd also like to point out that, while this course is intended to be completed from start to finish, we hope that you will use it as a reference after you become more familiar with the material. If you need a refresher on one or more parts of the course, click on the topic you'd like to view from the Main Menu.

A copy of the transcript for this course can be found under the Transcript tab.

In addition, a copy of the glossary can be found under the Glossary tab. The glossary was developed to assist you with definitions of selected industry-standard words and terms used in this course.

Finally, there will be an opportunity at the end of the course for you to test your knowledge and receive a Certificate of Completion.

Course Summary

This course is divided into three parts:

- Part 1 provides a basic introduction to aquatic resources.
- Part 2 provides information that will help you identify aquatic resources more easily.
- Part 3 provides a case study that showcases how considering aquatic resources during appraisals can affect property values.

Part 1: Introduction to Aquatic Resources

Let's get started with part 1, which provides a basic definition of an aquatic resource, why aquatic resources are important, and how they are protected by law. This part also describes how appraisers need to account for aquatic resources and how they can impact the market value and development potential of a property.

The Federal Clean Water Act (CWA)

The Clean Water Act (CWA) is the primary federal law in the United States governing water pollution. Passed in 1972, the objective of the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. It establishes the basic structure for regulating discharges of pollutants into the "waters of the United States" and regulating quality standards for surface waters.

Waters of the United States are protected under Sections 303, 311, 402, and 404 of the Clean Water Act. Section 303 calls for establishing water quality standards that serve as the quality target for all CWA programs. Section 311 of the Clean Water Act regulates the discharge of oil or hazardous substances into waters of the United States. Section 402 of the Act regulates the discharge of point source pollutants, while Section 404 regulates the discharge of dredged or fill material into waters of the United States.

Waters of the United States?

Waters of the United States, which are subject to the provisions of the Clean Water Act, include many familiar features such as streams, rivers, lakes, bays, estuaries, and portions of the oceans. However, waters of the United States can also include less familiar types of waters such as wetlands and numerous other features, some of which are designated as special aquatic sites, including:

- Wetlands
- Mud flats
- Vegetated shallows
- Coral Reefs
- Riffle and Pool complexes

It is important to note that not all surface waters are legally waters of the United States. Generally, however, waters of the United States includes:

- All waters that are traditionally navigable
- All interstate waters
- Impoundments of jurisdictional waters
- Tributaries of the above
- Territorial seas
- Waters adjacent to all the above
- Waters which a case-specific evaluation shows have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas

The exact dividing line between waters of the United States protected by the Clean Water Act and other waters can be hard to determine, especially regarding waters whose protection under the Act must be determined using a case-specific analysis of whether a significant nexus exists. Land appraisers are not qualified to make jurisdictional determinations. This course is designed only to increase awareness and aid in preliminary identification of the potential presence of aquatic resources and will not address jurisdictional determination issues in any further depth. More information, including a link for Clean Water Act Definition of Waters of the United States, can be found in the Resources Tab.

What are Aquatic Resources?

Let's define Aquatic Resources.

Aquatic resources is a term used for describing waters of the United States (such as wetlands) which, because of the important functions and services they provide, are some of the Nation's most valuable natural resources.

Sometimes it is easy to know if aquatic resources are present before you begin an appraisal, for example in the case of a designated sanctuary, coral reef or large river. However, often times aquatic resources may not be known to exist on a property until the development process has started. This is often true in the case of wetlands. As an appraiser you may be the first or only eyes on a property before it is purchased and thus you can play an important role in providing notice to the purchaser, client, and/or lender that there may be aquatic resources on the property which may be subject to special regulations. In addition, the presence of aquatic resources may affect land value if development would involve discharging pollutants into the aquatic resource or filling in the resource and converting it to dry land, because such development is likely to require a state or federal Clean Water Act permit.

Part 2 of this course will introduce you to ways to identify the potential presence of aquatic resources. But first, let's hear more about the importance and function of aquatic resources, why their identification is important for appraisers and the relevant federal laws and regulations which govern them.

At the end of Part 1 you'll be able to test your knowledge with a quick quiz.

Importance of Identifying Aquatic Resources

You might be asking yourself, why is the identification of aquatic resources important?

Aquatic resources provide important services to the environment, society, and our economy. In many areas of the country, local communities rely directly on aquatic resources to sustain their livelihoods. Aquatic resources also help protect human safety and health. Because of their importance and the ecosystem services they provide, most aquatic resources are subject to local, state, and federal regulations. Property owners are responsible for knowing if aquatic resources are present on their sites and following all applicable rules that govern them.

Wetland Functions and Services: Diversity and Habitat

Wetlands were once thought of as disease-ridden wastelands of no importance to society. Relatively recently, however, we have discovered that wetlands are among the most productive ecosystems in the world. The ecological functions they provide are of great significance to society. For example, protecting wetlands can, in turn, protect our health and safety by reducing flood damage and preserving water quality.

There is great diversity in the types and qualities of wetlands around the nation. A seasonally saturated scrub/shrub wetland in the state of Washington will look and function quite differently from a Louisiana salt marsh or an Alaskan bog. In addition to the diversity between types of wetlands, each wetland itself is also a substantial source of biodiversity. Most wetlands provide ideal conditions for organisms that support the base of the food web. Nutrient-rich, broken down plant matter provides a food source for a variety of small aquatic invertebrates and fish, which in turn serve as food for larger species. Some fish and wildlife species rely on wetland habitat for their entire life cycle, while others use it only during certain stages. Many species of birds and mammals rely on wetlands for food, water, and shelter, especially while migrating and breeding.

In fact, according to the U.S. Fish and Wildlife Service:

- 80% of birds rely on wetlands,
- 95% of the commercial catch and over 50% of the recreational harvest of fish and shellfish species are wetland-dependent,
- 33% of threatened and endangered species live only in wetlands, and
- 43% of threatened and endangered species depend on wetlands.

Wetland Functions and Services: Biogeochemical Cycling & Water Quality

Wetlands also play an important role in biogeochemical cycling of many important elements like carbon, nitrogen, phosphorus, and oxygen. These elements move through wetland systems and are recycled in many different ways. For example, wetlands contribute to the removal of nitrogen and phosphorus from surface water. Wetlands can also act as a carbon “sink” - storing carbon in the wetland plant biomass rather than releasing it to the atmosphere as carbon dioxide. Filling, clearing, or draining wetlands releases carbon dioxide. Therefore, wetlands worldwide are important in helping moderate the effects of climate change.

Wetlands are also important to humans because of the role they play in regulating water quality. Wetlands intercept surface runoff and can detain and treat the water, removing excess nutrients (for example, nitrogen and phosphorus), pollutants, and suspended solids that may otherwise pollute downstream waterways. For example, forested riparian wetlands in agricultural watersheds have been shown to remove 80% of phosphorus and 90% of nitrogen from water. High nutrient levels can lead to algal blooms and fish kills.

Wetland Functions and Services: Water Quantity & Flood Control

Wetlands are nature's sponges – capturing, storing, and releasing water over long periods of time. They curb flood volume by reducing velocity and flood stages downstream.

Wetlands can also aid in flood control by storing and slowly releasing flood waters. Vegetation in wetlands aids in slowing down and evenly distributing flood waters, which helps to reduce erosion and protect downstream resources. Coastal wetlands are also important in reducing the impact of storm surges from extreme weather such as hurricanes. Plant roots and stems in these areas reduce erosion as well as wind and wave energy.

Wetland Functions and Services: Recreation/Education and Economic Benefits

Finally, wetlands provide great opportunities for recreation and education. Bird watching, hunting, and fishing are some of the popular activities wetlands help sustain.

In each of the ways that wetlands function ecologically, services are provided to society at no monetary cost. Thus, the economic benefits of wetland resources are great. Wetlands help reduce damage to property and, in some places, can even regulate the availability of drinking water by maintaining streamflow during dry periods or replenishing groundwater. These ecosystem services are extremely expensive to replicate or replace with current technology and engineering practices.

Wetlands: National Status and Trends

In October 2011, the U.S. Fish and Wildlife Service released the report *Status and Trends of Wetlands in the Conterminous United States for 2004-2009*. According to the report, there were an estimated 110.1 million acres of wetlands within the lower 48 states in 2009, which composed 5.5 percent of the surface area of the United States.

Wetlands were found in all 48 states and in every physiographic region of the country in this study. Ninety-five percent of wetlands were found in freshwater systems. Of the freshwater wetlands that were sampled, ponds were the most common type found in urban areas, whereas marshes or wet meadows were the least common type. On agricultural lands, there was a fairly even distribution of different wetland types with forested, marshes, and ponds represented. Managed forests had the highest percentage of forested and shrub wetlands. Rural areas exhibiting population growth had a mix of all freshwater wetland types, including forested, shrub wetlands, marshes, and ponds.

The Fish and Wildlife Service wetlands trend study determined that wetlands declined by an estimated 62,300 acres between 2004 and 2009, an average annual loss of 13,800 acres. The loss rate of certain

marine and estuarine wetlands like salt marshes, increased to three times the previous loss rate last measured between 1998 and 2004. Those losses have primarily been attributed to saltwater intrusion and other forms of inundation caused by storms or wave damage, which converted many of those wetlands into open water areas.

Meanwhile, freshwater wetlands also continued to decline, albeit at a reduced rate. The annual rate of loss for freshwater vegetated wetlands has been reduced by roughly 50 percent since 2004. Most ongoing freshwater wetland losses were from urban and rural developments that accounted for 128,570 acres (or 23 percent) of loss, while forestry-related activities accounted for 307,340 acres (or 56 percent) of all wetland losses.

Federal Regulations: Role of Federal Agencies

To protect the Nation's wetlands from further loss or degradation there are many federal, state and local regulations that dictate what activities are allowed in and around wetlands and what protective measures must be taken.

Federal Regulations Pertaining to Wetlands and Other Aquatic Resources

The discharge of dredged or fill materials into aquatic resources, including fill for development, is regulated under programs established by Section 404 of the Clean Water Act. These programs are administered by the federal resource agencies, primarily the U.S. Army Corps of Engineers. Dredged material is defined as material that is excavated or dredged from waters of the United States. Fill material is defined as any "pollutant" which replaces portions of the waters of the United States with dry land or which changes the bottom elevation of a water body for any purpose. The discharge of these materials is defined as an addition to water.

Permits issued by the U.S. Army Corps of Engineers authorize various types of development projects in wetlands and other waters of the United States. The Corps' regulatory process involves two types of permits: general permits for actions by private landowners that are similar in nature and will likely have a minor effect on wetlands, and individual permits for more significant actions. The Corps uses general permits to minimize the burden of its regulatory program: they authorize landowners to proceed with a project without the time-consuming need to obtain standard individual permits in advance. About 90% of the Corps' regulatory workload is processed in the form of general permits

The U.S. Army Corps of Engineers also requires concurrence with the Endangered Species Act and the National Historic Preservation Act to ensure these potential impacts are addressed before a Section 404 permit is approved.

Role of the Federal Agencies in Protecting and Regulating Aquatic Resources

The Clean Water Act Section 404 permit program is administered jointly by the U.S. Army Corps of Engineers and EPA in all but two states, Michigan and New Jersey. The Corps handles the actual issuance of permits, both individual and general. The Corps also conducts jurisdictional determinations to determine whether a particular plot of land falls within or includes a water of the United States. The Corps has primary responsibility for ensuring compliance with permit conditions. Twenty other states administer

a parallel or integrated permit with the Corps of Engineers. In these locations, there may be additional restrictions or conditions imposed under state law.

The U.S. Environmental Protection Agency develops and interprets policy, guidance and criteria used in evaluating permit applications. The Agency reviews and comments on individual permit applications and typically takes the enforcement lead for unpermitted discharges. The EPA also approves and oversees the Clean Water Act provision which allows states and tribes the option of assuming administration of the Federal Section 404 permit program in certain waters within State or Tribal jurisdiction. Michigan and New Jersey have assumed administration of the federal permit program which means that those states determine what areas and activities are regulated, process individual permits for specific proposed activities, and carry out enforcement activities. The U.S. Environmental Protection Agency reviews the state programs annually to ensure the states are operating their programs in compliance with requirements of the law and regulations. The U.S. Environmental Protection Agency is also responsible for determining the scope of “waters of the United States” protected by the Clean Water Act.

In addition to the Corps of Engineers and EPA, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, which is part of the National Oceanic and Atmospheric Administration or NOAA, must evaluate potential impacts on fish and wildlife for all new federal and federally permitted projects.

Federal Regulations: Role of State & Tribal Water Quality Agencies

State and tribal governments also play a role in section 404 permit decisions, primarily through water quality certification under section 401 of the Clean Water Act. Under section 401, a federal agency cannot issue a permit or license - such as a 404 permit - for an activity that may result in a discharge to waters of the United States until the state or tribe in the jurisdiction where the discharge would originate has granted or waived 401 certification. On some tribal lands, where the tribes do not have “treatment as state” status or “water quality standards”, EPA issues water quality certifications under section 401.

Section 404: Regulates Discharge of Dredged or Fill Material

Clean Water Act Section 404 requires a permit from the U.S. Army Corps of Engineers, before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation such as certain farming and forestry activities.

Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects.

Dredged material means material that is excavated or dredged from waters of the United States. Section 404 regulates the addition of dredged material into, including any redeposit of dredged material within, waters of the United States. This includes the addition of dredged material into a specific discharge site; the runoff or overflow, associated with a dredging operation, from a contained land or water disposal area; and any addition of dredged material including excavated material, into waters of the United States which is incidental to any activity and more than incidental fallback, including mechanized land-clearing, ditching, channelization, or other excavation.

Fill material means any “pollutant” which replaces portions of the “waters of the United States” with dry land or which changes the bottom elevation of a water body for any purpose. Clean Water Act 404 regulates the discharge of fill material into water of the United States. The term generally includes: placement of fill that is necessary for the construction of any structure in a water of the United States; the building of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fill for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; and artificial reefs.

Types of Clean Water Act 404 Permits

Proposed activities that may have impacts to Aquatic Resources are regulated through a permit review process.

An individual permit is required for potentially significant impacts from a specific activity. Individual permits are reviewed by the U.S. Army Corps of Engineers, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the Clean Water Act Section 404(b)(1) Guidelines.

However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. A commonly used general permit type is the nationwide permit that authorize activities across the country, unless a district or division commander revokes the nationwide permit in a state or other geographic region. There are currently 49 nationwide general permits that authorize a wide variety of activities such as mooring buoys, residential developments, utility lines, road crossings, mining activities, wetland and stream restoration activities, and commercial shellfish aquaculture activities.

The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met.

The permit application process can be time consuming and require fees and perhaps other associated costs which may affect the value of the property as compared to one not encumbered by such requirements.

Section 404(f) Exemptions

As mentioned previously, certain activities are exempted from Clean Water Act Section 404 permit requirements. These activities include normal farming, silviculture (growing forests), and ranching activities, minor drainage, farm roads, construction of irrigation ditches, harvesting for the production of food, fiber, and forest products, or upland soil and conservation practices as long as these activities are a part of an established farming, silviculture, or ranching operation.

Exemptions to section 404 have traditionally been construed narrowly. The legislative history of section 404(f) reflects the intent of Congress that exemptions are to cover only minor disturbances to wetlands.

Former Senator Ed Muskie, sponsor of the 1977 Clean Water Act amendments, addressed exemptions in the context that Clean Water Act Section 404 permits would not be required for those narrowly defined activities that cause little or no adverse effects either individually or cumulatively. Senator Muskie also stated at that time that the exemptions would not apply to discharges that convert extensive areas of water into dry land or impede circulation or reduce the reach or size of the water body.

Exemptions are self-implementing...persons undertaking any of the exempt activities are not required to give the U.S. Army Corps of Engineers or U.S. Environmental Protection Agency notice, or keep any records. Claimed exemptions are policed through normal enforcement mechanisms.

Sequence of Actions Applicants Must Follow

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Toward achievement of this goal, the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States unless a permit issued by the U.S. Army Corps of Engineers or approved State under Clean Water Act Section 404 authorizes such a discharge. For every authorized discharge, the adverse impacts to wetlands, streams and other aquatic resources must be avoided and minimized to the extent practicable.

For unavoidable impacts, compensatory mitigation is required to replace the loss of wetland and Aquatic Resource functions in the watershed. "Compensatory mitigation" refers to the restoring, establishing, enhancing, or in certain circumstances preserving wetlands, streams or other aquatic resources for the purpose of offsetting unavoidable adverse impacts. Compensatory mitigation is actually the third step in a sequence of actions that must be followed to offset impacts to aquatic resources. The mitigation sequence was first established under the 1990 Memorandum of Agreement between EPA and the U.S. Department of Army and then further clarified in the 2008 Final Rule - Compensatory Mitigation for Losses of Aquatic Resources. The mitigation sequence is a three-part process to help guide mitigation decisions and determine the type and level of mitigation required under section 404 regulations.

Step 1. Avoid - Adverse impacts to aquatic resources are to be avoided and no discharge shall be permitted if there is a practicable alternative with less adverse impact.

Step 2. Minimize - If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken.

Step 3. Compensate - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain.

Section 404: Compensatory Mitigation

Compensatory mitigation is designed to compensate for the functions of aquatic resources that will be lost through unavoidable impact. Methods may include restoration, establishment, enhancement or preservation of the remaining resource and/or another resource. The Corps (or approved state authority) is responsible for determining the appropriate form and amount of compensatory mitigation required. On March 31, 2008, EPA and the Corps issued revised regulations governing compensatory mitigation.

Compensatory mitigation may be accomplished through “permittee-responsible” methods, in which the entity holding the permit maintains liability for the construction and long-term success of the site; or through “third-party” mitigation methods. Third-party mitigation includes mitigation banking and in-lieu fee programs, in which the liability for project success is transferred from the permittee to the mitigation bank or in-lieu fee sponsor. The cost associated with compensatory mitigation can vary greatly.

Corps CWA 404 Permit decisions based on:

As mentioned before, the U.S. Army Corps of Engineers does the day-to-day permitting for Clean Water Act section 404.

First, they determine if the project requires a permit (for example, is the activity exempted?). Then, they verify or delineate all wetlands and other waters on the project site – if waters are there, are they waters of the United States?

Next, a determination is made about whether an individual or general permit is needed. Recall that, general permits are often issued for categories of activities that are similar in nature and would have only minimal adverse environmental effects – they are issued on a national, regional, or state basis. The Corps issues a public notice for comments on the project within 15 days of receiving a completed permit application.

The Corps then compiles the comments and conducts a public interest review. The general permit process, however, eliminates individual review and allows certain activities to move forward with little or no delay, provided that the conditions for the general permit are met. Finally, the Corps can issue or deny the permit. Issuance is contingent upon state water quality certification and coastal zone consistency determination.

Other Federal Statutes

In addition to sections 404 and 401 of the Clean Water Act, there are other key federal statutes sometimes applicable to wetlands and other aquatic resources in the United States. Click on the Acts below to learn more.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) is the basic national charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy. Under NEPA, federal agencies are required to systematically assess the environmental impacts of their proposed actions and consider alternative ways of accomplishing their missions in ways that are less damaging to the environment. NEPA includes requirements for delineating and studying wetlands in some cases.

Rivers and Harbors Appropriation Act of 1899

Section 10 of the Rivers and Harbors Appropriations Act of 1899 regulates virtually all work in, over, and under waters listed as “navigable waters of the United States.” Some typical examples of projects requiring Section 10 permits include beach nourishment, boat ramps, breakwaters, dredging, filling, or

discharging material (such as sand, gravel, or stone), groins and jetties, mooring buoys, piers (seasonal or permanent), placement of rock riprap for wave protection or streambank stabilization, boat hoists pilings, and construction of marina facilities. Section 10 waters typically include coastal waters, bays and harbors, portions of major rivers, and the Great Lakes.

Endangered Species Act

The Endangered Species Act (ESA) provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 is legislation intended to preserve historical and archaeological sites in the United States. The act requires federal agencies to evaluate the impact of federally funded or permitted projects on historic properties, including buildings and archaeological sites, through a process known as "Section 106 Review".

Federal Agriculture Improvement and Reform Act

The Federal Agriculture Improvement and Reform Act is commonly known as the Farm Bill. This act deals with the conservation of wetlands on agricultural lands.

Coastal Zone Management Act of 1972

The Coastal Zone Management Act of 1972 is a United States policy to preserve, protect, develop, and, where possible, restore or enhance, the resources of the nation's coastal zone for this and succeeding generations. It requires states to develop and implement coastal zone management plans. All federal activities, including development projects or permitting, that affect any coastal use or resource must be evaluated and determined to be consistent with a state's approved management program.

State and Local Regulatory Agencies

In addition to their role in implementing Clean Water Act regulations through Section 401, states, tribes, and local governments might also have their own regulations governing activities involving aquatic resources. These regulations could impose development restrictions on a property with aquatic resources present, in addition to the requirements of the Clean Water Act. States and local governments might also be able to take jurisdiction and impose development regulations on aquatic resources that are not federally regulated as waters of the United States. This includes features such as isolated wetlands which have no effect on the chemical, physical, or biological integrity of a water of the U.S. and are not subject to the Clean Water Act.

If aquatic resources are recognized, the property owner should be advised to contact the state environmental regulatory agency to check for local critical area regulations that might apply.

Additional Resources You Must View To Proceed with the Course

Before taking the quiz for part 1 and moving on to part 2 of this course, real estate appraisers must read the listed fact sheets in the Resources Tab to continue and satisfy course requirements for continuing education credit by the Appraisal Foundation's Qualifications Board Course Approval Program.

After you have finished reviewing the fact sheets, please complete the Reading Checklist also provided in the Resources tab.

Test Your Knowledge

Let's take a second to see what you've learned so far...

Quiz 1

Part 2: Identification of Aquatic Resources

Part 1 of this course explained what aquatic resources are, how they are regulated, and why appraisers should have a general knowledge of them.

Part 2 provides an overview of some key concepts and tools appraisers can use to help determine if there are potential aquatic resources present on a site.

Identification of Aquatic Resources

Many types of aquatic resources might be present on any given property. Sometimes the resources might be known to exist before you get to the site. For example, if the property is on the waterfront or there is a mapped river running through it. Other types of aquatic resources are often discovered on a site only after or during the appraisal stage of a property transaction.

The most common types of aquatic resources you might find during an appraisal – which might not previously be known to occur on the site – are ponds, streams, and wetlands. However, as mentioned in part 1, there are several other features also identified as aquatic resources that you should take note of during an appraisal.

Rivers and Streams

With more than 3.5 million miles of rivers and streams in the United States, they are some of the most commonly recognized aquatic resources. But it is not only the large and familiar rivers and streams that are important to recognize and protect. Smaller rivers and streams that do not always have year-round water are also important.

There are three main types of streams:

- Ephemeral streams, which exist regularly but only flow for short periods of time in response to precipitation events like rain or snow. They may have defined channels even during the times when they are dry.
- Intermittent streams, which flow periodically at different times of the year, or seasonally, when there is enough water from either rainfall, springs, or other surface sources such as melting snow. It is important to note that intermittent streams do not flow year-round.
- And perennial streams, which flow year-round.

As you learned in Part 1, streams, like wetlands, must be deemed to be a “water of the United States” to be subject to the regulations of section 404 of the Clean Water Act. It is possible for all types of streams to meet this criteria. However, this determination can only be made by the U.S. Army Corps of Engineers or the EPA. Any stream you observe on site should be noted as a potential aquatic resource.

Wetlands: What are they?

“Wetlands” is a collective term for marshes, swamps, bogs, and similar areas. Wetlands are commonly characterized as flat vegetated areas, in depressions, and between dry land and water along the edges of streams, rivers, lakes, and coastlines.

Wetlands typically have frequent and prolonged presence of water at or near the soil surface that drives the natural system. This natural system determines the types of soils that form, the kinds of plants that grow, and the fish and/or wildlife that inhabit the area.

Wetland Types: Marshes

In comparison to rivers and streams, lakes, or ponds, wetlands can be much more difficult to detect! They are found all over the country and can vary greatly in their characteristics from region to region or even from one site to another within the same region. There are many different types of wetlands, and they can be known locally by a variety of different names. Often what a wetland is called will vary depending on the region of the country in which it is found.

Let’s review the common names and distinguishing characteristics of four main types of wetlands.

The first type is marshes.

The term “marsh” generally refers to wetlands characterized by emergent soft-stem vegetation like grasses and reeds that are frequently or continually inundated with water. There are both freshwater and saltwater marshes.

Wetland Types: Swamps

The next type of wetland is swamps.

“Swamp” generally refers to a wetland dominated by woody vegetation like trees and shrubs. Swamps include bottomland hardwood forests found along rivers and streams in the southeast and south central United States and mangrove forests located in salt water typically found in tropical to subtropical coastal regions such as the Gulf of Mexico.

Wetland Types: Bogs and Fens

Another type of wetlands are bogs and fens.

Bogs are characterized by thick sphagnum moss, which holds water and creates acidic conditions. Bogs receive most of their water from precipitation rather than other types of hydrology like groundwater or surface water runoff. Most bogs in the U.S. are found in the northern states, where there are low temperatures and short growing seasons. Pocosins are a special type of bog found on the Atlantic Coastal Plain from Virginia to northern Florida that are densely vegetated with trees and shrubs.

Fens are similar to bogs but generally have less acidic conditions resulting in higher nutrient levels and a more diverse plant and animal community. Fens also occur in colder, northern regions. In the U.S., they are found mostly in the northeastern states, Great Lakes region, and Rocky Mountains.

Wetland Types: Other

Examples of other types of wetlands include prairie potholes, playa lakes, vernal pools, and pine savannahs. They are generally categorized as nontidal marshes.

Three Parameters in Defining a Wetland

Federal regulations define wetlands as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil”.

For an area to be considered a wetland, it must exhibit all three of the key parameters present in the definition:

- 1. Wetland-dependent vegetation
- 2. Soil types associated with water-saturated conditions (commonly called “hydric soils”)
- 3. Hydrology that will support wetland vegetation and soils

How Is the Presence of Wetlands Determined?

A “wetland determination” is simply an evaluation to determine whether wetlands are likely present on a site or property, whereas a “wetland delineation” is a procedure conducted to determine the presence and boundaries of a wetland for purposes of local, state, and federal regulations.

This schematic provides a good picture of the three parameters that must be exhibited in order to determine that a wetland is present:

- Presence of water, either at surface or within the root zone
- Unique soil conditions that differ from adjacent uplands (hydric soils)
- Vegetation supported that is adapted to wet conditions (hydrophytes)

A wetland delineation is also an element of a jurisdictional determination, which is the process to identify the water bodies within a project's boundaries that meet the definition of "waters of the United States", as discussed in part 1. It is important to know that wetland determination and delineation is a complicated process that requires substantial technical knowledge and training beyond what this course provides.

Regional Supplements to the Wetlands Delineation Manual

The 1987 Corps of Engineers Wetlands Delineation Manual dictates the methods that must be followed to conduct a wetland delineation. Since wetland characteristics can vary so greatly between areas of the country, in recent years the Corps has also developed regional supplements to the 1987 manual that refine indicators of wetland hydrology, vegetation, and soils to be more region-specific.

Here is a map showing the regions for the supplements, which are based on U.S. Department of Agriculture's Major Land Resource Areas.

Consider Seasonality in Determining Wetland Presence

Some types of wetlands are dry during some periods of the year. In fact, wetlands in some areas of the United States are dry for several months of the year. The absence of water or saturated soil at any given moment does not render a plot as "not a wetland" if the vegetation and soils indicate that wet conditions often do occur and hydrological data support this conclusion. Conversely, seasonal conditions can also result in surface water or soil saturation being present on a non-wetland site. Thus, primary or secondary indicators of all three features must be exhibited to determine the presence of a wetland.

Steps to Identify the Potential Presence of Aquatic Resources

While you are not expected to be an aquatic resource expert, there are certain things you can look for to help increase your awareness of the presence of aquatic resources during an appraisal and aid in the accuracy of your report. Considering aquatic resources during the appraisal process will help protect you, the buyer, client/lender, and the environment. The next few slides will walk you through the steps to follow to identify potential aquatic resources. You will also learn about some of the tools and resources available to help you. We also will review the common indicators of aquatic resources that you can look for in the field during your appraisal.

The three steps are:

- 1. Review the maps.
- 2. Walk the site.
- 3. Know where to go for more information.

Step 1: Review the Maps Off-site Data

Before you even get to the site you are appraising, there are a variety of Internet- or paper-based resources available to aid in a preliminary identification of potential aquatic resources. The more you know about the physical features and position of the site you are appraising, the easier it will be to appraise and the more accurate you will be in determining the potential presence of aquatic resources. For example, knowing where the site lies geographically in the landscape of the watershed, and what major bodies of water are nearby and which way they flow, as well as historic uses of the land can all help determine if aquatic resources are present.

The various tools and resources on the proceeding slides offer a variety of background information to aid you in making an accurate assessment and prepare you for what to look for during your site visit.

Step 1: Review the Maps - Aerial Images

There are many free aerial imagery services available including GoogleEarth™ and Bing Live Maps™ as well as access to several of the resource maps that have aerial imagery layers. It can often be helpful to review several different aerial maps that can provide a view from different years or seasons, or with different levels of detail and clarity that can help you to pick out changes, patterns, and features of the site.

Step 1: Review the Maps - National Wetland Inventory Database

The U.S. Fish and Wildlife Service, in partnership with the U.S. Geological Survey (USGS), maintains the National Wetlands Inventory (or NWI for short) and provides free access to a digital mapping tool, allowing you to view wetland data for most regions of the country. The NWI database is a great resource to use when first starting your site review. If wetlands are mapped on the site you are assessing, it is a good indicator that a professional review may be warranted. However, be aware that the available data layers do not represent an inclusive list of all wetlands. Even if the site you are assessing does not have any wetlands shown on NWI maps, you should still look for on-the-ground indicators during your site visit, particularly if the NWI shows wetlands or streams near the property.

On the next slide please review this brief video that will introduce you to the Wetlands Mapper and answer some basic questions, such as:

- How do I find the Wetlands Mapper?
- How do I use the Wetlands Mapper?
- What does it mean if there is a wetland on my property?
- What do the map codes mean?

Step 1: Review the Maps Video: Introduction to NWI Wetlands Mapper

Hello, my name is Dave Harrelson and I would like to share with you a short presentation on how to find and use the U.S. Fish and Wildlife Service's Wetland Mapper. The easiest way to find the Wetland Mapper is to use Google™. Enter: FWS wetland mapper for your search term. The National Wetlands Mapper link will typically be at the top of the search results. Click on this link. Another way is from the Fish and

Wildlife Service homepage. Click on the “Wetlands” resource link in the left column. Please note that while our homepage is updated on a regular basis, the wetlands resource link will still be found in the left column. The National Wetlands Inventory page will be retrieved, and you are almost there. But first a word about “Precautions”. Do you see this area up here that says “Data Limitations, Exclusions, and Precautions?” we need to take a look at that. Please be aware of the following: Precautions: Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities. Now, click your back button and open this highlighted link to access the wetland mapper – click here to open the Wetlands Mapper. Read the disclaimer and click the “I accept the terms and conditions” link. Your screen should look like this. Some features are common to all Wetland Mapper views such as a “zoom” tool, a scale, a color coded wetland key and a “layers” selection tool. In the upper right hand corner is a location search tool. To show an example of how the Mapper works, type in the following address: 24 Minott Road Westminister MA. Then click the “Find Location” button. Click your cursor anywhere on the image and areas identified as wetlands will appear. The key to the right will provide basic information about the wetland type or classification. For additional information about a specific wetland unit and an explanation of the classification code, click on the highlighted wetland. A dialogue box appears that has more information about the wetland. For information about the classification code, which for this particular wetland is PEM1E, click on the blue decode link in the dialogue box. When this opens, click on the tab that says DECODE. Then click on DECODE again on the next dialogue box that appears. So here you have the description code for PEM1E. P stands for Palustrine, EM for Emergent, 1 for Persistent, and E for seasonally flooded or saturated. That’s it, the basics on how to use the Wetland Mapper. Before we finish there are two more things to share. Do you recall this page? It is where you accessed the Wetland Mapper. At the bottom of the page there is a “trouble shooting” Frequently Asked Questions link. If that information is not helpful, or there are other technical difficulties, use the contact link and call or email Wetlands_Team@fws.gov. For the U.S. Fish and Wildlife Service, this is Dave Harrelson, thanks for listening.

Step 1: Review the Maps - USGS Topographic Maps

Topographic maps from USGS, sometimes called “topo maps”, can help you locate the landscape position of the site in the overall watershed. This can help you determine the direction of the flow of water through a site, if off-site areas may be draining to the site, and where low areas occur that may pond water, helping to create wetland conditions.

Step 1: Review the Maps - Federal Emergency Management Agency Flood Maps

Flood maps from the Federal Emergency Management Agency (FEMA) indicate the location of flood plains. If the site you are assessing lies in a flood plain, there are likely additional regulations and considerations affecting the value and development potential of the property. There may also be the potential for aquatic resources, particularly streams or riparian (or streamside) wetlands, to occur within the flood plain area.

Step 1: Review the Maps - Natural Resource Conservation Service Web Soil Survey

The U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) provides digital access to soil maps and data for almost all areas of the United States. Before you visit the site of your appraisal, consider using the online Web Soil Survey to zoom into the location and produce a map of all the soil types present on the site. You can then access a variety of data on the different soil units' properties and qualities, including which are considered hydric—one of the three parameters needed to define a wetland. The soil surveys can provide useful information about a site including the potential corrosive nature of the soil to certain building materials, acceptability for using on-site septic systems, the best kind of vegetation that can be supported, drainage features, etc.

Step 1: Review the Maps - City or County Geographic Information System Resources

The planning department of city or county governments will often have available to the public resource maps or additional environmental information on properties. Many states and local counties have updated or refined the NWI maps for their particular jurisdictions.

Remember that, while these tools are helpful guides, the absence of aquatic resources on the maps and other information sources does not preclude the possibility that there may be aquatic resources present on-site. Maps can often be inaccurate. Only a qualified aquatic resource specialist can make an official determination of the presence or absence of aquatic resources on a site.

Step 2: Walk the Site

The second step to identifying the potential presence of aquatic resources involves walking on the property. There are three categories of indicators to look for that might indicate the presence of aquatic resources when you are walking the site:

- Hydrology (evidence of standing water in the area)
- Soils and
- Vegetation

Let's start with some examples of hydrologic indicators of aquatic resources.

Step 2: Walk the Site - Hydrology

Water marks or stains on tree trunks or stems is a hydrologic indicator of aquatic resources. Some other common field indicators of hydrology include:

- Observation of inundation (pools of standing water)
- Observation of saturated soils (ground is soggy)
- Drift lines on the ground or in vegetation (racks of accumulated vegetation, twigs, or logs)
- Sediment deposits (fine soil laid on top of leaves or the ground)
- Drainage patterns in wetlands (channels or bent vegetation where water has flowed)

Step 2: Walk the Site - Hydrology

A rotten egg or sulfur smell that is noticeable when walking around could be an indicator of hydric soils or prolonged flooding/saturation. In addition, water-stained leaves or debris such as sticks, leaves, and soil deposited in a line on plants (drift line) are also indicators.

Step 2: Walk the Site - Hydrology

Finally, visible standing or ponded water, soggy ground, or saturated soils within 12 inches of the surface indicate the potential for aquatic resources. Saturated soils are soils from which you can squeeze water. A cracked soil surface also is a good indication that standing water was likely once present on the site.

Step 2: Walk the Site - Soils

Next, let's look at some soil types that are typical indicators of aquatic resources.

- Soils typical of aquatic resources include:
- Black soils
- Very dark brown soils, especially with orange or reddish concentrations
- Gray- or blue-hued soils
- Clay or very dense, impermeable soil layers that look like they would hold water above them

Although getting this type of information requires digging a hole, which is what most aquatic resource specialists do when conducting an assessment of a site or performing a wetland delineation, we don't expect appraisers to dig soil pits. This is merely an illustration.

Step 2: Walk the Site - Vegetation

And finally, here are some examples of vegetation characteristics that are typical indicators of aquatic resources:

- Obvious changes in plant communities, such as areas with less or no vegetation or areas with smaller tree diameters
- Herbaceous vegetation all matted in one direction
- Roots growing above ground
- Dried algae deposits

You could also review the National Wetland Plant List for your region or state, which is maintained by the U.S. Army Corps of Engineers, to familiarize yourself with commonly occurring wetland species in your area. The plant list includes photos of many of the plants listed to help you identify them.

You can print the Aquatic Resource Clues Checklist available in the Resources tab and take it with you to the property for a quick reminder of what to look for when on-site. But remember, the clues are broad and generalized for most regions of the country. For information on more specific indicators for the region in which you will be working, refer to the appropriate regional supplements to the Corps of

Engineers Wetlands Delineation Manual, which can be found online. Click on the Resources tab to find a link to the manual.

Step 2: Walk the Site - Ordinary High Water Mark

Now let's talk about situations in which it is more obvious that aquatic resources are present. When you can see a lake, pond, river, or stream on the property, looking for evidence of the ordinary high water mark might be a helpful indicator of an aquatic resource. The ordinary high water mark is the line to which water ordinarily rises.

Wetland areas are often found adjacent to other aquatic resources like lakes, ponds, rivers, or streams as well.

There are several things to look for as an indication of high water marks, for example, changes in the appearance of the soil surface; sediment deposits; signs of erosion along the bank or edge; evidence of wrack (or dried seaweed), debris, and mud lines; algae staining along rocks, trees, and manmade structures; and water staining. It is important to know that delineation of an ordinary high water mark is a complicated process that requires substantial technical knowledge and training beyond what this course provides.

Step 2: Walk the Site - Consider Seasonality

As I mentioned earlier, many aquatic resources look very different depending on the time of year it is. Therefore, you must consider the season when observing a site. Many wetlands lack both standing water and waterlogged soils during at least part of the growing season (which is when the ground is warm enough for biological activity to occur or for plants to germinate). Many wetlands are seasonal features that will be more evident during periods of high rainfall – like late winter and early spring – but by the end of summer or into the fall, many of those wetland types are more difficult to spot unless you know to look for landscape position (depressions), differences in vegetation between the wetland and surrounding uplands, or even different soil types.

Step 3: Know Where To Go for Help U.S. Army Corps of Engineers

The third step in identifying the potential presence of aquatic resources is knowing where to go for more help.

The U.S. Army Corps of Engineers has regulatory district offices all around the country. Contact your Corps district regulatory office for permit requirements on proposed activities in waters of the United States (including wetlands) and jurisdictional status of a specific wetland or aquatic resource.

Remember that the Corps has many roles and responsibilities for Clean Water Act section 404. They administer the day-to-day program activities, including making individual and general permit decisions, developing regulatory policy and guidance documents, conducting or verifying jurisdictional determinations, sharing the enforcement role with EPA, and ensuring that permits comply with Clean Water Act section 404(b)(1) guidelines as well as NEPA, the National Historic Preservation Act, and ESA.

Step 3: Know Where To Go for Help - EPA Regional Offices

EPA has 10 regional offices around the country. Contact your EPA regional office for any questions within their areas of responsibility for Clean Water Act section 404 implementation. They develop environmental guidelines, policies, and guidance documents; determine geographic scope of jurisdiction; approve and oversee state assumption; review permits; maintain Clean Water Act section 404(q) "elevation" and (c) "veto" authority; identify exempt activities; and share enforcement responsibility with the Corps.

Step 3: Know Where To Go for Help - Conservation Districts

Conservation districts are local units of government established under state law to carry out natural resource management programs at the local level. These local units typically exist at the county level and may be referred to as soil and water conservation districts, resource conservation districts, or land conservation committees.

Step 3: Know Where To Go for Help - State Governments

State governments are another resource. Wetland and other aquatic resource protection programs may exist within different departments and state laws within respective state governments. For example, in Washington State, wetlands protection is a program within the Department of Ecology under the State Water Pollution Control Act and the Shoreline Management Act; whereas in Oregon, the Department of State Lands requires people who plan to remove or fill material in waters of the state to obtain a permit in accordance with Oregon's removal-fill law.

Step 3: Know Where To Go for Help - Local Governments

Your local county and/or city government planning departments may have a specific department that provides county or city code regulations and educational resources to promote the protection of wetlands and other aquatic resources. Keep in mind that the comprehensiveness of these programs will vary with each county or city.

Additional Resources

Before taking the quiz for part 2 and moving on to part 3 of this course, real estate appraisers must read the listed fact sheets in the Resources tab to continue and satisfy training requirements for continuing education credit by the Appraisal Foundation's Qualifications Board Course Approval Program.

After you have finished reviewing the fact sheets, please complete the Reading Checklist also provided in the Resources tab.

Test Your Knowledge

Before we move on, let's take a moment to test your knowledge...

Quiz 2

Part 3: Case Study and Inclusion of Aquatic Resource Information on the URAR

Let's take a look at some real-life situations involving wetlands or other aquatic resources in which we have changed names and addresses to protect the privacy of persons involved.

Self Contained Appraisal

In 2009, Mr. Joe Appraiser conducted an appraisal on a foreclosed property consisting of a triple-wide manufactured home and other improvements on 4.93 acres in Anyplace, USA, for ABC Bank. The yellow rectangle depicts a rough boundary line of the property. Mr. Appraiser prepared a self-contained fee simple, market value appraisal report in conformance with the Uniform Standards of Professional Appraisal Practice. He used the typical property identification/inspection and economic analysis scope of work in preparing his appraisal. He did not invoke any "hypothetical conditions" or "extraordinary assumptions" on the report. Based on his research and analysis, Mr. Appraiser assessed the property at approximately \$300,000.

Map View

Mr. Recently Retired agreed to the price and purchase of the 4.93-acre property contingent on inspection. He was interested in building a guesthouse on the property for his children and grandchildren when they visited. Mr. Retired hired an inspector who also happened to be a biologist. The inspector reviewed a U.S. Fish and Wildlife Service NWI map prior to visiting the site and noticed potential wetlands on nearly an acre of the northwestern portion of the property. When on-site, he saw indicators of wetlands (i.e., water, vegetation, and soils) in the areas outlined on the NWI map and reported that those areas might be undevelopable according to Anywhere County's critical areas codes.

Mr. Retired contacted Anywhere County to get more information on the property and learn more about critical areas codes. Sure enough, the inspector was correct. The property on which Mr. Retired had hoped to develop a guesthouse was undevelopable. Because of this finding, he pulled out of the deal.

If Mr. Retired had purchased the property only to discover a year later that the area on which he planned to build was undevelopable, he would have overpaid for the property by about \$100,000. Because of the wide discrepancy in value, he could have sued ABC Bank (the property owner), Mr. Appraiser (THAT COULD BE YOU), and/or the inspector (if the inspector had failed to report the wetland).

Scenario 1: Original vs. Revised Appraisal

ABC Bank was disappointed in Mr. Appraiser's work and asked him to revise his appraisal report. Mr. Appraiser then conducted a more thorough investigation and analysis of the property using the NWI, FEMA flood maps, and NRCS Web Soil Survey web-based tools. His research of the NWI indicated that the northwest area of the property was designated under three aquatic resource categories: "freshwater emergent", "freshwater pond", and below the ordinary high water mark of a "lake". Subsequently, he contacted Anywhere County staff who confirmed the critical area designations for the property. After learning this, Mr. Appraiser realized that Mr. Retired had made a wise decision to back out of the deal

since he would not have received a property development permit from Anywhere County because of the critical area designation. In addition, Mr. Retired may have needed to check with the U.S. Army Corps of Engineers to determine if the waters were considered waters of the United States and, therefore, potentially subject to regulation under section 404 of the Clean Water Act.

Based upon the additional research, Mr. Appraiser's new appraisal report assessed the property at \$200,000. His findings indicated that 1 acre of the 4.93-acre property might not be developable or it might be subject to the federal permitting process.

NOTE: It is important to understand that, just because a property may be encumbered with the existence of aquatic resources or other resource restrictions – which might appear to diminish the utility of the property – not all markets react the same way. In some cases, aquatic resources can be viewed as a positive attribute to the land. And, this can be especially dangerous for an appraiser when their peers and/or other market participants expect this as the norm.

Scenario 2: Potential for Clean Water Act Violation

Because Mr. Retired backed out of the deal early, he prevented himself from being in a potentially costly situation. Let's consider what could have happened if Mr. Retired had purchased the property and built his guesthouse on the wetland without an appropriate section 404 permit and other required permits. He might have been subject to federal, state, or local enforcement actions. Mr. Retired might have been required to pay a penalty, and conduct restoration and/or mitigation for his alleged violations by EPA or the Corps. In this hypothetical scenario, Mr. Retired might have been required to spend about \$700,000 for penalties, restoration, and compensatory mitigation to resolve the outstanding violations.

Luckily, Mr. Retired hired a good inspector who notified him of the wetland on the property. Ultimately, he did not purchase the property and ABC Bank was able to put the property back on the market at the appropriate price.

Mr. Appraiser learned a valuable lesson that could have been extremely costly to him personally. He is now more aware of the importance of identifying aquatic resources when conducting real estate appraisals.

Scenario 3: Appropriate Valuation

Scenario 1 described what actually happened with the property that Mr. Appraiser appraised. Scenario 2 described what could have happened if the aquatic resources were not recognized before the property was sold. Now let's consider a third scenario in which the aquatic resources were recognized at the outset of the appraisal, which is what should have happened.

In Scenario 3, upon being asked to appraise the property, Mr. Appraiser first reviewed the NWI, FEMA flood maps, and NRCS Web Soil Survey web-based tools for the property and adjacent land. Next, he drove out to the property and walked the site making note of any visible water lines on trees, standing water, or other potential indications of streams or wetlands. Upon learning of the critical area designations on the property through the map review process and by spotting some telltale signs of wetlands on the northwest corner of the property, Mr. Appraiser contacted Anywhere County staff to

confirm the critical area designation. After speaking with county staff and the local Corps district office, Mr. Appraiser learned that a new property owner would not be able to build on 1 acre of the site. Therefore, Mr. Appraiser appraised the land at an appropriate value of \$200,000. He informs ABC Bank of the rationale for the appraised value and the bank is satisfied with the amount. The property is put on the market and later sold at that value. The new landowner is informed of the aquatic resources on the property prior to purchase and the restricted development potential of that portion of the property.

Scenario 4: Increased Valuation

In Scenario 4, we consider how the recognition of aquatic resources on a property may actually help to increase its appraised value.

Protecting open space can stabilize or increase nearby or adjacent property values- avoiding the need for increased property tax rates. In rural areas where most land is perceived to be at a low risk for development both market and enhancement value of aquatic resources will be negligible. However, in urban or urbanizing areas where open space is scarce, the enhancement value of aquatic resources can be high. For advocates of open space protection, enhancement value is important because it offsets the negative effects of removing the market value of the open space itself (which is usually tax exempt or taxed at a low rate) from the local property base.

Providing wetland stewardship does not have to mean an economic loss to the landowner. Landowners can benefit economically by restoring and enhancing wetlands. Some financial benefits include direct income, estate tax reductions, and in some cases, income and property tax reductions. Several state and federal programs are available that offer cost-sharing for preserving or restoring wetlands, and even direct payments for conserving wetlands. Landowners can receive financial or technical assistance for providing conservation easements on their wetlands. Along with the economic returns, many urban communities experience increased property values when open spaces such as wetlands are preserved; assuring the owner of permanent solitude and an aesthetic view.

In this scenario, the property was found to have locally significant wetlands located on it. Local restrictions imposed by the County originally prevented the landowner from getting approval for development of a subdivision next to the wetland. However, the concept of Transfer of Development Rights (TDRs) was recently approved by the County to allow property owners to relocate their potential development rights from an area where resources are environmentally sensitive to an area where increased development will not harm the landscape. This is done by actually transferring the right to develop the property from one location to another. TDRs allow land to remain in the private sector while avoiding development on environmentally significant sites. TDRs work by assigning credits to property owners in an area of ecological significance or a conservation area experiencing strong development pressure. These credits can then be transferred to designated growth areas. Developers in designated growth areas can purchase the necessary credits from the owners of the conservation area and thus build to a higher density than is traditionally allowed.

The Appraiser's Role

So what is the role of the real estate appraiser when it comes to aquatic resources?

Having an appraiser that is knowledgeable in recognizing potential aquatic resources serves to:

- Provide more accurate land valuation and protect the appraiser from lawsuits later on, and
- Increase the knowledge level of the regulated community in effort to decrease aquatic resource violations.

To serve these two purposes, an appraiser should not only consider the aquatic resources in the appraisal, but should document the presence of aquatic resources in the appraisal report and on the Uniform Residential Appraisal Report form. While there is no specific section on the Uniform Residential Appraisal Report form to note information about aquatic resources, an appraiser can use the section designated for noting any adverse site conditions or external factors (easements, encroachments, environmental conditions, land uses, etc.) shown on this slide.

Unfortunately, the Uniform Residential Appraisal Report main form has very limited space in its site section for comments, and in many cases much more commentary is required. Also note that the form asks for only adverse site conditions, even though there could also be favorable conditions. You can check either “Yes” or “No” and comment on the conditions whether they are adverse or favorable. Many cases will require more space for comments than is allotted on the form. A simple “See additional comments” reference might be necessary if more expansive comments are necessary elsewhere in the overall appraisal report.

The Appraiser's Role Cont.

In addition, to encourage regulatory compliance, the appraiser should notify the property owner that they may need to contact the U.S. Army Corps of Engineers or a State or Local regulatory agency before conducting activities that would impact the aquatic resources. If possible this notification should be recorded in the appraisal report.

This may be more appropriate in the “Highest and Best Use” analysis (still in the site section). Appraisers are required to comment on the highest and best use of a site both as improved (if it is improved) and as if vacant (even if it is improved). The four tests of highest and best use are: 1) physically possible (is it actually possible to build?); 2) legally permissible (is it legal?); 3) financially possible; and 4) maximally productive.

In regard to test #2, appraisers SHOULD consider all legal aspects (wetland and aquatic concerns included) in determining what is and is not legal. Included in this analysis SHOULD be such a comment. On the form, even if highest and best use is marked “yes,” comments can still be added in the addendum. This line of the form can be seen in the picture, a little above the adverse site conditions section.

Including such comments would help ensure compliance with Uniform Standards of Professional Appraisal Practice (USPAP) regarding the site and highest and best use. USPAP is the governing body for appraisers which adverse legal proceedings would reference.

Test Your Knowledge

That's the end of our course presentation and now it's time for one final quiz to test your knowledge. In order to pass this course and receive your certificate, you will need to correctly answer 80% of the quiz questions.

Quiz 3

Certificate

Congratulations on completing the quizzes and finishing this presentation!

In order to receive Continuing Education Learning Credits for the completion of this course, you must print a certificate and submit to your respective state recertification program.

Please click on the button below labeled "Open Certificate of Completion." Clicking on this button will open a new window with a fillable pdf certificate. Follow the instructions on this slide to print the certificate.

After completing the certificate, please return to the presentation and continue with remaining 2 slides by clicking on the next button.

Course Complete

Once again, check with your own state regulatory entity on how to submit your certificate for renewal! Each state may be different in their requirements and procedures. This screen shot is an example from Washington State's Department of Licensing.

As a further reminder, we have numerous checklists and fact sheets on the Resources tab of this course presentation for you to print and use in the field or for future reference. One in particular that could be of great use in the field is the Aquatic Resource Clues Checklist.

Contact Information

Thank you for joining us for this Aquatic Resource Awareness for Real Estate Appraisers training presentation!

Please take a moment to tell us in what state or states you are applying for or renewing a Real Estate Appraiser License, how satisfied you were with this course, and if you have any suggestions for improving the course by clicking on the button labeled "Provide Feedback."

If you have questions or comments on any part of this course, click on one of the email addresses on this slide and send us a message.