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An Inquiry into the Relationship of Wetland Regulations and Property Values in Minnesota

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Abstract

Ownership in property can be thought of as ownership of the rights to the "incomes" associated with different uses of the property. Each potential use has a separate economic value, which can be ranked if put into money terms. The property's market value is usually held to be the highest income on that ranking.

Wetland protection regulations might shift the ownership of some of these rights from private to public entities or restrict the exercise of some rights. This can result in a reduction of the property's market value, if the regulation precludes access to the income from the highest ranking use. A regulation can never increase the economic value of a property from the owner's perspective.

Whether or not a reduction in property value is considered "fair" is a question usually left to the courts. If it is determined that a regulation has resulted in a "taking" of property, compensation must be paid. The appropriate level of compensation is the difference between estimated pre- and post-regulation market values. The task of the analyst is to estimate those two values, after first determining if the two uses are feasible given other physical, financial, and legal conditions.

Because property prices are not determined until there is a transaction, all such valuations are necessarily estimates based on the professional judgments of the analyst. There are no easy ways to determine these values short of costly individual appraisals or extensive market studies.

Wetland regulations in Minnesota do result in reduced values for some property owners – as do all land use regulations. Demonstrating that values went down on regulated properties has policy import, however, only if: (1) the examples are so egregious that the Legislature decides to change the enabling legislation to adjust the distribution of the law's benefits and costs; or (2) the sum of measured property losses exceeds any estimate of total benefits, in which case the Legislature might decide to change the law as not in the broader public interest.

Should further property value analyses be conducted? Only if the Legislature is very clear about why it wants to do the study. If the concern is one of fairness, then the distribution of a regulation's costs should be examined by using parcel-by-parcel appraisals or by a careful calculation of the economic benefits and costs among different classes of people, classes of property, or regions of the state. If, on the other hand, the concern is that the aggregate costs of the regulation may exceed its total benefits, then broader economic valuation studies are called for. We are not prepared to recommend either approach at this time, because the Legislature has not yet declared what the problem really is.

Introduction

Responding to concerns that the Minnesota's wetland protection programs excessively restrict development opportunities on parcels containing wetlands, the Minnesota Legislature (Chapter 407, Laws of 1996) directed the Board of Water and Soil Resources (BWSR) "to assess the economic impact of wetland regulations on property values, in connection with a study by the wetland heritage advisory committee of the issue of compensation to landowners for costs, including reduced property values, resulting from regulation under state law of draining and filling of wetlands." The Board subsequently contracted with the University of Minnesota's Department of Applied Economics for the first mentioned study. This report is the final product of the work conducted under that contract.

We have not prepared an estimate of property value loss or gain attributed to specific Minnesota wetland regulations in specific property markets. That would be far beyond the scope of the project's budget. We do analyze the legal and economic aspects of the interactions of wetland regulations and property values, organized around a sequence of "findings." We isolate what we think are the critical issues, and we illustrate them with several wetland regulation "cases," some from northern Minnesota and some from the Twin Cities area. These are individually detailed in the appendix.

We examine only proposed residential or commercial developments involving wetlands. Under Minnesota law, discussed below, agricultural properties are largely exempt from wetland regulations. We make no claims that these examples capture all wetland regulation issues in Minnesota, nor do we claim that this "sample is representative of all wetlands.

Throughout the report, we necessarily mingle concepts and issues pulled from both economic science and the law. It is useful to think of the law (regulations) as setting the rules under which property markets operate. Changes in regulations will alter the distribution of economic gains and losses, and anticipated changes in property markets will sometimes influence the making of laws. We were not asked specifically to address the issues of regulatory takings or appropriate compensation levels, but we could not isolate our examination of valuation impacts from this broader context. Because legal documents reflect a sizable body of thought about what property rights are and how regulations affect them, we additionally examine how American courts have come to view these issues, particularly when and how the courts make use of economic science in their deliberations.

In its briefest form, our conclusion is this: Wetland regulations do reduce some properties' market values. However, adjacent non-regulated properties might increase in value as a result of the same laws. Whether the State owes compensation in the former case (or is due reimbursement in the latter) is not within the scope of this report.

The link between a wetland regulation and a particular property's value is not as direct as it first might seem.

The price of a property is not known until there is an actual transaction. Up to that point, market value must be considered the expected price of property. Theory holds that people place an economic value on a property equal to the monetized services (including ultimate sale price) they expect out of it for as long as they hold it. These services come not from the property itself but from its use. There are many possible uses for a given property but not all are financially, physically, or legally feasible. As a result, it is best to speak of a property's value as contingent upon a particular use that generates services that have economic value to a particular owner. The services in turn are functions of the economic, physical, and legal characteristics of the property itself.

The influence of a wetland regulation therefore must be isolated from all the other (changing) factors that influence the property's value. A claim of lowered property value is a claim that exercise of a higher-value use has been precluded by the regulation.

Both wetland protection and other land use regulations might come into play for any given property development proposal. Disentangling the economic effects of these several regulations is a difficult task, as some of our case studies illustrate. In Minnesota, the following wetland laws have the most direct effect on development proposals. The several regulations summarized here do not constitute an exhaustive list of laws that influence property decisions. Development also may be restricted by several other types of local and state regulations such as zoning, subdivision, or water quality laws. A good illustration is our Case A (see Appendix), where the proposed development was subject to a steep slopes ordinance, a scenic easement, and a private covenant on the deed – all in addition to the state wetlands regulations.

Wetland Conservation Act

The 1991 Minnesota Wetland Conservation Act (WCA) permits the draining or filling of wetlands only under an approved replacement plan. There is to be no net loss to the State of the water quality, flood control, habitat, public recreation, and commercial values said to be provided by wetlands. Any actual wetland loss must be compensated by restoring or creating replacement wetland. Importantly, many agricultural and silvicultural activities (as well as projects whose impacts are classified as insignificant) are exempt from these provisions.

The authority to approve a replacement or mitigation plan resides in the designated local government unit (LGU) or its delegate. Within the seven-county metropolitan area, the LGU is to be a city council, a township board, or a water management organization. Outside the metropolitan area, it can be the county board (in unincorporated areas) or a city council. The state Board of Water and Soil Resources oversees implementation of the WCA and hears appeals from LGU decisions.

Landowners whose replacement plans are not approved are eligible for compensation under certain conditions. Generally, this payment is to be equal to the average market value of agricultural property in the township or the assessed value of the parcel containing the wetland, whichever is greater. In exchange, the State is granted a conservation easement on the wetland property. There have been no compensation

payments under the WCA to date. In practice, most wetland owners and the LGU have negotiated to modify development plans initially deemed unacceptable.

No comprehensive WCA-related mapping exists for the state, although many jurisdictions have developed local maps, using recently-released National Wetland Inventory data, USGS topographic maps, and USDA soil surveys. Landowners or prospective buyers must obtain a wetland delineation privately or through the assistance of the LGU before starting a project. (The absence of a predetermined set of wetland delineations that identify WCA jurisdiction may create uncertainty in the market as to the extent to which the regulation will constrain use of the land. We take up this point in a later section.)

Protected Waters Statute

A Department of Natural Resources (DNR) permit is required before changing the course, current, or cross-section of "protected waters." These include streams, lakes and ponds, as well as Type 3, 4, or 5 wetlands that are 10 or more acres in size in unincorporated areas or 2.5 or more acres in incorporated areas. Alteration is permitted if the owner demonstrates that it cannot reasonably be avoided and that disturbance will be minimized. Wetlands subject to the DNR permit were inventoried in the late 1970's; maps identifying these wetlands are located in county offices. These maps show the general location of protected wetlands, but they do not delineate actual wetland boundaries.

Federal Statutes

Two federal statutes also may constrain the use of wetlands in Minnesota. (1) Section 404 of the 1972 Federal Water Pollution Control Act (FWPCA) requires a permit from the Army Corps of Engineers (COE) to place dredged or fill material in "waters of the United States." These include navigable waters, their tributaries and headwaters, and adjacent wetlands. (2) Section 10 of the 1899 Rivers and Harbors Act (RHA) prohibits excavation, fill or the placement of an obstruction within navigable waters without a permit. To obtain a permit under either statute, a landowner must demonstrate that the proposed disturbance is unavoidable and will be minimized. Public wetland values are to be maintained through actions such as wetland restoration or creation.

Exceptions to these two requirements are common, in the form of "nationwide," "regional," or "general" permits. For example, some nationwide permits allow, without prior approval or wetland replacement, the discharge of dredge spoils or fill into wetlands of less than one acre. Waiver of federal jurisdiction, however, does not mean that state approval is automatic.

Wetland regulations are presumed to serve the public good on the whole, but the resulting gains and losses may not be evenly distributed among property owners.

For present purposes, we necessarily assume that the Legislature (or Congress) passed the regulations passed in the first place because it determined that the benefits of wetland protection exceed the costs it imposes *in the aggregate*. The present study does not examine the validity of this implicit policy finding.

This is not to say, however, that everyone benefits equally from wetland protection in general or that the benefits from protection of a particular wetland exceed its costs in

every instance. In some of our case studies, the owners said they did not think the land contained "important" or "valuable" wetlands, so they did not even consider the possibility that the properties might be subject to wetland regulations. (We discuss below whether or not "reasonable" buyers and sellers should be expected to be on "constructive notice" that wetland regulations might apply, simply because of the presence of any sort of wet area on their properties.)

In principle, those who benefit (gainers) from wetland protection laws could reimburse all those who experience economic losses (losers) – and still have something left over. Compensation by gainers is not often put into practice, except for case-by-case formal legal proceedings. Some observers refer to the gains from regulation as "givings," in obvious contrast to the losses, commonly called "takings."

Certain landowners might both gain and lose from the same regulation. While properties subject to a land use restriction are sometimes reduced in economic value, it may also happen that adjacent properties improve in value because they are protected from adverse changes in nearby (and desirable) wetlands. This property value protection function is usually considered the principal purpose of zoning regulations.

The distinction between overall public benefits and the distribution of benefits and costs is prominent in many court cases where a regulatory taking is claimed. It has also proved important in the courts' deliberations on appropriate compensation levels. Because most regulations result in a non-uniform distribution of gainers and losers, questions of distribution are central to a thorough examination of the economic implications of land use regulations.

Wetland regulations might shift property interests from landowners to the public, or they might clarify existing constraints on development of certain properties.

Viewing land as a collection of separable property rights, not all of them held by the "owner," helps us analyze the economic effects of land use regulations. Legal writers frequently speak of property as a "bundle of sticks," with the several sticks allocated among different parties. For example, a landowner's bundle might include the stick that allows construction of a single-family residence, but it might not include the stick allowing operation of a feedlot. Each property right, each stick in the bundle, has an economic value. The analyst's task is to first determine which right has been affected by the regulation and then to estimate the economic loss associated with restrictions on that right.

The allocation of all such property interests is never, and never could be, exhaustively enumerated in law. Both the sheer number of these interests and our inability to anticipate all possible uses of property preclude this.

Some laws have the effect of transferring control of some sticks in the bundle to someone other than the owner. For example, an easement might be thought of as a combination of a property right held by another party and an obligation borne by the landowner to refrain from interfering with the exercise of that right. Other laws withhold use of some rights from the owner without reallocating their control to anyone else. Wetland regulations are

mostly of this type. The owner is restrained not by a reallocation of use rights to some other party but by the imposition of restrictions on use of rights remaining in the bundle.

In other circumstances, wetland regulations do not shift property interests so much as they make explicit any existing constraints or potential constrains on use of the property. For example, some regulations simply restate private or public nuisance law, such as that regarding flooding or sedimentation of adjacent properties.

In order for people to make workable plans for the future, it is essential that property rights possess a certain stability over time. This stability, however, must be balanced against the need for laws and allocations of rights to change over time, to adjust to a changing society. Consequently, few property rights can be considered absolute. To say that a landowner is, before regulation, permitted to use the property in a certain way does not always mean the owner had a right to exercise that use. Wetland protection regulations can frequently be said to constrain uses that were previously permitted.

Observed changes in property values sometimes can be used to estimate the economic effects of a specific regulation.

Economists presume that market prices tell us something about market participants' expectations about the future. An observed change in a property's market value is said to reflect a change in expectations about the future income potential of that property. Land, in particular, can provide a flow of services, some of which can be monetized (such as annual rents) and some of which cannot be monetized (such as pride of ownership).

The sales price of a property is the result of a compromise between the buyer and the seller. It is presumably lower than the buyer might have willingly paid and higher than that for which the seller might have willingly sold. The price of a property whose use is constrained by wetland regulations might end up lower than it would be in its unrestricted condition. This could happen if the seller takes less because the property won't yield the income anticipated in the absence of regulation or if the buyer won't pay as much because potential future uses are constrained. Either way, there is no "realized loss" unless property is actually sold. Either way, the selling price depends crucially upon the relative bargaining power of the buyer and seller. The financial effects of that regulation, if any, are said to have been "capitalized" into the value of the property. Any change in market value is borne only by the owner at the time this capitalization takes place. This might be when the regulation is enacted, but it might not be until the property market becomes aware of the effects of the regulation.

Not all observed changes in property values, of course, can or should be attributed to changes in regulations. When we observe prices in property markets, we see only the net effect of all the laws, technologies, and preferences that influence price determination. Only by careful analysis can we disentangle from this net effect the contributions of particular factors such as wetland protection regulations. Even if an owner is permitted to modify a wetland so that the property itself is not reduced in value, the regulation can have a substantial financial effect if the permit is granted contingent on creation of a new wetland somewhere else or on purchase of wetland banking credits. In some parts of the

state, such credits can cost several thousand dollars an acre. This financial impact will influence an owner's wetland development decision even if its effects are not translated into the immediate property's value.

Sometimes, an observed change in property value is mostly attributable to changes in market supply and demand, irrespective of the characteristics of the property itself or of any actions by the owner. As urban areas grow or as societal preferences change, some properties' market values increase, perhaps dramatically. (Economists sometimes refer to this as the "locational component" of land value.) This phenomenon lies behind the notion of property ownership for investment purposes. For example, the owners in our Case G bought the land several decades ago "for speculation."

Value changes could be measured on the portion of the property that contains wetlands, the rest of the regulated property, adjacent properties, and other wetland properties in the vicinity. It could be the case that a given regulation reduces the value of the portion of a parcel that contains the wetlands, has no effect on the upland portion of the same property, increases the value of adjacent properties because home buyers want properties with wetland views, and increases the value of wetlands in nearby communities because a mitigation plan requires replacement of the original altered wetlands. In our Case A, for example, the developer chose to capitalize on the restricted use of the wetland by orienting portions of the development around the restricted areas and marketing the wetland as an amenity. The analyst may or may not consider it important to examine all these value effects. It depends upon how the initial question is posed.

The economics literature on regulations and regulatory takings looks mostly at residential property on urban fringes. A great many are in the "gray literature" – court depositions, agency studies and the like – and so are extremely difficult to locate. Few purely wetland takings studies exist. Most of the studies find that regulations increase existing nearby properties' values, because the regulations ensure that lesser-valued uses will not enter the neighborhood.

A measured loss of property value does not automatically mean that a regulation has "taken" a property right.

As a rule, American courts have decided that a regulation has resulted in a taking if it does not "substantially advance a legitimate state interest;" if it authorizes a physical invasion of the property; if it denies the landowner all economically viable use of the property; or if it takes from the landowner the right of bequest. Where the case at hand falls into none of these categories, a taking still might be declared if the economic impact of the regulation on the landowner is felt to be onerous; if the regulation interferes with the landowner's "distinct investment-backed expectations;" or if the regulation seeks to extract a general public benefit at the expense of a few landowners. (Note that to determine this last point, the court needs to know the distribution of costs among all parties, not just the change in market value for a particular property.)

Not every market value reduction signals a taking. Under both federal and state doctrine, the landowner must endure a significant loss in value before qualifying for compensation.

This may reflect the desirability of avoiding the administrative costs of compensating minor takings; alternatively, it might be read as a rough operationalization of the principle that a landowner does not have a right to the use yielding the absolutely highest return. In a recent case concerning the 500-acre calcareous fen complex in Savage, Minnesota, the federal Court of Claims ruled that the Army Corps of Engineers' denial of a fill permit, reducing the value of the claimant's property from $991,000 (reflecting unregulated development potential) to $112,000, was indeed a taking. In other cases, however, diminutions of similar proportions have been found insufficient to constitute a taking.

While we do not propose here to predict court decisions or even to provide more than a sketch of the characteristics of situations in which takings are commonly found, we can note that courts have often declared a taking if reasonable buyers and sellers would not have expected the change in property rights caused by the regulation. This might have been because of precipitous action by the government or because only a few property owners are affected. In either situation, the chance of being affected is essentially unpredictable by the owners, and hence uninsurable.

The courts, unfortunately, do not speak in one voice as to the role of expectations. Some have ruled that a claimant's expectations must have been reasonable, others merely that they have been sincere. Some courts have ruled that expectations, once rightly formed, will be protected for all time; others have demanded that the claimant's expectations respect the societal balance between certainty of rights and the need for laws to evolve.

The US Supreme Court, in a holding limited for other reasons to a narrow set of cases, has ruled a buyer, in forming expectations, need look only to legal prohibitions in force at the time of acquisition. The landowner is protected against the effect of constraints coming into force after that time. Some lower federal courts and the Minnesota Supreme Court, conversely, have reasoned that expectations as to how one may use one's land are formed not merely from law as it stands, but from a variety of other sources as well, including governmental plans and policy statements, patterns of governmental actions, evolving societal awareness of what may cause social or ecological harm, and one's own observations as to what seem to be appropriate land uses in a given community.

What makes buyers or sellers "reasonable" in these rulings? They are presumed to be knowledgeable about both the market and potential changes in economic and institutional conditions that might affect the property. For example, if a certain use is prohibited by a zoning ordinance that the buyer believes might be amended, the buyer might willingly pay more. Conversely, if a use presently is permitted, but proposals that would prohibit that use are being debated, a knowledgeable buyer is expected to reduce any bid for the property. Of course, buyers and sellers might not be equally knowledgeable. For example, their opinions about whether or not a particular wetland is or will be regulated may differ.

Reasonable buyers are also presumed to realize that the farther into the future one projects a property's flow of services/income, the more likely it is that present legal and economic conditions will change. Reasonable market participants will recognize that expectations formed today are likely to be either lower or higher than the income from the property will actually turn out to be. For example, the owners of the property described in Case B purchased the land several decades ago, long before commercial development came to the

area. A court might consider whether a reasonable buyer or seller at that time would have formed an expectation of substantially higher income today than form agriculture. Too, the court might determine that a reasonable buyer would not have assumed with certainty that land use rules such as wetland regulations would remain unchanged over intervening years.

Finally, it is usually presumed that reasonable buyers and sellers appropriately assess the set of other institutional factors that might influence decisions about wetland use. It might not always be the wetland laws that limit development. For example, in our Case C, the owner's proposal to use the wetland for stormwater drainage might run afoul of nuisance law, if that use led to excessive overflow onto adjacent properties.

Only after a court first determines that a taking has occurred is the appropriate level of compensation then determined.

American courts have traditionally acted as if they conduct a two-part test for claims of property value loss from land use regulation. First, they decide whether or not a property right has clearly been shifted from the owner to the public and whether such a shift can be said to have been "unexpected" by a reasonable buyer at the time of purchase. If a taking is determined to have occurred, the courts then turn to the question of compensation.

For this, courts rely upon the testimony of professional property appraisers, whose valuation techniques in turn rest on underlying economic principles, as discussed above. In particular, these valuations put great stock in the principle that market prices, if available, are the best estimators of economic values. The appraiser is to estimate the return to the "highest and best use" of the property under applicable zoning regulations. Highest and best use, in turn, is taken to mean that use bringing the greatest financial return to the landowner, net of construction, capital, and transaction costs.

For a long time, Minnesota courts prohibited evidence of a landowner's own development plans as the basis for value determination, on the ground that this evidence was too speculative. But in 1982, the state's Supreme Court authorized a "development cost approach" to value an undeveloped parcel that the City of New Brighton had condemned for parkland. The approach, which is basically an application of the income-capitalization method (discussed below) to a hypothetical development, is "designed to reflect, through cash flow analysis, the current price a developer-purchaser would be warranted in paying for the land, given the cost of developing it and the probable proceeds from the sale of developed sites."

The Court approved the approach for future use in cases where the landowner first can establish that the land is "ripe for development"; the owner reasonably can expect to secure zoning and other required approvals; and development will not occur at too remote a time. The Court noted that because buyers and sellers can use computers to explore many different variables that might affect the market value of undeveloped land, hypothetical plans are less speculative than they once might have been.

Four principles can be said underlie courts' decisions about appropriate compensation levels: (1) The claimant must show that the parcel is physically suitable for the asserted

use and that demand exists for the use in the reasonably near future. For example, in our Case E, there is a difference of opinion about whether the property can be cost-effectively prepared for the proposed use. (2) A use that requires cooperation with owners of other parcels (e.g., a drainage ditch that requires an outlet on adjoining land) may be the basis for pre-regulation value only if the likelihood of such cooperation is sufficiently great. (3) Potential income from a use not permitted under current zoning law can be used only if it can be shown that an enabling zoning amendment is reasonably probable. In our Case C, the owner could point to the fact that surrounding properties have already received zoning permission for the proposed use. (4) The development must have a clearly demonstrated market demand.

Courts also have recognized that a regulation may affect the value of non-regulated properties. For example, the highest income use of an upland parcel may hinge upon access through an adjacent wetland parcel. Constraining use of the wetland parcel may limit the upland parcel to a lower-income use. In compensation determination, this loss of value, called "severance" or "consequential" damage, is to be reflected in the market value determination for the property as a whole. A possible example is Case D, where the owner asserts that commercial development of the upland area is not economically viable if the wetland area cannot be altered as requested.

A final issue in compensation determination is the decision about which price differential to measure. Should the compensation be the full return that would have been received had the property been used for its intended, but now precluded, use? Or should it be only the owner's opportunity cost, the difference between that return and that from a project with a lower, but still non-zero, return? The former is more generous, compensating the landowner for a return that, with the wetland protection constraint in place, cannot be achieved. The latter approach assumes the landowner can still invest in the next-best project. A third approach would compensate only the opportunity cost of any investment actually made. These questions are germane in situations like Case E, where the owner has been offered a price only 50% above what was originally paid, even though the land would now fetch, says the owner, far more in the absence of the regulation.

The appropriate measure of a property value loss is the difference between what the property would be expected to sell for, with and without the regulation.

The process of estimating "with" and "without" property values is not straightforward, because ordinarily there is little direct market evidence for either of these two prices. The property usually has not changed hands prior to the challenge. A professional appraisal of the property, based on selling prices for comparable properties, is generally held to be the best way to generate damage estimates. When few comparable properties exist, appraisers usually rely on cost or income approaches, discussed below. But what prices do appraisers actually "find?"

For any parcel, there are many possible future income streams, depending upon use decisions, physical and location factors, legal environments, and economic conditions. Because no one knows for sure what these will be over the life of the investment, owners must form "expectations" about future events. The expected value of a property is the

owner's (or the appraiser's) estimate of the earning potential of the property, appropriately discounted to deal with uncertainty about the future.

There are many possible uses and associated economic values for any given property. Not all possible values are known now, and some may never be known, because forming an extensive set of expectations can be expensive, requiring market analyses, price trend forecasting, or demographic studies. In addition, some of the possible income streams are not achievable under current laws or technologies.

If we knew everything about the future (if transaction costs were zero) we could array all these use-dependent choices by their expected incomes and pick the highest, with and without the regulation in question. Because the highest prices on this list may or may not be feasible for technological or institutional reasons (such as other land use regulations), the maximum possible economic return is not necessarily the appropriate upper figure against which to assess the amount of a regulatory taking. Even if the maximum is feasible, it might not be known without costly search.

Following this line of reasoning, the owner selects some use option whose associated income stream will cover costs and return an acceptable profit. Call the value associated with that use V*. There may be other higher-value use options for the property, but the owner chooses not to spend the time or money searching them out. The owner's expected income, then, in this context, is the highest value that is found by a reasonable search for which the use is both technologically feasible and legally permissible. Both Cases A and B can be said to illustrate this feature of the search for highest and best use. The owners appear to have settled upon a parcel and a use that met certain threshold criteria and then looked no further.

A change in the legal framework such as a wetland protection regulation does not necessarily lop off the high-value end of expected price distribution. Rather, it enables or eliminates some of the choices from throughout the distribution. A takings claim takes the form of an assertion by the owner that the present value of the future stream of income from the property use constrained by the regulation is lower than the expected income V*, selected as above. The question that the court must first decide, then, is whether the owner had a reasonable expectation to V*, so that any demonstrated reduction from that level might be compensated.

But which pre-regulation value should the courts use? They do not usually accept the owner's claim that V* is the unconstrained value of the property. Instead they order a series of appraisals to determine the "real" before (V') and after (V'') values. Awkwardly, it sometimes happens that these appraisals identify potential uses whose economic values are higher than those the owner originally selected: V'>V*. Indeed, sometimes both of the appraisers valuations exceed what the owner originally asserted. What happens then? Should the court declare the "loss" as |V' - V''|, making the loss estimation independent of the stated expectations of the owner? Although courts will generally use the professional appraiser's "highest and best use" price determination as the pre-regulation market value, this might overstate the necessary compensation for a taking.

Economists have developed several different ways to measure changes in property value.

Because all properties are different, each are likely to be affected by regulations in different ways. The only way to measure the effect on each property is to use direct appraisal techniques. Conversely, the best way to measure market-wide or average effects is to use statistical market analysis.

Professional appraisers typically use three methods to estimate market value. The methods differ in how they approach the concept of value. The market comparison approach builds from the principle of substitution – buyers will pay no more for a property than they would for similar property in another location. Knowledge of sales prices on similar properties, then, helps the appraiser estimate a sales price for the subject property, appropriately adjusted for its particular characteristics. The cost approach is similar, but the appraiser more directly disassembles the property into its components (developable land of various levels of drainage, slope, views, or location) and estimates each component's replacement cost. The sum of these costs becomes the value estimate for the full property. The income approach views property as an element in a production process. Different uses of the property would yield different annual incomes. The present values of these various uses (using appropriate discount rates) are then compared, and the largest is selected as the expected sales price of the property.

Many value estimates from these sources combine elements of all three appraisal techniques. The income approach is closest to the concept of property value we use in this report – the discounted sum of future income expectations held by reasonable market participants. However, this approach to price estimation is not used by every property tax assessor or by every professional appraiser.

Hedonic analysis is used frequently by economists and appraisers to determine either the market value of a number of properties too large to efficiently determine on individual properties (such as in property tax assessment) or to examine the influence of a particular factor in a class of properties (such as the presence or absence of a regulated wetland). These studies are based on the economic theory that people value an asset like land not for the property itself but rather for its characteristics such as location, terrain, or soil properties. Each of these characteristics has an economic value that can be estimated separately, using appropriate statistical techniques.

We discuss below the possible usefulness of such economic value estimation techniques to the wetlands regulation debate in Minnesota. We caution, however, that statistical studies necessarily calculate the average (not a parcel specific) impact of the presence of a regulated wetland, after accounting for the different effects of the other characteristics of each property. These studies' results could be used to calculate an estimated impact on individual properties, but these estimates will almost always differ from those calculated in a detailed appraisal of these properties; individual appraisals can consider factors not included in most broad-based statistical studies.

The analyst must also be careful to distinguish the presence of a wetland on a property from the influence of a wetland protection regulation on that property's use. Poorly

drained properties are generally more costly to develop, so, all else equal, they will always have lower market values, even if there are no regulatory constraints to development.

The choice of analytic technique depends in part on which economic effect one is interested in. A wetland regulation might affect the value of many properties, ranging from the wetland itself to the entire community. Courts have traditionally relied upon appraisal studies to measure the net effect of the regulation on the individual parcels. The (possibly positive) effects on neighboring properties or on the community as a whole tend not to get examined in the courts. These values could, however, be estimated with statistical tools such as hedonic analysis or with other economic valuation tools.

The present research did not conduct a statistical analysis of the links between specific wetland regulations and actual property values.

Properly conducted market studies require a great deal of data compilation and analysis. Such an effort was beyond the time and budget resources provided by the Legislature for this study.

A properly conducted hedonic valuation study requires analysis of sales data for similar use classes (residential, say, or commercial) in each of several property markets. Economists prefer to use actual sales prices, rather than assessed market values, because the former are felt to better reflect the underlying economic values attached to property characteristics by buyers and sellers. Such a study would require for each of hundreds of properties the consistent compilation of characteristics such as sales price, lot size, drainage, location, utility access, structures, and whether or not the property's use was constrained by (or believed to be constrained by) a wetland regulation at the time of sale. (Critically, this final characteristic will be known to the analyst – and to the market – only if there has been a prior delineation of all lands subject to existing or proposed wetland regulations.)

Given a sufficient number of sales that were or were not so constrained, we would be able to determine whether or not the sales prices of constrained properties were lower – all other property characteristics being held constant by our statistical techniques – than the prices of unregulated properties. We would also be able to attach a certain level of confidence to our estimate of the magnitude of the difference.

A variant on this technique, preferable in many respects but hardly ever possible given its stringent data requirements, is to examine only those properties that sold both prior to the imposition of a wetland regulation and then again after the wetland regulation took effect. The problem, of course, is that few properties meet this repeated-sales criterion. As a result, few such studies are ever conducted.

An alternative approach would be to select a set of properties on which to conduct a series of property appraisals. This would differ from traditional court-associated studies in that it would systematically analyze a whole set of properties, not just the single property in dispute. Therein lies its drawbacks for policy purposes. For reasons discussed elsewhere in this report, it is very likely that the results of such appraisals will be widely disparate and provide little guidance to policy makers. We have no quarrel with direct appraisals in the

determination of compensation in takings cases; indeed, we recommend them if compensation is to be consistently measured as the difference between pre- and post-regulation property values. However, scattered direct appraisals tend to be too idiosyncratic and too expensive to be of use to policy makers for other than anecdotal evidence.

The Legislature should examine ways to lower public administrative costs and to make the land market more efficient without jeopardizing the benefits of existing wetland protection laws.

Certain efficiencies in the operation of property markets might be achieved by increasing the amount of wetland information available to buyers and sellers. For example, the fact that there is rarely a wetlands zoning map associated with the regulations under the WCA means that buyers usually do not know in advance whether or not the regulations will apply to a particular property. That discovery requires costly (to the public and to the owner) delineation processes. If a prior determination could be made on all properties – perhaps through a less-thorough but more cost-effective GIS-based identification process – then market participants would know in advance whether or not a parcel is subject to wetland regulations.

A prior determination system would have the government more clearly announce which lands were subject to the restrictions and which were not. This would require a balancing between two possible types of "errors" in wetland delineation. What if the agency inappropriately puts a "real" wetland outside the wetland zone? Should the owner still be subject to the wetland regulations if the error is discovered later in the development process? If so, then the prior determination procedure would not provide 100% assurance in the formation of future income expectations by a reasonable buyer. If not, if the owner is made exempt from later application of WCA regulations, then a potentially valuable wetland and its benefits could be lost. What if, on the other hand, the agency errs by putting non-wetland parcels into a wetland zoning district? That would result in an unnecessary dampening of market activity, because a reasonable buyer would assume that the wetland regulations would apply, only to find out later (if at all) that they really would not.

One must, of course, balance the efficiency gains of prior determination against its very real, and possibly substantial, administrative costs. Even if the per-parcel costs of mass determination are lower, the sheer number of parcels that must be analyzed, parcels that might never have to be determined under the existing system, could swamp these cost reductions. Prior determination would also reflect an implicit switch in the locus of responsibility for knowledge about possible development restrictions. The present system lodges this responsibility in the land owner, who is expected to be aware of the law and its conditions and to seek determination prior to investment.

The Legislature might also direct the courts (in takings cases) or public agencies (if non-court compensation schemes are put into place) to calculate compensation using a previously estimated and officially accepted hedonic model. The calibrated model could be used to calculate both the pre-regulation and post-regulation values for any property. The

value loss in dollars or as a proportion of total property value could be consistently calculated, because both values would be estimated in the same framework.

While hedonic models are by no means perfect – and never can be – such use could avoid expensive case-by-case adjudication. The costs of developing these models, of course, might exceed whatever gains in efficiency their use might bring to the market. Further, the Legislature would want to first consider the constitutional implications of replacing case-by-case determinations with more sweeping market-based compensation schemes.

Neither adopting a prior delineation procedure nor formalizing a price differential model would remove all sources of uncertainty or inefficiency from the land development process. There are ample opportunities for legislative clarification and market simplification. For example, the Legislature might want to consider making explicit just which property rights are to be affected by proposed legislation, which rights are to be always in public holding, and which rights will remain in private hands. It could also help by clearly spelling out what it considers to be an appropriate level of compensation and which techniques are appropriate for determining that compensation.

The Legislature might instead decide that the traditional case-by-case determinations that typify American takings law should be superseded by more direct compensation mechanisms. Two other procedures, one in place and one proposed, circumvent the courts and their deliberations entirely or in part.

As noted above, Minnesota's WCA contains a compensation mechanism that comes into play upon final State denial of a wetland alteration plan. No court action is necessary. The compensation amount is tied to average local property prices, not to a specific determination of the property in question. This procedure appears to result in lower administrative costs than would a full-blown appraisal of each property on which compensation is to be paid. Of course, we have no direct evidence of this, because no compensation awards have been made to date. Nor do we have any way of deciding whether or not this procedure results in any "fairer" distributions of regulation costs and benefits than would traditional court actions.

Another alternative procedure, proposed in the 1996 legislative session (SF475) would have required automatic compensation to any property owner who could demonstrate to the court that a regulation had resulted in a reduction in market value of a stated value. There appears to have been no provision for a prior determination of a regulatory taking. Demonstrated market value reduction would essentially become the definition of a taking, contrary to the more carefully wrought procedures now employed in takings cases.

Conclusion

Wetland regulations have the effect of precluding certain land use options, not all of which are known (or relevant) to the property owner. Because each option is associated with an expected income, any "loss" in property value is the difference between the incomes from the uses the owner would select without and with the regulatory restriction.

The task of the analyst is to estimate those two values, after first determining if the two uses are feasible given other physical, financial, and legal conditions. Because market values are not determined until there is a property transaction, all prior valuation must remain an estimate subject to the professional judgment of the analyst. The task of the court, if a regulatory taking is claimed, is to decide if the forced change in use options is fair in a legal sense and how much of any measured value difference should be compensated. The task of the Legislature is to decide if the net effect of the regulation is positive and if the (inevitably disparate) distribution of costs and benefits among property owners and other citizens is fair in a political sense.

Wetland regulations in Minnesota do result in reduced values for some property owners – as do all land use regulations. Demonstrating that values went down on regulated properties has policy import only if: (1) the examples are so egregious that the Legislature decides to change the enabling legislation to adjust the distribution of the law's benefits and costs; or (2) the sum of measured property losses exceeds any estimate of total benefits, in which case the Legislature might decide to change the law as not in the broader public interest.

Should further property value analyses be conducted? Only if the Legislature is very clear about why it wants to do the study. If the concern is one of fairness, then the distribution of a regulation's costs should be examined by using parcel-by-parcel appraisals or by a careful calculation of the economic benefits and costs among different classes of people, classes of property, or regions of the state. If, on the other hand, the concern is that the aggregate costs of the regulation may exceed its total benefits, then broader economic valuation studies are called for, recalling that the valuation techniques discussed above capture only those economic values that are themselves reflected in the property market. We are not prepared to recommend either approach at this time, because we are not in a position to define for the Legislature what the problem really is.

Further Reading

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Appendix: Case studies

Methodology

These eight cases illustrate situations in which wetland regulation is said to have affected development decisions in the Twin Cities area (cases A through E) or northern Minnesota (cases F through H). In the first three, regulation does not seem to have been a major impediment, but it did lead to project modification. In the other five cases, any financial effects of regulation are not fully apparent at this time, but they are present. A building permit was denied in case H because there is a wetland within the proposed project area. The other cases have not been resolved: in case D, an application for replacement plan under the WCA has been filed but not yet ruled on; in cases E and F, the wetland has been delineated but no project approvals have been sought; and in case G, the development is still at the proposal stage.

Our cases were selected on the basis of three criteria: (1) They should illustrate wetland regulation issues that appear with some frequency both within the Twin Cities and in northern Minnesota. (2) They should be cases in which public interest was or is significant; the developer or landowner and the regulating body differed as to how the property ought to be used; or the application of wetland regulations could result in significant project modification. (3) They should illustrate the elements of "property value" discussed in the text.

We identified candidate cases by talking to people who are knowledgeable about recent and current Minnesota wetland regulation activity. These included representatives of BWSR, the DNR, local governments, and the COE; public and private sector attorneys; and property owners who were identified as active in wetland regulation issues. We prepared these case summaries through examination of project files and county property records, site visits, and personal interviews. The summaries that follow are abstracted from more detailed field notes.

The summaries necessarily omit some factual material and purposely do not identify either the exact project location or the parties involved. Seven of the eight cases are still subject to legal proceedings, and a number of parties were reluctant to enter into lengthy discussions. Further, our limited time and resources restricted our ability to conduct the rigorous fact-finding needed to draw firmer conclusions. Finally, facts that may be highly relevant, such as the subjective knowledge and expectations of a landowner at the time of acquisition, can be reliably determined only through more formal methods not appropriate to the scope of the present study.

These constraints did not keep us from what we set out to accomplish. In fact, we concluded that it would be counterproductive to gather a wealth of detail about each case. We didn’t set out to identify or highlight what might be claimed to be egregious cases of injury to landowners' or developers' rights, nor did we intend to set forth our views about how specific cases ought to come out. Rather, the case studies are to serve two purposes: (1) to explore the ways in which land development and wetland protection typically intersect in Minnesota; and (2) to illustrate the concepts discussed in the text.

In the main body of this report, we define "value" as the observed or estimated price on which a buyer and seller agree. The price is based on the reasonable expectations each holds as to the flow of monetized services (income) that the property provides over time. We discuss in the text the various physical, economic, and legal circumstances that influence the formation of these expectations. We are especially interested in changes in expectations between the time the owner originally bought the land and the time the owner decides to develop it. In particular, we were interested in gauging the portion of that change that can be attributed to a specific wetland regulation.

We discuss in the text several broader premises that we take to frame landowners' expectations: that laws will change over time, but not precipitously or capriciously; that gains and losses due to changing laws will be distributed evenly across the population; and that at least some types of benefits conferred on landowners by governmental action may be weighed against losses caused by regulation. These premises are illustrated in the cases that follow.

Accompanying the summary in each case we speculate how a given element might be raised either by someone arguing that implementation of wetland protection regulations had reduced property values, or by someone arguing that it had not.

A: City of Chaska

Summary

A 42-acre flat to gently rolling site is to be developed as a residential subdivision. The site, within the city limits, was previously cultivated. It is densely wooded along one edge, and contains about five acres of hardwood stands (a portion on steep slopes), two acres of Types 1 and 2 wetlands and a three-acre marshy pond. Thirty-one acres are to be platted, and 11 acres reserved as common area.

In accordance with a comprehensive plan in place since the 1960's, the area surrounding the site has been developed over time with single-family homes. Roads and utilities exist at the project site. The site was zoned for townhomes at a density of 3.56 units/acre. An similar area to the north had been zoned for condominiums, but in 1987 that parcel was rezoned to single-family use. The initial owner of the present project initially proposed 54 conventional single-family lots at 0.59 acres/unit (1.7 units/acre); after further discussions, the City approved 68 single-family lots at 0.45 acres/unit (2.2 units/acre).

The initial proposal was to fill two acres of “jurisdictional” (Type 1 or 2) wetlands. The proposal went before the Planning Commission for preliminary plat approval with a staff recommendation to deny based on the request to disturb WCA protected wetlands without sufficient justification. The staff report also cited a failure to justify the request for rezoning, proposed use of site wetlands to receive untreated subdivision stormwater runoff, and incompatibility with a city ordinance that prohibits building on wooded slopes of more than 18 degrees. The plat, as finally approved, limits wetland alteration to 288 square feet, which is below the WCA action level. The reserved common area contains and protects the pond and the steep wooded slope.

After preliminary plat approval in early 1996 the present developer bought the site for $1,100,000. Current plans are to offer homes priced between $165,000 and $225,000, the same range as in the original proposal.

Several restrictions other than those imposed by implementation of the WCA also influence use of the site. The land was originally owned by a homeowners' association, which placed restrictions on the property that continue with the new owner. Use of the land is restricted by covenants of several types, including provision of bus shelters and mail stations, maintenance of trail and footpath corridors, and submission of all house designs for approval by the association's architectural review committee. Homebuyers become association members, receiving certain services (e.g., mowing, snowplowing) in exchange for association fees.

As well, the City's subdivision approval required the developer to agree to undertake street, water main, and sewer improvements, as well as to build a walking trail and to dedicate a portion of the subdivision as public land. The developer also is obliged, under a scenic easement, to maintain an existing treeline for the benefit of an adjacent neighborhood and to obtain a Minnesota Pollution Control Agency permit for sediment control during construction, as well as county permits for road access. Finally, a proposed highway construction project will take 2.45 acres on the edge of the site, for which the developer will be compensated. In anticipation of the project, the developer has provided for deeper lots adjacent to the right-of-way and additional trees and landscaping for sound and sight insulation.

Analysis

It is not clear that wetland regulation has had a negative effect on property value in this instance. Indeed, the various regulatory processes have resulted in an increase in the number of lots, which the developer intends to develop and offer for sale within the same price range as originally planned. But it could happen that the project's gross income has been offset by increased administrative costs of regulation or that houses on the smaller lots will not sell at as high a price as those originally planned for larger lots.

If so, the developer might argue that, having been zoned for residential development by the city, the land should not be subject to additional development constraints. The developer might also argue that the Type 1 and 2 wetlands are mere isolated wet areas that serve no public purposes and would provide greater social value if filled.

The LGU might respond that use of the property is subject to a variety of restrictions, including zoning and steep slopes ordinances, dedication requirements, a private scenic easement, and covenants to the property owners association. WCA restrictions are no different, the LGU might claim, from these types of constraints. The developer would have been aware of the possibility of these restrictions when forming expectations, before purchase, about the income flow from the property.

B: City of Coon Rapids

Summary

The landowners wish to develop 3.44 acres for a gas station, convenience store, restaurant, car wash and associated parking. The parcel is a portion of a total landholding of about 100 acres that the landowners bought in the 1950's and have farmed since. It lies about 15 feet below grade at the corner of a state highway and a primary arterial road, and is separated by a creek from the rest of the property. In the site's immediate vicinity, development is scattered and primarily residential. There is an active sod farm nearby, and a federal highway interchange with substantial associated residential and retail development lies about a third of a mile from the site. A zoning amendment would be needed for the project to go forward.

Two Type 2 jurisdictional wetlands, seasonally flooded sedge meadows, exist on the site; one essentially coincides with the outer edge of the creek's 100-year floodplain. The original proposal was to fill both wetlands, one for access from the arterial road and the other for a car wash and parking area. The LGU has indicated that it would probably permit the former alteration, with replacement, but not the latter because it would have reduced floodplain capacity. The landowners have since modified the proposal to avoid wetland disturbance in the floodplain.

As of 1996, the appraised value is $119,000, more than half of that for an existing house that would be removed. The parcel is preferentially taxed for agriculture on a value of $86,700. The original purchase price is not known.

Analysis

The effect of WCA negotiations has been a modification of the site layout and, possibly, a reduction in project size. Increased project costs, including replacement under the original proposal and reduced income from a smaller or less efficient facility could be considered as property devaluation.

The owners might argue that when they bought the land in the 1950's, the WCA did not exist and indeed wetland draining was considered socially valuable. Thus they could not have anticipated wetland protection constraints, and their expectations formed at the time of purchase have been frustrated. They could argue further that the wetland disturbance would be minimal, and that greater social value would result from allowing the land to be built on.

The LGU might argue that although the owners could not fairly have anticipated the WCA, they should have been aware when they bought the property that laws do change over time; hence, they could not fairly have assumed that no land use constraints might be imposed in the intervening years. As well, the LGU might point to the fact that the market for the owners' proposed use has developed only within the past several years, and that their initial expectations surely were based on an income stream from only agricultural use.

C: City of Andover

Summary

In December 1994, the developer acquired an option to buy about 10 contiguous parcels totaling 261 acres for residential development. The site is gently rolling and partially forested, with eight jurisdictional wetlands that constitute 25 percent of the site acreage. A portion of the site previously was mined for gravel; the developer plans to reclaim it. The purchase price for the parcels is $3,550,000; in 1996, the parcels were assessed at $1,529,900, with $361,200 of that for improvements that would be razed according to the developer's plans. The developer's initial plat proposed 356 single-family homes and 64 townhouses.

Residential development in the vicinity has been fairly steady over the past 15 years. A MUSA line extension to bring the site within the urban service area was approved on the City's petition in Spring 1996. Utilities exist at site boundaries. To accommodate the proposed density of development, the site must be rezoned from single-family rural to single-family urban. Subdivisions zoned to single-family urban exist to the northeast and a half-mile to the west of the subdivision. Zoning of adjacent land in a neighboring city is a mix of conservation-agriculture, planned unit development, rural residential, single-family residential and commercial development. A regional park is located just south of the project site.

Under the developer's proposal, 0.42 acres of sedge and tamarack meadows (Types 2 and 6) would be filled for a road crossing and a building lot, with two-to-one replacement. A Type 2 meadow within the floodplain of an adjacent creek would have been bermed for stormwater retention, and so converted to a Type 3 wetland (open water). Construction of a holding pond in an upland portion of the property would consume four to six building lots. The LGU is concerned that use of the wetland for stormwater management might increase flows across the adjacent privately held parcel.

In the course of LGU project review, the amount of fill in the two wet meadows has been reduced. The LGU has not approved fill for the road crossing, as the need for the crossing depends on future development that remains hypothetical. The developer has since split the project into two phases, postponing the stormwater management issue to the second phase. The LGU has approved phase one, comprising 175 single-family homes.

Analysis

WCA regulation here may prevent construction of four to six lots and potentially greater development costs to construct stormwater retention in upland areas. These reduce the return from that on which the developer may have counted when it bought the land, if it did not consider potential WCA constraints.

To support a claim of property devaluation, the developer might argue that the area is one that has seen substantial residential development and that even if the MUSA did not encompass the site when purchased, it was likely to be extended (as indeed it was). Given the degree of development, the developer might argue, the public value of protecting small

amounts of wetlands is minimal; the developer had no reason to expect that WCA constraints would be applied either to protect marginal wetland or to simply prevent existing wetland from being used for stormwater control.

The LGU might counter that WCA was in place when the property was purchased, and that the constraints that it imposes in this case are within the realm that a developer fairly might anticipate. Besides, the developer could have conferred with the LGU before investing to determine more precisely how the WCA might be applied at the site. Claims of limited wetland value would be countered by pointing to the broad protective mandate in the statute and the administrative infeasibility of site-specific determinations of wetland value.

D: City of Coon Rapids

Summary

The proposed project is a 261,000-square-foot retail center on 32.4 acres at the intersection of a state and a federal highway. Residential and retail development is substantial across the federal highway, on its western side, but as yet is absent from the eastern side. In the city's comprehensive plan, the site is part of a large commercial node surrounding the interchange, and is zoned as Community Commercial.

The project would be within a 131.6-acre currently undeveloped site that constitutes the largest remaining open space in the city. Terrain varies measurably from high areas in the northwestern, western and eastern edges of the site down toward a large creek that flows across the center/north center. About 17 acres lie within the creek floodplain. Although wetlands have not been formally delineated as yet, the site is estimated to be 50 to 75 percent Types 1 and 2 wetland, with areas of peat.

In October 1994, the developer and a project partner jointly acquired about 100 acres of the total site area. The City owns or is trustee for 28 acres (primarily right of way for the planned extension of a primary arterial road across the land), and other record holders own the several remaining acres. In 1996, the parcels together were assessed at $543,000. The purchase prices of the parcels are not known.

The developer proposes to fill a total of 11.8 acres of wetland for the retail complex and to facilitate the county's planned extension of an arterial road across the land. In exchange for project approval, the developer would create about 27 acres of replacement wetland on the site, would dedicate public access to 57 acres of on-site wetland as an ecological and learning resource, and would contribute some measure of resources toward the road extension. It asserts that coordinating its project with the road project would allow wetland disturbance to be minimized.

The developer suggests that some portion of the wetland is artificial and incidental. Tracing back to 1902, it reports a variety of wetland disturbances over the years from creek dredging and channeling, ditch activity, road construction, and cultivation. To these it attributes both the draining of natural wetland and reduced diversity in the remaining wetland. Further, it suggests that existing wetland in the northwest corner of the site is

maintained by highway stormwater runoff. In the southern portion of the site, a 4.38-acre area is replacement wetland for an earlier retail development, but the wetland appears not to be entirely established, and its status both as a wetland and as a site for potential mitigation in this project is uncertain.

An application for wetland replacement plan approval under the WCA has been filed. It states that existing upland would support a retail center of only 163,000 square feet which, according to the developer, is below the "critical mass" for economic viability. Corps of Engineers approval under FWPCA Section 404 would also be needed.

Analysis

Here, the developer has suggested that use constraints under the WCA would make the site unsuitable for commercial development and so precludes uses which were intended when the property was purchased. Even if its replacement plan were to be approved, it properly could argue that 2:1 replacement, the dedication of a public easement, and its partial financing of the county road extension all severely reduce the expected income stream from the project.

The developer could argue that it reasonably believed that some portion of the wetland is artificial and that the wetland as a whole has been degraded through the years. The WCA would not apply at all. The developer could also point to the city plan to develop the highway interchange node intensively, as evidence that devoting the land to commerce would be recognized by the city, and the public generally, as of greater public benefit than preservation. The LGU might counter that WCA was in place at the time of the investment and that the land clearly has some drainage problems, so the owners should have known that their site might be subject to the regulation.

E: City of Blaine

Summary

This case concerns a 137-acre parcel containing, according to the LGU, 80 acres of primarily Type 2 wetland. A shooting range has operated on the site since 1967. The current owner bought the property in 1985 at a price of about $3,000/acre. The property was then, and remains, zoned as light industrial.

The owner bought the land with the intent of commercial/industrial development on 75 to 95 acres not needed for shooting range operations. At that time, construction of a race track also was being considered, but this never materialized. Several years later, the Corps of Engineers identified large areas of wetland as part of its section 404 permitting process. These areas came under WCA jurisdiction as well when that law took effect in 1991. In consequence, the owner successfully petitioned for the parcel to be removed from within the MUSA line and for the zoning to be changed to Farm Residential.

The landowner believes that absent federal and state wetland regulation, the entire 137 acres would sell for $6 to $8 million for light industrial use. With the regulations in place, the owner was offered $1.5 million. In 1996 the property was assessed at a combined

market value of $601,400, of which $405,800 is land and $196,400 is the buildings and other improvements used by the gun club. Under the Farm Residential zoning designation, the land was revalued for property tax purposes from $405,000 to $235,000.

The landowner indicates that he inspected the land before purchase and was aware that it was wet, especially in the spring. However, he attributed the high groundwater to the disrepair into which a county ditch system, constructed in 1917, had fallen. Removal of several beaver dams did not measurably lower the water table. Thus, in 1989, having concluded that the poor drainage was due to a downstream culvert improperly placed during a 1959 road project, he petitioned the LGU to order Anoka County to lower the culvert by three feet. Further ditch repair would be needed on the owner's own land.

The LGU ruled that the culvert was indeed too high, but only by 0.8 feet. Its engineer contended that because the site’s soils are so poorly drained, any lowering of the culvert by that amount would not substantially change the hydrology of the project area. If so, then the area would remain under WCA and COE jurisdiction. A downstream community, fearing increased sedimentation and pollutant loadings, resists even this lowering of the culvert and has appealed the LGU decision.

Analysis

The difference between a $6 to $8 million market value for industrial use and the $1.5 million that the owner was offered would be the basis for the landowner's claim of property devaluation. He would support his claim by pointing to his diligence before buying the property in investigating the land's condition, and the reasonable development expectations he formed on the basis of that investigation. The basis for these reasonable expectations would include both the conclusion that the wetness of the land was due to beaver dams and general ditch disrepair and the fact that WCA had not yet been enacted. He might argue as well that the wetland, or some substantial portion of it, is not ecologically productive or socially valuable; therefore, even if it were reasonable to think that some sort of land use constraints might be enacted before development, it was not reasonable to expect they would apply to these particular wetlands.

The LGU might respond in several ways. First, it might press the claim that the property's condition is due not to ditch disrepair, but to the natural poor-draining characteristics of the soil, so that either the land is not buildable or the cost of site preparation is prohibitive. Second, it would argue that WCA imposes no constraint that did not already exist when the owner purchased the property. The COE section 404 program was in place in 1985. Third, the LGU might ask whether the $1.5 million that the owner had been offered wasn't in fact significantly greater than the $400,000 paid for the land. A landowner, the LGU could claim, is not entitled to the highest return that a property conceivably could provide, but only a reasonable return. Finally, it might examine further the degree of speculation in the 1985 purchase. To the extent the owner's decision as to the price he would pay was premised on a the prospect of road or racetrack construction, the expectations reflected in that decision, it might be argued, would be considered inherently less strong.

F: City of Blackduck

Summary

The current owner's father purchased 160 acres within the city limits in 1969 for about $12,000, intending to develop it. About 25 of the 160 acres has been sold and developed for both residential and commercial uses. The remaining 135 acres comprises one parcel subdivided into 27 residential lots and three undivided parcels.

The subject of wetland regulation is a five acre portion of a 12.27-acre undivided parcel. The five-acre site is bounded by development on three sides and by city streets on two. The fourth side abuts an intermittent stream, toward which the property gently slopes. Municipal services are available. About 70 percent (3.5 acres) of the lot is Type 2 wetland; it is believed that about four of the five acres is buildable. The stream channel has been modified and the site, as of the summer, had been cleared of all vegetation.

In August 1995, the owner entered into a contract to sell the five-acre parcel for $19,000. The buyer planned to construct an apartment building and adjacent garage, with the garage situated on less than an acre of the designated wetland. Early in 1996 the buyer backed out of the contract, ostensibly after coming to understand the constraints imposed by wetland regulation. Although the proposed disturbance of the wetland apparently would not fall within WCA jurisdiction, the Corps of Engineers has jurisdiction and might require avoidance or mitigation. The owner indicates that several other parties have looked at the parcel, but none has made an offer because of the wetland restrictions. A problem may be not simply the fact of regulation itself, but confusion among potential purchasers regarding the different regulating agencies and sets of regulations.

The 12.27-acre parcel has an assessed market value of $2,000, with 1996 property taxes of $54. Commercial land with municipal services available is worth about $10,000 to $12,000 per acre in the area. Thirty percent of the site (1.5 acres) remains developable. The owner believes the only use of the 3.5 acres of jurisdictional wetland, as constrained, is as agricultural land, worth $250 to $300 per acre. At about $0.10/square foot, purchase of Type 2 wetland from a mitigation bank would cost $4,300/acre.

Analysis

The landowner might claim that because wetland regulation reduces the property's potential sale price from $48,300 ($12,000 per acre for four acres; $300 for the unbuildable acre) to $19,050 (1.5 acres at $12,000 per acre; 3.5 acres at $300 per acre), the owner has suffered a loss of $29,250. Alternatively, if off-site mitigation were permitted, the loss would be $10,750 (2.5 acres purchased from a mitigation bank at $4,300 per acre). This amount would be reduced by the amount of property taxes saved as the result of the lowered assessed value of the parcel.

The owner might also point out that his father's expectations when he acquired the land in 1969 were to develop it, and that these expectations were reasonable, given the absence of wetland regulation at that time. He would argue as well that municipal development over

time has defined development as the best social use of the parcel, particularly given what might be asserted to be the limited ecological value of the wetland.

The chief response to the landowner's claims would look to both the many years that have elapsed since purchase and the gain that the landowner (either father or son) has accrued over that period. The LGU could further argue that buyers are fairly expected to recognize that laws change over time, that no rights are certain forever. It is not reasonable to expect that land acquired now will be able to be developed in 27 years in accordance with regulations now in place. One could point to zoning law, which does not recognize a right to build under the terms of existing law until approvals have been gained and actual significant expenditures made. In addition, 25 acres were sold for development. Presumably the remaining 130 acres have market value as well. If the owner gains a return on the property at least equal to the opportunity cost, goes this line of reasoning, no loss in value has been suffered. This argument is consistent with the principle that an owner has the right only to a reasonable return, not to the highest return that the land might have provided.

G: Roseau County

Summary

This wooded parcel of about 160 acres lies east of Warroad along the shores of Lake of the Woods. The owners bought the land for $3,000 in the 1960's, when it came out of an expiring soil bank program. It was bought for speculation and has been used primarily for recreation. In 1992, they surveyed 40 acres for residential development, intending to create 29 lots, each slightly larger than one acre, for mobile homes. The parcel is bounded on two sides by township roads. Telephone, electric, and cable TV service are available, but water and sewer are not.

The owners put their development plan on hold pending promulgation of wetland rules under the 1996 farm bill, and now await LGU wetland delineation. A significant portion of the site appears to be Type 2 and 6 wetlands with interspersed upland. Many of the 29 lots lie within 1000 feet of the lake, so they are subject as well to Minnesota shoreland zoning regulations.

Since 1992, the owners have invested about $7,000 in surveying, preparation of legal documents, and other development costs. One lot has been sold. The anticipated sale price is $6,500 per lot, for a gross market value of $188,500. Profit is expected to be $4,800 to $5,200 per lot, or $140,000 to $150,000 total. If the site cannot be developed as proposed, it would be worth about $12,000 for recreational use, say the owners.

Analysis

This case raises two issues present in the cases already discussed. First, what expectations did the owners have when they acquired the land 30 years ago, and have those expectations been frustrated? The owners would point to the absence of wetland protection constraints at that time, and to the apparently marginal value of the wetland –

both suggesting that the intent to develop the property would have been reasonable. Those taking the contrary view would suggest the unreasonableness of presuming that land use laws generally would stay unchanged for 30 years. They might question as well the extent to which the owners could have foreseen the availability of roads and utilities and the other features that give the land its present potential value.

Second, and related, are the landowners entitled to the full profit they believed they would gain absent wetland regulation? That is, were their expectations at the time of purchase to put the property to a use bringing a $150,000 profit? Regardless of the view taken, the flow of recreational services the land has provided to date is a part of the return on investment the owners have enjoyed. Conversely, the owners' uncertainty about permissible use and delay in acting while awaiting regulatory action, impose opportunity costs (i.e., their investment could be producing return in some other use) that decrease return.

H: City of International Falls

Summary

This 35-acre property is in a residential area near a shopping mall and the Rainy River. The current owners purchased the property in 1967. They earlier donated about 10 acres to Concordia College and a local Lutheran church, and identified the remaining 25 acres as potentially suitable for residential development. Municipal services are available at the property boundary. Although a wetland delineation has not been done, the land appears to be a Type 2 wetland.

In 1995 the owners undertook development. The LGU determined that the property, or some portion thereof, contained wetlands and so denied a building permit. The county assessor valued the property at $1,500 to $2,000 an acre in 1992, but since has revalued it to $100 an acre on the basis of these wetland regulation constraints. Similar undeveloped lots sell in the area for $10,000 to $15,000. Developed land with sewer and water services is selling for $25,000 an acre.

Analysis

This case raises issues very similar to those noted in Case G. Development at the moment is denied on the basis of regulations that did not exist when the landowner acquired the property almost 30 years ago. Is it reasonable to hold the owner to an expectation that regulations governing development might change? Also, at the time of purchase, residential use of the land might not have been foreseen. Its present high value is based on infrastructure and growth that might not have been foreseen in 1967.

Wetland regulation may stand in the way of intense residential use, but use of some portion of the remaining land, including less intensive uses of regulated wetland, may provide a reasonable financial return.

The landowner might argue that in cases of lower-quality wetland, savings realized by the public – by not incurring the administrative costs of wetland valuation – are at the

landowner's expense. One might respond by suggesting that because it is administratively costly to make fine distinctions, imprecision is a typical feature of regulation. Rather than a cost imposed unfairly on a select few, then, it is one that over time imposes itself evenly across the population, in wetland regulation as well as other instances.