ABSTRACT
Depreciation deductions are the Internal Revenue Code’s method of allowing taxpayers to take deductions on long-term investments. Unlike normal deductions, depreciation requires the taxpayer to apportion the expense over the life of the asset. While most assets used for the production of income may be depreciated, the Internal Revenue Service and courts have never allowed land to be depreciated. The treatment of land as a non-depreciable asset is deeply rooted in the idea that it does not have a useful life—it lasts forever.

However, global temperature has risen rapidly over the past fifty years and is expected to grow even faster in the future. This causes ice caps to melt and oceans to expand, which leads to a rise in sea level. The rise in sea level means that many coastal property owners will see a decrease in their property size as the sea inundates the dry land. This is because the public trust doctrine converts navigable waters into public property. As such, coastal property is now a wasting asset because private lands are becoming public once they are underwater.

This note argues that in light of global warming, coastal property should be a depreciable asset. By looking at existing tax doctrine and drawing comparisons to other types of depreciable property, this note explains why coastal property should be depreciable and how this change could be implemented under existing tax policy. Finally, this note argues that even if coastal property is not depreciable, coastal property owners should, in the alternative, be allowed to take depletion deductions.

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INTRODUCTION

Imagine two small business owners, Beth and Charlotte. Beth buys a building for $1,000,000, and Charlotte spends the same on a piece of coastal land. Both Beth and Charlotte use their property for the production of income. Over the next thirty-nine years, Beth and Charlotte will receive wildly different tax treatments. Each year Beth will receive a depreciation deduction on her building and the basis in her building will be reduced. This means that before deciding taxable income, Beth will be allowed to deduct roughly $25,000 to recognize the loss in value of her property. However, Charlotte will not be allowed to take any depreciation deductions on her land, and its basis will remain at $1,000,000. After thirty-nine years, Beth will not have any basis in her property, and Charlotte will still have a $1,000,000 dollar basis. If each sells their property for its estimated worth—Beth sells her building for nothing and Charlotte sells her land for $1,000,000—neither will have any tax consequences. However, Beth has had the benefit of taking depreciation deductions over the past thirty-nine years.

This treatment of property has long made sense. Buildings used for the production of income are depreciable because they have a finite life, but land never wastes away. As such, Beth was able to realize the decrease in value of her property as it occurred. Charlotte never had deductions because her property value—all else equal—remained the same. This treatment has always been considered fair because land does not waste away.

Now, however, in light of global warming and the resulting rise in sea level, coastal property no longer has an infinite life. Over the next hundred years the sea level is expected to rise at an accelerated pace due to global warming. Over 20,000 km² of coastal land in the eastern

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2 Beth would likely sell it along with the land or for some nominal amount. For the purposes of this example, it easiest to say she sold it for nothing.
3 Treas. Reg. § 1.167(a)-2 (1960); Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 (3d Cir. 1943); Rev. Rul. 55-730, 1955-2 C.B. 53 (recognizing that farm land cannot be depreciated even if the loss of peat soils will make it completely useless for the production of income within fifty years because the land itself remains).
4 ENVTL. PROT. AGENCY ET AL., EPA-430-F-02-007, SAVING FLORIDA’S VANISHING SHORES (2002) [hereinafter VANISHING SHORES], available at http:
United States is at risk of becoming inundated by a rise in sea level over this period.\(^5\) Once in the water, the land is no longer the property of the original owner, but is usually available to the public under the public trust doctrine.\(^6\) Because of global warming and the public trust doctrine, coastal property now has a finite life.

This note argues that, in light of the rising sea level, coastal properties that are at risk of becoming completely inundated, which meet all other requirements for depreciation other than being land, should now be depreciable because they have a finite useful life. Part I of this note begins by discussing how the Internal Revenue Service (the “IRS”) calculates taxable income and why depreciation deductions exist. Next, it examines the different types of depreciable assets and discusses how depreciation is calculated. Part I also looks at the differences between traditional straight line depreciation and depreciation under the IRS’s current scheme, known as MACRS. Finally, it provides a brief history of land as a non-depreciable asset and discusses why land, by itself, has never been treated as depreciable.

In Part II, this note argues that there should be a different tax treatment for coastal properties in light of global warming. This Part begins with a summary of global warming and its potential impact on

\[^5\] James G. Titus & Charlie Richman, *Maps of Lands Vulnerable to Sea Level Rise: Modeled Elevations Along the U.S. Atlantic and Gulf Coasts*, 18 CLIM. RES. 205, 224 (2000). This is unlike the farm that loses its peat soil but not the land. See *supra* note 3. The rise in sea level will cause coastal property to sink completely into the water.

sea level, including predictions on how much coastal property may become flooded. Then, using an original example, Part II discusses the public trust doctrine in relation to rising sea levels, and demonstrates how coastal property can waste away completely under the doctrine. As sea levels rise, a taxpayer’s privately owned coastal land will diminish at a steady rate until it is completely under water.\(^7\) Finally, Part II discusses how the unique features of coastal property should affect the method of depreciation and concludes that coastal land should be treated as a depreciable asset.

Part III addresses potential critiques against the idea of treating coastal land as a depreciable asset. First, this Part examines relevant law demonstrating that property has been allowed to depreciate even if the value of the property appreciates over a given period. Then, it draws a comparison to buildings, a depreciable asset, to show why any difficulty in determining the useful life of coastal property should not prevent it from being depreciable. Part III also explores the ways in which repair expenditures should affect the depreciation process. This is especially important because many owners of coastal property will build sea walls or undertake beach nourishment efforts to increase the life of their property. Finally, this Part will discuss and address the tax treatment that should be given to coastal landowners who have already lost property to rising sea levels.

Part IV discusses the implications of the suggested rule in terms of tax revenue. The IRS will see an immediate decrease in tax revenues as coastal land owners are allowed greater deductions. However, as Part IV points out, many property owners will not benefit from the suggested rule. Nevertheless, Part IV concludes that coastal property owners whose property value decreased due to rising sea levels should be allowed to take yearly deductions instead of forcing them to take the loss all at once when they attempt to sell the property.

As a possible alternative, Part V explores § 611 of the Internal Revenue Code (“IRC”) which provides a deduction for real property which has certain natural resources depleted on a regular basis.\(^8\) Sand is one of the natural resources in which taxpayers are allowed to receive a depletion deduction under § 611.\(^9\) Instead of arguing that coastal property should be depreciable, this Part explores the idea of allowing a deduction for beachfront property based on the depletion of

\(^7\) Id.
\(^8\) I.R.C. § 611(a) (2006).
\(^9\) Id. § 613(b)(6)(A) (2006).
the taxpayer’s ownership of the sand. This Part looks at the factors involved in a § 611 analysis and where a taxpayer may have the most trouble arguing for this type of deduction.

Part VI explains how taxpayers might seek a change in the current policy. It provides a quick explanation of the roles of Congress, the courts, and the IRS in the tax system, and concludes that courts likely are the best venue for seeking to reclassify coastal property as a depreciable asset.

I. THE ROLE OF DEPRECIATION DEDUCTIONS IN THE U.S. TAX SYSTEM AND WHY THEY HAVE NEVER APPLIED TO LAND

This note argues that coastal land should be depreciable in light of global warming. To understand why, this section sets out to explain depreciation deductions under the current tax system. Then, it explains the different methods of depreciation before concluding with an explanation of land and its historic treatment as a non-depreciable asset.

A. The Basics of Taxable Income

Generally, the IRS determines taxable income by subtracting certain deductions from gross income. The Supreme Court has ruled that gross income is an “accessions [of] wealth, clearly realized, and over which the taxpayers have complete dominion.” The clear realization requirement means that property that increases in value, if not sold or transferred, does not count as gross income.

Deductions allow a taxpayer to reduce taxable income by deducting from his gross income the amounts of certain expenses. Business expenses, for example, are deductible in the year of

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10 Id. § 63 (2006 & Supp. III 2009). This definition does not apply to individuals who elect not to itemize deductions. Id. § 63(b)(1) (2006). Income may be in the form of cash, services, or property. Treas. Reg. § 1.61-1(a) (1960).

11 Comm’r v. Glenshaw Glass Co., 348 U.S. 426, 431 (1955). However, the many exclusions which exist in the IRC substantially limit the kinds of income that are required to be reported. I.R.C. § 61 (2006). An exclusion is simply any item of income which the IRC does not require to be included in gross income. BLACK’S LAW DICTIONARY 646 (9th ed. 2009). Some noteworthy exclusions include gifts, inheritances, compensation or non-punitive damages from a personal injury suit, and scholarships. I.R.C. §§ 102(a), 104(a), 117(a) (2006).


purchase.\textsuperscript{14} Expenses on property or improvement that have a useful life greater than one year are considered capital expenditures are also deductible.\textsuperscript{15} However, deductions for capital expenditures must be distributed over the useful life of the property.\textsuperscript{16} This process is known as depreciation. The policy to depreciate, in lieu of a one-time expense, is the government’s way of forcing the taxpayer to “distribute in a systematic and rational manner the cost of property over its useful life.”\textsuperscript{17} This note will focus on depreciation deductions and why they should be allowed for coastal property.

**B. Capital Expenditures and Depreciation Deductions**

Capital expenditures include costs to buy land, buildings, machinery, or other property that has a useful life of over one taxable year.\textsuperscript{18} However, depreciation is only allowed when the capital expenditures are for property which: (1) is used in a trade or business or held for the production of income; (2) is subject to exhaustion, wear and tear, decay, or obsolescence—or in other words, has a finite useful life;\textsuperscript{19} (3) has a reasonably ascertainable useful life;\textsuperscript{20} and (4) is owned by the taxpayer.\textsuperscript{21}

\begin{itemize}
  \item \textsuperscript{14} \textit{Id.} § 162(a) (2006).
  \item \textsuperscript{15} Treas. Reg. § 1.263(a)-1 (as amended in 1993).
  \item \textsuperscript{17} \textit{Joshua D. Rosenberg & Dominic L. Daher, The Law of Federal Income Taxation} § 4.18 (2008); see Alton A. Murakami, “Useful Life” Has Outlived Its Useful Life, 72 N.Y.U. L. REV. 1211, 1213 (1997) (quoting Henry J. Lischer, \textit{Depreciation Policy}, 32 SW. L.J. 545, 573 (1978)). If capital expenditures were immediately deductible then taxpayers would be forced to take significant losses in the year of purchase but would then have large gains throughout the life of the asset because—ignoring ongoing expenses due to maintenance or taxes—the asset does not cost anything in subsequent years. \textit{Id.} at 1214. Depreciation spreads these costs throughout the life of the asset to better match revenues with costs. \textit{Id.} at 1215.
  \item \textsuperscript{18} See Temp. Treas. Reg. § 1.263(a)-1T(c)(1)–(7) (as amended in 2011) (listing examples).
  \item \textsuperscript{19} Treas. Reg. § 1.167(a)-2 (1960). The useful life of an asset is the period over which it should produce income for the taxpayer. \textit{Id.} § 1.167(a)-1(b) (as amended in 1972).
  \item \textsuperscript{20} \textit{Id.}
  \item \textsuperscript{21} I.R.S. Pub. 946, 4 (2012), available at http://www.irs.gov/pub/irs-pdf/p946.pdf. This includes property subject to a debt. \textit{Id.} For the purposes of this note, it is assumed that each taxpayer owns the subject property.
\end{itemize}
Depreciation allows a taxpayer to allocate the cost of the capital expenditure over the period of its useful life. However, using depreciation deductions may adversely affect the seller. When deductions are taken, an asset’s basis must also be reduced by the amount depreciated. This reduction in basis may cause the taxpayer to realize an unexpected taxable gain when the property is sold. This will occur if depreciation deductions were taken at a faster rate than the actual reduction in the asset’s fair market value.

Historically, the method of depreciation did not matter as long as it was “reasonable and consistently applied” to the asset. A popular method of depreciation is the straight line method. Using the straight line method, the taxpayer must first determine the cost or basis of the asset and deduct the estimated salvage price. The remainder is then divided into equal portions over the life of the asset. These equal portions may then be deducted from gross revenue to calculate taxable income.

For an example of the straight line method, assume that Beth had purchased the building for $1,100,000, it has a salvage value of $100,000, and an estimated life of ten years. Using the straight line method, Beth would be able to take a depreciation deduction for each

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22 Id. at 3.
23 I.R.C. § 1016 (2006 & Supp. IV 2010). Basis is the “value assigned to a taxpayer’s investment in property [which is then used] for computing gain or loss from a transfer of the property.” BLACK’S LAW DICTIONARY 171 (9th ed. 2009).
24 This is not the result of taxpayer error. Rather, the IRS has tables that tell the taxpayer the appropriate rate of depreciation. E.g., I.R.S. Pub. 946, app. A (2012). However, an asset will rarely lose its value at the exact rate that the IRS has predicted.
25 See Treas. Reg. § 1.167(b)-0(a) (1960).
26 Id. § 1.167(b)-1 (1960).
27 Id. The salvage value of property is the estimated remaining sale value of the property when it is no longer useful for the taxpayer’s trade or business and is going to be retired. Id. § 1.167(a)-1(c) (as amended in 1972).
28 Id. § 1.167(b)-1 (1960).
30 The salvage value is estimated at the time of acquisition and should not be readjusted due to a change in the market. Treas. Reg. § 1.167(a)-1(c) (as amended in 1972). However, the salvage value may be readjusted if the original estimated useful life of the property is found to be incorrect. Id.
of the ten years she owns the building.\textsuperscript{31} The total amount depreciable would be the $1,000,000 difference between the purchase price and the salvage value. After taking a $100,000 deduction each year, at the end of the tenth year she could sell the building for its salvage value—$100,000. Her basis in the building would then be $100,000, so she has no realized gain or loss.\textsuperscript{32} The reduction in basis means she does not take a $1,000,000 loss in the year of sale; rather, she is able to spread the loss over the ten-year period by taking yearly deductions.\textsuperscript{33}

Today, most property\textsuperscript{34} is depreciated under the Modified Accelerated Cost Recovery System (MACRS).\textsuperscript{35} MACRS is divided into two systems of depreciation, the General Depreciation System (GDS) and the Alternative Depreciation System (ADS).\textsuperscript{36} Each system provides a different method for recovering depreciation.\textsuperscript{37} While GDS is the more common system, the government requires some types of property to be depreciated under ADS.\textsuperscript{38} This note will focus on GDS because it assumes the typical taxpayer prefers a quicker rate of depreciation\textsuperscript{39} and because real property is not generally required to be

\textsuperscript{31} This calculation assumes that she owns the building for the entire ten-year period.

\textsuperscript{32} She has no gain or loss because the basis was reduced by the amount of depreciation each year.

\textsuperscript{33} Beth does not need to hold onto the asset for its entire determined life. If she sold the building after five years for $600,000, then her basis at that time would be $600,000 because she took $100,000 depreciation deductions for each of five years.

\textsuperscript{34} There are restrictions on what type of property can be depreciated using MACRS, such as certain intangible property, certain property purchased by a corporation or a partnership which was acquired through a non-taxable transfer, and property which the taxpayer elects to deduct using a different method. I.R.S. Pub. 946, 8 (2012). With few exceptions, MACRS only applies to property placed in service after 1986. \textit{Id.}

\textsuperscript{35} \textit{Id.} at 35.

\textsuperscript{36} \textit{Id.} The primary differences between GDS and ADS are that property depreciated under ADS is considered to have a longer life span compared to its GDS counterpart and that property depreciated under ADS must use the straight line method whereas GDS allowed three different methods. \textit{Id.} at 41–43.

\textsuperscript{37} \textit{Id.} at 35.

\textsuperscript{38} \textit{Id.} at 35–36. The taxpayer may also elect to use ADS for many types of property. \textit{Id.} at 36.

\textsuperscript{39} A quicker rate of depreciation means the taxpayer can realize deductions sooner than would otherwise be available. Due to the time value of money—the idea that a dollar today is worth more than a dollar in the future—few taxpayers prefer to delay deductions. For a better understanding of the time value of
Depreciated under ADS. Under GDS, property is placed into one of nine separate property classes. Extensive lists tell the taxpayer which class the property should be placed in. MACRS does not recognize salvage values. Rather, each class is assigned a period of years over which the taxpayer must depreciate the entire value of the property. Depending on the type of property, the taxpayer may depreciate it using either the declining balance method or the straight line method. However, real property must be depreciated using the straight line method.

Under MACRS, depreciation begins when the property is placed in service for the production of income or for use in a trade or business. Property that is converted into a qualifying depreciable asset begins depreciating at the date of conversion, even though it may have been used for a substantial period before the conversion.

Returning to the example above, imagine instead that Beth depreciates the building using MACRS. Rather than depreciate the building with ADS because it creates a smaller depreciation deduction throughout the early life of the asset. While most companies prefer a higher depreciation deduction early on, a company may prefer to slow depreciation because its property has a higher book value and thus the overall value of the company will appear greater.

Under the declining balance method, the property is depreciated at an accelerated rate in the first years of use. This accelerated rate allows the taxpayer to take the majority of its depreciation deductions soon after purchasing the property. For examples of calculating depreciation using the declining balance method, see id. at 49–51.
building over a ten-year period, she must look at which MACRS class the building falls into. Nonresidential real property is considered to have a useful life of thirty-nine years under GDS. Instead of taking a depreciation deduction of $100,000 for ten years, Beth must now take a deduction of $28,205.13 for each of thirty-nine years.

C. The History of Land as a Non-Depreciable Asset

Since the passage of the Revenue Act of 1916, it is well settled that land is not a depreciable asset. On a number of occasions, taxpayers have attempted to take depreciation deductions on land. Yet various federal courts, the Tax Court, and the IRS—through revenue rulings—have always stood firm that land is a non-depreciable asset because it does not have a finite useful life.

In 1931, the taxpayer in Hoboken Land & Improvement v. Commissioner attempted to depreciate property defined as “Piers and Waterfronts.” Within “Piers and Waterfronts” the taxpayer included depreciation for buildings, but also the land they were built upon. The Commissioner of the IRS disallowed the taxpayer’s deduction, and after the taxpayer challenged the assessment the lower court held for the Commissioner. The Third Circuit Court of Appeals upheld

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50 Pub. 946, at 40.
51 Id. (setting a thirty-nine year term for nonresidential real property); $1,100,000 / 39 years = $28,205.13. Technically, GDS uses a mid-month convention. Id. at 42. This means that the first and last year of depreciation will be measured to the exact month and then divided in half—so if the building is placed into service in January, then the taxpayer can depreciate it for 11.5 months of that year. For real property, all but the first and last year are depreciated evenly. Id.
52 Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 (3d Cir. 1943) (“Land as such is a non-depreciable asset and has so been treated ever since the Revenue Act of 1916.”) (citation omitted); Treas. Reg. § 1.167(a)-2 (1960) (“The depreciation allowance in the case of tangible property applies only to that part of the property which is subject to wear and tear, to decay or decline from natural causes, to exhaustion, and to obsolescence.”).
54 Hoboken Land & Improvement Co., 138 F.2d at 106.
55 Id.
56 Id.
the lower court’s ruling.\textsuperscript{57} Citing treasury regulations, the court held that land is a non-depreciable asset for the purpose of calculating taxable income because depreciation is an adjustment for the “exhaustion, wear and tear, obsolesce, amortization, and depletion” of property.\textsuperscript{58} As far as the court was concerned, the land itself did not fall into any of these categories.\textsuperscript{59}

In 1955, a taxpayer asked the IRS whether he could depreciate the price of his farm.\textsuperscript{60} The taxpayer’s farm was in Florida where subsidence\textsuperscript{61} is a major problem.\textsuperscript{62} After a certain amount of subsidence the soil was expected to become useless for farming, or, at least, incredibly difficult to maintain.\textsuperscript{63} The IRS even recognized that the land would likely be abandoned within fifty years due to its inadequate peat soils.\textsuperscript{64} Nevertheless, the IRS ruled not to allow depreciation because the land itself would remain after the fifty years.\textsuperscript{65} Therefore, land which will have lost all of its useful purposes, was still not a depreciable asset because land does not waste away.

While never allowing depreciation of the land itself, the Tax Court has allowed landfill operators to depreciate the part of their land used to store garbage.\textsuperscript{66} In \textit{Sexton v. Commissioner}, the taxpayers had purchased an excavated clay pit from a brick company to use as a landfill.\textsuperscript{67} The IRS contended that the pit was not depreciable because it was land.\textsuperscript{68} The taxpayers argued that their purchase was not only

\begin{itemize}
\item \textsuperscript{57} Id.
\item \textsuperscript{58} Id. at 106–07.
\item \textsuperscript{59} Id.
\item \textsuperscript{60} Rev. Rul. 55-730, 1955-2 C.B. 53.
\item \textsuperscript{63} Id.; see also U.S. GEOLOGICAL SURVEY, supra note 61, at 3 (“In the Everglades agricultur[e] . . . as currently practiced has a finite life expectancy because of the ongoing subsidence”).
\item \textsuperscript{64} Rev. Rul. 55-730, 1955-2 C.B. 53.
\item \textsuperscript{65} Id.; see also A. Duda & Sons, Inc. v. U.S., 560 F.2d 669 (5th Cir. 1977) (holding that a different Florida farmer could not depreciate his exhaustion of peat soil).
\item \textsuperscript{66} Sexton v. Comm’r, 42 T.C. 1094 (1964).
\item \textsuperscript{67} Id. at 1096.
\item \textsuperscript{68} Id. at 1100 (“The respondent argues that the only asset purchased by the petitioner was land and that the cost of land cannot be depreciated, depleted, or
land but also the pit and that they should be able to depreciate the loss of the storage capacity of the pit as it became full with garbage. The Tax Court allowed the deductions, holding that the taxpayer purchased the land for the hole, which would become exhausted after a calculable period. While Sexton involved a manmade pit, Sanders v. Commissioner involved a natural pit. Following the ruling in Sexton, the Tax Court held that the manner in which the hole was formed was not important. Rather, the important factor was that the hole would no longer exist, and thus the entire value of the hole to the taxpayer’s business would exhaust. While Sexton and Sanders stand for the proposition that a certain feature of land used for the production of income may be depreciable, they do not recognize that the land itself is depreciable.

II. ANALYSIS

As discussed in Part I, land is not considered a depreciable asset. Section 167 of the IRC requires an asset to be subject to exhaust, wear and tear, and obsolesce for it to be depreciable. Traditionally, land is not subject to depreciation because it has no determinable useful life. Land, it is expected, will last forever. However, in light of global warming and the rise in sea level, the general disallowance of depreciation on coastal land should be reconsidered.

charged off as amortization or business expense until the land is sold and the loss, if any, is sustained in a closed transaction.”).

69 Id.
70 Id. at 1104.
71 Sanders v. Comm’r, 75 T.C. 157, 164 (1980).
72 Id.
73 Id.
74 Treas. Reg. § 1.167(a)-2 (1960); Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 (3d Cir. 1943).
76 Rev. Rul. 2001-60, 2001-2 C.B. 587 (“The [depreciation] allowance does not apply to land apart from the improvements or physical development added to it.”).
77 See I.R.S. Pub. 946, 6 (2012).
A. Global Warming and Sea Level Rise

Global warming is the increase in average temperature near the earth’s surface.\textsuperscript{78} In modern times, industrialization and the increased burning of coal and oil have exacerbated the rate of global warming.\textsuperscript{79} While global warming has a number of adverse effects, for the purposes of this note, a rise in sea level is the most important.\textsuperscript{80} Global warming increases the sea level by melting glaciers and expanding ocean waters.\textsuperscript{81}

Because of global warming, sea level may increase anywhere from 0.33–1.00 meter in the next century.\textsuperscript{82} However, many estimates do not take into consideration the increased melting rate of Greenland’s

\textsuperscript{78} Erik Conway, \textit{What’s in a Name? Global Warming vs. Climate Change}, NASA (Dec. 9, 2008), http://www.nasa.gov/topics/earth/features/climate_by_any_other_name.html (“Global warming refers to surface temperature increases, while climate change includes global warming and everything else that increasing greenhouse gas amounts will affect.”). It is important to note that some people believe that global warming is a hoax or that it is unproven. \textit{See, e.g.}, Darryl Fears, \textit{Climate Change Fight Intensifies in Va.}, WASH. POST, Dec. 18, 2011, at A3 (discussing local plans to deal with rising sea levels caused by global warming, which critics called a hoax or an environmentalist “guise” to “put nature above man”); Michael Madigan, \textit{Life ‘Was’ a Beach Down Under}, WINNIPEG FREE PRESS, Oct. 30, 2009, at A14. However, most established agencies and governments do recognize global warming and sea level rise as a serious concern. \textit{See e.g.}, Massachusetts v. E.P.A., 549 U.S. 497, 521 (2007) (“The harms associated with climate change are serious and well recognized . . . [and they include] ‘the accelerated rate of rise of sea levels during the 20th century relative to the past few thousand years . . . .’”) (quoting NAT’L RES. COUNCIL, \textit{CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS} 16 (2001)); Christopher D. Johnsen, \textit{Fueling the Heated Debate Over Global Warming}, 38 STETSON L. REV. 163, 164–65 (2008) (recognizing global warming as a largely non-partisan concern); THOMAS JOSEPH HATTON ET AL., \textit{supra} note 4 at 879–880 (recognition of global warming by an independent committee of the Australian government). This note assumes that global warming exists.

\textsuperscript{79} \textit{VANISHING SHORES}, \textit{supra} note 4.

\textsuperscript{80} \textit{Id.}

\textsuperscript{81} \textit{Id.} The molecules in water expand when heated, so an overall increase in temperature will expand the world’s oceans even without glaciers melting. Michael A. Hiatt, Note, \textit{Come Hell or High Water: Reexamining the Takings Clause in a Climate Changed Future}, 18 DUKE ENVTL. L. & POL’Y F. 371, 374 (2008).

\textsuperscript{82} Titus & Richman, \textit{supra} note 5, at 205 (predicting a one meter rise could occur by 2100); \textit{VANISHING SHORES}, \textit{supra} note 4 (predicting a rise in sea level between one to three feet during the next century).
ice sheet, which contains enough water to raise the sea level by almost seven meters. As such, the increase in sea level may be far greater. This increase in sea level means that much of the world’s coastal land is at risk of becoming completely inundated. The effect of this inundation will be detrimental, and a one-meter rise in sea level will force an estimated one hundred million people in Asia alone out of their homes.

A rise in sea level also will have a severe impact in the United States. In 2000, James G. Titus and Charlie Richman published a paper predicting the effect of sea level rise on coastal lands. While it was impossible to draw future shorelines, the authors were able to predict some likely changes that global warming may have on certain coastal states. Most importantly, the authors predicted that over 20,000 km$^2$ of the United States is within one meter of sea level and at particularly high risk of flooding in the next century.

Florida, Louisiana, and North Carolina are most at risk for sea level rise. Florida has approximately 7500 km$^2$ of land below one meter of elevation and about 12,200 km$^2$ below 1.5 meters of elevation. Louisiana only has an estimated 4850 km$^2$ within one meter of sea level. However, if one accounts for a sea level rise of 1.5 meters, the state could lose as much as 24,700 km$^2$ of land. North Carolina has about 2000 km$^2$ of land below one meter of elevation, but over 5800 km$^2$ within 1.5 meters. Further, there are many small towns in North Carolina which are entirely below the 1.5-meter mark.

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84 Titus & Richman, supra note 5, at 206.
86 Titus & Richman, supra note 5, at 205.
87 Id. at 207.
88 Id. at 206.
89 Id. at 224.
90 Id. at 219.
91 Id.
92 Id.
93 Id.
and therefore are at risk of complete inundation within the next fifty to one hundred and fifty years.94

The report also noted that sea level changes have already created problems in the Chesapeake Bay area.95 In parts of Virginia and Maryland the rising sea level has turned some yards into marshy land and caused septic tank failures.96 These failures make the houses nearly impossible to sell and difficult to live in.97 As a result, there are instances of abandoned houses next to inhabited houses on slightly elevated lots.98

As the Titus and Richman study shows, a significant amount of coastal property, especially in the Southeastern United States is at risk of becoming completely inundated as a result of rising sea level. This land, which the IRS typically treats of as a non-wasting asset,99 will have literally wasted away into the sea because of global warming.

B. Why Coastal Land Should Now be a Depreciable Asset

It is now generally accepted that global warming is accelerating the rise in sea level.100 As a result, many coastal properties will be inundated within the next fifty to one hundred years.101 When these lands are covered in water and become unusable, it is hard to argue that they do not fit the IRC definition of depreciable asset—one that is subject to exhaustion, wear and tear, or obsolescence. This is especially true in light of the public trust doctrine.

The public trust doctrine provides that the state government owns the land underneath navigable waters, but holds it in trust for the public.102 The boundary typically begins at either the high or low water

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94 Id. at 224.
95 Id. at 225.
96 Id.
97 Id.
98 Id.
100 See VANISHING SHORES, supra note 4; Titus & Richman, supra note 5, at 205.
101 As much as 20,061 km² of land near the Atlantic Ocean and Gulf of Mexico may be flooded with water in the next century due to sea level rise. Titus & Richman, supra note 5, at 219.
102 SLADE ET AL., supra note 6, at 3. The public trust doctrine is an umbrella term for a number of state doctrines. See Shively v. Bowlby, 152 U.S. 1, 26 (1894) (“The foregoing summary of the laws of the original states shows that there is no universal and uniform [public trust doctrine], but that each state has dealt with the lands under the tide waters within its borders according to its own views of
mark and extends through the state’s navigable water. Thus, the public trust doctrine typically affects all property along rivers, lakes, and ocean shores.

As sea levels rise, the high and low water marks will also rise. Because of the public trust doctrine, coastal property that sinks below the rising waters will no longer belong to the original owner. The public trust doctrine will convert such land into public property.

For example, assume Charlotte’s property runs fifty meters along the coast and ten meters back. The property has a low elevation and spans from 0 to 0.33 meters above sea level. Using a moderate prediction that sea level will rise 0.66 meters during the next century,
and assuming that sea level will rise at an even rate, her property will be completely flooded within fifty years. Due to the public trust doctrine, she will lose all of 500 m² of her coastal property over a fifty-year period. Her property will have literally wasted away as it converts into a public trust.

To combat this problem, taxpayers should be allowed to depreciate land on coastal waters. Under the existing tax structure, such a rule would only apply to coastal property that is used in a trade or business or for the production of income. This includes resorts, rental homes, and countless other businesses, all of which could benefit from this rule.

To depreciate an asset, the taxpayer must prove that it has a useful life, that is, that the asset will exhaust or wear away. The taxpayer must also provide the IRS with the cost of the property. However, only a reasonable estimate of the duration of an asset’s life is required for determining whether it is depreciable.

Here, Charlotte could provide a reasonable estimate for the life of the property. Within fifty years—a reasonable estimate—the property will be completely useless. The land that was purchased for Charlotte’s business can no longer be used for the production of income because it has been converted under the public trust doctrine. As such, Charlotte should be able to depreciate the land at a rate of 1/50th of the value per year.

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106 Pohlen v. Comm’r, 165 F.2d 258, 259 (5th Cir. 1948) (“[I]n order to establish the right to depreciation, it is necessary to show that the property, whether tangible or intangible, will become exhausted within a definite period, which is known as its useful life, and which can be ascertained from specific terms, such as a contract, or can be determined from available facts.”).
107 This should be easy to prove since the sale of real property typically requires a contract in writing to satisfy the statute of frauds and this writing will usually mention the price paid. See Keith H. Hirokawa, Property as Capture and Care, 74 ALB. L. REV. 175, 185 (2010–2011).
108 Hawkins v. Comm’r, 713 F.2d 347, 353 (8th Cir. 1983) (“The useful life of an asset for depreciation purposes need not be shown with certainty, a reasonable approximation will suffice.”).
109 Once the sea level completely takes over a taxpayer’s property, new land, which was once landlocked, will become coastal property. This new shoreline will create substantial gains for the new coastal property owners and the IRS will be able to tax any gains from the sale of this property.
C. Apportioning to Create Increased Benefits for Land Owners

Some types of property are more valuable than others are. Coastal property is often purchased at a premium.\textsuperscript{110} Even if a specific piece of property will not end up completely covered by water over an ascertainable period, the taxpayer should be allowed to depreciate the portion of the land that will become unusable over this period.

Under IRS regulations, when a piece of property is sold from a larger plot the taxpayer must reduce its basis in the larger plot by an amount contributable to the sold piece.\textsuperscript{111} The basis applied to each part of a larger property should be equitably apportioned.\textsuperscript{112} Often, this means that the basis should be reduced by the percentage of the land sold.\textsuperscript{113} However, there are also times when the value of property should be equitably apportioned based on a different metric than area. The IRS has stated that if a taxpayer purchased a two-acre lot with two buildings of different value on each acre, and the taxpayer sells one of the acres, the basis should be apportioned according to the value of each acre, taking the worth of each building into consideration, and not simply relying on the size.\textsuperscript{114}

Different types of land have different values. Beachfront property is often some of the most valuable property.\textsuperscript{115} Whether it is the scarcity of the beachfront, the proximity to the ocean, or the sandy beaches, many consider beachfront property a desirable place to live and play.\textsuperscript{116} While some states have restricted the rights of private citizens to own the beach,\textsuperscript{117} most still allow an individual to own the beach and exclude others from trespassing.\textsuperscript{118}

\textsuperscript{110}See Thompson, \textit{supra} note 103, at 47, 71.
\textsuperscript{111}Treas. Reg. § 1.61-6(a) (1960) (“When a part of a larger property is sold, the cost or other basis of the entire property shall be equitably apportioned among the several parts, and the gain realized or loss sustained on the part of the entire property sold is the difference between the selling price and the cost or other basis allocated to such part.”).
\textsuperscript{112}Id.
\textsuperscript{113}Id. ex. 1. This would be the case when the land is generally homogeneous. If a homogeneous 100-acre farm had a basis of $100,000, and 25% of it was sold, the basis would be reduced to $75,000.
\textsuperscript{114}Id. ex. 2.
\textsuperscript{115}See Thompson, \textit{supra} note 103, at 47, 71.
\textsuperscript{116}See id. at 57–58, 68.
\textsuperscript{117}See Raleigh Ave. Beach Ass’n v. Atlantic Beach Club, 185 N.J. 40, 124 (2005) (holding that the public had a right to defendant’s dry sands, but relying largely
Most property owners who own beach property also own the fronting property, whether it is a cliff, hill, or grassland. However, in many instances the real value of the property comes from the beach; this is especially true when a resort buys property and markets itself as having a beach for tourism. Often this property is not entirely at sea level but may rise significantly. With no other concessions, this property would be incredibly difficult to depreciate because, on a whole, it does not have a reasonably ascertainable life. However, if the beach portion is entirely low-lying, it does have a reasonably ascertainable life. Using the government’s theory of equitable apportionment, the taxpayer should be allowed to divide her basis, allocating more value per square meter for the beach property than the rest. By allocating her basis this way, she should be allowed to depreciate the beach property, which has a reasonably ascertainable life, even if the rest of the property does not have an ascertainable useful life.

For example, imagine that Charlotte’s coastal property consists not of a flat parcel of land the entirety of which is 0.33 meters above sea level, but instead that her property consists of a low-lying beach, a cliff, and grassland at the top of the cliff where she builds a hotel. Over the next fifty years, her entire property will not be lost to the rising sea level. However, the sandy beach, which likely constitutes a large portion of the property value, may become completely inundated with rising water. By applying separate bases and recognizing that the beach will waste away over a certain period, Charlotte should be able to depreciate the beach portion of her property through equitable apportionment. If Charlotte purchased the lot for $1,000,000, but without the beach the lot would have sold for $400,000, then $600,000 is attributable to the beach. If this beach will waste away over the next

on the fact that the beach had a long history of general public access); City of Daytona Beach v. Tona-Rama, Inc. 294 So.2d 73, 78 (Fla. 1974) (holding that public access to some private beaches in Florida has become a local custom and should remain so); Steven W. Bender, Castles in the Sand: Balancing Public Custom and Private Ownership Interests on Oregon’s Beaches, 77 OR. L. REV. 913 (1998) (discussing Oregon’s extensive history of allowing public access to privately owned beaches).

118 Thompson, supra note103, at 47, 68.
119 See id. at 57–58, 68.
120 Because it may take global warming centuries to completely flood the property.
121 See Treas. Reg. § 1.61-6 (1960).
122 See id. ex. 2.
fifty years, then she should be able to depreciate her investment in the property as the value diminishes. As such, Charlotte should be able to depreciate $12,000 per year. At the end of fifty years, the beach property will have wasted away and the fair market value of the property will be reduced greatly.

D. Implementing a Depreciating Land Scheme

In light of global warming’s adverse effect on coastal property, the government should recognize that coastal land is now a wasting asset and allow taxpayers to take a depreciation deduction on qualifying property. Generally, real property must be depreciated using MACRS. The IRS should create a new GDS classification under MACRS for land. Currently, residential real property is depreciated over a period of 27.5 years. Non-residential real property is depreciated over a period of thirty-nine years. Recognizing the extended period in which real property depreciates, the IRS should categorize coastal land as a fifty-year depreciable asset. While this number may seem arbitrary, it reflects the idea that land wastes away at a very slow rate and that this rate is somewhat calculable, but that depreciation deductions are important when coastal property owners have an expensive wasting asset.

Clearly, not all land will waste away within fifty years. But by recognizing that some land does waste away, the IRS can allow coastal property owners to depreciate their property and recognize its gradual loss in value. If the IRS fails to recognize coastal land as a depreciable asset, many property owners will gradually lose all, or the

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123 $600,000 spread over fifty years.

124 This assumes that the market for land has not increased substantially over the fifty years. See infra Part III for a discussion of depreciating property which may appreciate in value over time.

125 The status of land as a non-depreciable asset can be changed by the IRS, the courts, or Congress. See infra Part VI, for an explanation of how coastal property can be recognized as a depreciable asset.

126 See I.R.S. Pub. 946, 8 (2012). Real property depreciation under MACRS applies to buildings, not land.

127 Id. at 40.

128 Id.

129 Real property has the longest depreciation period under MACRS. Id.

130 To ensure that this treatment is only given to property that actually has a reasonably ascertainable life the IRS could require a land survey determining the range of elevation of the taxpayer’s property.
vast majority, of their property value over the next fifty years without being able to deduct these losses in the years they occur.\footnote{The ability to deduct the cost of the property over its useful life is the whole purpose of depreciation. \textit{Rosenberg \& Daher}, supra note 17, \S 4.18.}

**III. ARGUMENTS AGAINST LAND AS A DEPRECIABLE ASSET**

If the government recognizes that land is a wasting asset, it must address four major issues. First, should the status of land as a depreciable asset be affected by an increase in the market value of land? Second, how important is a reasonably ascertainable life? Third, what effect should repairs have on depreciating land? Finally, which property owners should be allowed to start taking depreciation deductions?

**A. What if the Market Value of Land Appreciates Over Time to Create a Realized Gain?**

What if instead of depreciating her entire property over a fifty-year period, Charlotte chooses to sell it after ten years? After ten years of depreciation, her basis will have depreciated by 20\%.\footnote{This is because the property should be depreciated over fifty years and \( \frac{10}{50} = 20\% \).} However, what if in those ten years the cost of land rises considerably?\footnote{Between 2000 and 2005 the value of all residential real property in the United States increased 60\%. Karl. E. Case, \textit{Housing, Land, and the Economic Crisis}, \textit{Land Lines}, Jan. 2010, at 8, \textit{available at} https://www.lincolninst.edu/pubs/dl/1732dl/1732_952_LLA100103.pdf (last visited Nov. 29, 2012). Half of this increase reflects a rise in land prices over that period. \textit{Id}.} Now, after decreasing her basis each year, and with the price of land increasing, Charlotte has a gain on her sale. Should her land still be depreciable even if its market value appreciates?

In \textit{Fribourg Navigation Company v. Commissioner}, the taxpayer purchased a “Liberty ship” for $469,000.\footnote{\textit{Fribourg Nav. Co. v. Comm’r}, 383 U.S. 272, 274 (1966).} After requesting a private letter ruling, the IRS told the taxpayer to depreciate the ship using the straight line method over a three-year period.\footnote{\textit{Id.} at 274.} After almost two years of depreciation, there was a shortage of ships and the market value of the Liberty ship jumped to $695,000—a substantial difference from its depreciated value of just less than $200,000.\footnote{\textit{Id.} at 274–75.} The taxpayer sold the

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\footnotetext[131]{The ability to deduct the cost of the property over its useful life is the whole purpose of depreciation. \textit{Rosenberg \& Daher}, supra note 17, \S 4.18.}

\footnotetext[132]{This is because the property should be depreciated over fifty years and \( \frac{10}{50} = 20\% \).}


\footnotetext[135]{\textit{Id.} at 274.}

\footnotetext[136]{\textit{Id.} at 274–75.}
ship at the increased market value, and on its tax return the taxpayer reported the income from the sale and took a depreciation deduction for the period of the year it owned the ship.\textsuperscript{137} The Commissioner disallowed the depreciation deduction because the ship did not depreciate in value over the year, and the determination was sustained by the Tax Court and the Court of Appeals for the Second Circuit.\textsuperscript{138} The Supreme Court reversed, reasoning that depreciation is merely an estimate of how to allocate an expense over a period of time, and a market fluctuation should not change whether a certain asset can be depreciated.\textsuperscript{139} As such, the Court held that an asset that appreciates in fair market value can be depreciated over the same period.\textsuperscript{140}

In \textit{Simon v. Commissioner}, the taxpayers bought two violin bows, one for $30,000 and one for $21,500.\textsuperscript{141} The bows were made in the early nineteenth century and were used for the production of income, as the taxpayers were members of New York Philharmonic Orchestra.\textsuperscript{142} The taxpayers began taking depreciation deductions on their bows because bows wear out over time.\textsuperscript{143} The Commissioner disallowed the deductions, arguing that property is depreciable when it is subject to wear and tear and has a determinable life, but that the bows’ appreciation in value as antiques made depreciation inappropriate.\textsuperscript{144} The Second Circuit held for the taxpayers saying that property must only suffer exhaustion, wear and tear, or obsolesce in the business of the taxpayers.\textsuperscript{145} Because the bows were losing their tonal quality and thus becoming exhausted for the purpose of making

\begin{itemize}
\item \textsuperscript{137} \textit{Id.} at 275.
\item \textsuperscript{138} \textit{Id.} at 275–76.
\item \textsuperscript{139} \textit{Id.} at 277.
\item \textsuperscript{140} \textit{Id.} at 277.
\item \textsuperscript{141} \textit{Simon v. Comm’r}, 68 F.3d 41, 43 (2d Cir. 1995).
\item \textsuperscript{142} \textit{Id.}
\item \textsuperscript{143} \textit{Id.} (“The Tax Court found that ‘[o]ld violins played with old bows produce exceptional sounds that are superior to sounds produced by newer violins played with newer bows.’ The Tax Court also found that violin bows suffer wear and tear when used regularly by performing musicians. With use, a violin bow will eventually become ‘played out,’ producing an inferior sound.’” (citation omitted)).
\item \textsuperscript{144} \textit{Id.} at 44.
\item \textsuperscript{145} \textit{Id.} at 47.
\end{itemize}
music, their appreciation in value as an antique did not disqualify depreciation deductions.146

Fribourg and Simon each stand for the idea that a taxpayer may take depreciation deductions on a piece of property that has appreciated over time. With coastal property, the size of the taxpayer’s property will diminish each year because of the rising sea level. While the area of property the taxpayer owns diminishes, the value of the property may not diminish at an equal rate.147 At first, the value of the property may actually increase despite a decrease in area. 148 Nevertheless, as the holdings in Fribourg and Simon illustrate, property may be depreciated even if the fair market value increases over time. As a result, the possibility of a rising value in coastal land is not a valid reason to prohibit depreciation deductions.

B. The Incredible Difficulty in Estimating the Useful Life of Coastal Property

Another argument against treating land as a depreciable asset involves the requirement that depreciable assets have estimable lives.149 According to treasury regulations, the period of depreciation must reflect the length of time “which the asset may reasonably be expected to be useful to the taxpayer in his trade or business or in the production of his income.”150 Some critics of the proposal of land as a

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146 Id. Similarly, in Liddle v. Commissioner, the taxpayer, a professional musician, purchased a seventeenth century bass viol. Liddle v. Comm’r, 65 F.3d 329, 330 (3d Cir. 1995). The taxpayer then began depreciating the cost of the instrument because it was losing its tonal quality. Id. at 331. Despite an appreciation in value as an antique, the Third Circuit allowed the deductions because the purpose for which the taxpayer purchased it—the tonal quality—was diminishing. Id. at 335 (“Normal wear and tear from Liddle’s professional demands took a toll upon the instrument’s tonal quality and he, therefore, had every right to avail himself of the depreciation provisions of the Internal Revenue Code as provided by Congress.”). “A viol is a bowed string instrument. Similar to the cello, the viol, or viola da gamba, is played between the legs (hence the name ‘viola da gamba’, literally ‘leg-viol’). While it is not a direct ancestor of the violin, there is some kinship between the two instrument families.” About the Viol, VIOL DE GAMBA SOC’Y OF AM., http://vdgsa.org/pgs/the_viol.html (last visited Nov. 25, 2012).

147 In fact, the decreases in both value and size will vary by year since neither global warming nor markets grow at an even pace.

148 The finite quantity of land and previous market booms make such an issue a very real possibility in the short run. See Case, supra note 133, at 8.

149 See Treas. Reg. § 1.167(a)-1(b) (as amended in 1972).

150 Id.
A depreciable asset may point to the fact that it is difficult to predict how long it will take coastal property to become useless to its owner. Without a comparison to other types of depreciable assets, this is a valid point. After owning hundreds of computers, any software design company can predict, within a few years range, how long a new computer will last. Similarly, any trucking company will be able to predict the period of time over which it should depreciate a new truck cab. However, how can a coastal property owner depreciate land, which will not depreciate within a known time? It is true that the rate of sea level rise is difficult to predict. In light of the difficulty of predicting sea level change, should it be subject to depreciation?

The issue of estimable life should not prevent land from becoming a depreciable asset. This is because only a reasonable estimate of an asset’s life is required for determining whether it is depreciable. Buildings are a prime example of how loosely the government construes “reasonable estimate.” Currently, a taxpayer may depreciate nonresidential real property over a period of thirty-nine years. However, few buildings actually last for exactly thirty-nine years. Some buildings may last for twenty years because of faulty construction. But even more likely, a building will last for a substantially longer period. This is no better illustrated than by the fact that the Empire State Building was built in 1931, the College of William and Mary’s Christopher Wren Building was built in 1700, and the Pyramids of Giza were built roughly 4500 years ago. All of these structures still stand today. So while it may seem strange to pick an estimable life for taxpayers to depreciate land—such as the fifty

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151 See Titus & Richman, supra note 5, at 1 (predicting a one meter rise could occur by 2100); VANISHING SHORES, supra note 4 (predicting a rise between one and three feet).
152 Hawkins v. Comm’r, 713 F.2d 347, 353 (8th Cir. 1983).
years suggested above—this time period is no more arbitrary than the thirty-nine years given to buildings. 157

C. Coastal Property Owners Can Take Measures to Extend the Useful Life of Their Property

Coastal property owners take a number of steps to combat rising sea levels. Many coastal communities or individual property owners construct sea walls to prevent the rising sea level from inundating their property. 158 Others spend exorbitant amounts of money to pump in sand from other locations to build sand dunes, a process called beach nourishment. 159 Each of these methods should substantially increase the life of coastal property, but at great costs. 160 However, even if

157 Trademarks are another example of an asset that has a useful life that is very difficult to determine. See 15 U.S.C. § 1059 (2006). According to the Lanham Act, registered trademarks can be renewed every ten years. Id. Indeed, a trademark may last as long as it is used in commerce; its useful life is therefore potentially infinite. Michael A. Carrier, Cabining Intellectual Property Through A Property Paradigm, 54 DUKE L.J. 1, 20 (2004). However, a trademark is amortizable over a fifteen-year period. I.R.C. § 197(a), (d)(1)(F) (2006) (providing a fifteen-year amortization period for “any franchise, trademark, or trade name”). Amortization is the process of allocating the cost of an intangible asset over the use of that asset’s life. BLACK’S LAW DICTIONARY 99 (9th ed. 2009). The process is no different from depreciation; amortization is used for intangible assets, depreciation is used for tangible assets. As a result, a taxpayer that purchases a trademark, purchases property with a possibly indefinite life but is allowed to take amortization deductions. While registered trademarks must be renewed, see 15 U.S.C. § 1059(a) (2006), the cost of these renewals is treated as separate acquisitions. I.R.C. §§ 197(f)(4)(B), 1253(d)(1)(A)–(B)(i) (2006). This draws a very similar comparison to coastal land, which would deteriorate in a finite number of years if not for repairs.


160 In the future, the use of sea walls may be substantially diminished as new research is showing sea walls have severe adverse effects to coastal property located near the walls—often accelerating erosion of the very property they were meant to protect—and environmental groups are urging restrictions on their use. Black, supra note 158, at 375; David Reyes, Hoping to Turn Tide Against Seawall Surfrider Foundation Battles a Plan to Bolster a Revetment at a
property owners can extend the life of their property through sea walls and beach nourishment, this should not impede the taxpayer from taking depreciation deductions.

The IRS has stated that an improvement to depreciable property that extends the life of the property does not affect the ability to depreciate the underlying property.161 Rather, the improvement to the property is treated as a separate depreciable piece of property.162 As such, any sea wall or beach nourishment installed to extend the life of a coastal property should not forbid or stall the depreciation of the property. Rather, the property owner should be allowed to continue to depreciate the coastal property and on a different MACRS timeline depreciate the life of the property improvements.163 This means that while the coastal property should continue to depreciate over its fifty-year time period, the depreciable improvements will be allowed to depreciate over a fifteen-year period.164


162 Id. Many types of improvements to land are currently considered non-depreciable. While Treas. Reg. § 1.167(a)-(2) (1960) allows for improvements to land to be depreciated if the improvements are subject to wear and tear, exhaustion, or obsolesce, the Tax Court has further limited what types of improvements are to be depreciated. In Algernon Blair, Inc. v. Commissioner, the Tax Court ruled that only land improvements directly relating to a depreciable asset should be depreciable. Algernon Blair, Inc. v. Comm’r, 29 T.C. 1205, 1220–21 (1958). The court ruled that depreciation deductions would be allowed on clearing, grading, and landscaping needed to construct a building. Id. However, other land improvements not directly required for building were “inextricably associated with the land” and should be added to the basis in land, and thus not depreciated. Id. As such, under current law, sea walls and beach nourishment would only be depreciable if the taxpayer proved what portion of the improvements is allocated to protect the depreciable assets such as infrastructure and buildings. See id.

163 While minor repairs to property may be deducted, one that substantially prolongs the useful life of property must be capitalized. Rev. Rul. 2001-4, 2001-1 C.B. 295.

164 The recovery period for land improvements under MACRS is fifteen years. I.R.S. Pub. 946, at 104.
D. What Treatment Should be Given to Owners Who Have Already Lost Significant Amounts of Property to Sea Level Rise?

Because the sea levels have risen at increasing speeds over the past fifty years, some coastal property owners have already lost significant portions of their property. This loss may lead some to question how the government should implement a scheme of depreciation when much of the newly depreciable property has already wasted away. To answer this question two different tax policies already in place should be observed: the implementation of goodwill as a depreciable asset in the 1990s and the conversion of non-depreciable personal real property into property used for the production of income.

For most of the twentieth century, goodwill and many other intangible assets were not amortizable. Goodwill was not considered amortizable because it had no useful life. In fact, even when goodwill diminishes it can regenerate. However, in the early 1990s Congress passed the Omnibus Budget Reconciliation Act of 1993 which created § 197 of the IRC and allowed the amortization of goodwill and many other intangible assets. Section 197 only affects intangible property purchased after the passage of the act. So under...
this model, coastal property owners would only be eligible to
depreciate their property if they purchased it after depreciation of
costal property became allowable.

On the other hand, the IRS allows taxpayers to depreciate
converted property even if it was formerly used for a non-depreciable
purpose. Real property is only depreciable if it is used for a business
purpose. This means that residential homes are not depreciable. However, if a taxpayer moves out of their home and converts it into a
rental property, the taxpayer is then able to take depreciation
deductions. Under this model, coastal property would become
depreciable as soon as its status was recognized by the IRS.

While depreciation on coastal property could be implemented
through either of the above methods, it is more likely to follow the
former route. Similar to goodwill before the passage of § 197, land has
always been treated as a non-depreciable asset. Alternatively, real
property for personal use is not depreciable but is capable of
depreciation if converted to property for the production of income. The
government’s allowance of goodwill to become a depreciable asset is
much more analogous to what would happen if coastal property—an
entirely new class of asset—becomes depreciable. As such, if coastal
property becomes depreciable, it will likely only apply to future
purchases of property unless some retroactive election period is
provided.

IV. HOW WILL RECOGNIZING COASTAL PROPERTY AS A
DEPRECIABLE ASSET AFFECT GOVERNMENT REVENUES?

As with all new deductions in the IRC, allowing real property to
depreciate will change the amount of revenue the government will be
able to collect. While coastal property owners should be allowed to
depreciate their property, the use and character of depreciation may
mitigate some of the consequences of this treatment. As discussed
above, any coastal property used as a personal residence would not be
subject to depreciation deductions. Similarly, if the deductions were

\[\text{purchased the property after July 25, 1991. Treas. Reg. } \S \text{1.197-2(d) (as amended in 2011).}\]

\[\text{172 Treas. Reg. 1.167(a)-2 (1960).}\]

\[\text{173 } \text{Id.}\]

\[\text{174 I.R.S. Pub. 527, 6–7 (2011).}\]

\[\text{175 See, e.g., Treas. Reg. } \S \text{1.197-2 (as amended in 2011).}\]

\[\text{176 Treas. Reg. } \S \text{1.167(a)-2 (1960).}\]
allowed only prospectively, then any change in the law would only affect future purchases of coastal property.

However, in some situations, allowing depreciation on coastal property will act as both a tax deferment and a tax reduction. Depreciation provides for yearly deductions against ordinary income but simultaneously reduces the owner’s basis in the property. Charlotte’s $1,000,000 piece of coastal property will be allowed roughly $20,000 in depreciation deductions each year if allowed to depreciate over a fifty-year period. This means that in each year, Charlotte will be allowed to reduce her taxable income by $20,000. This may be a tax savings of as much as $7,000 a year if she is normally taxed at 35%. However, each year she takes a deduction, she must also reduce the basis in her property. Land, a finite resource, tends to appreciate at significant rates. Due to this appreciation, many coastal properties will sell for more than they were purchased, even if they have been reduced substantially in size. This depreciation in basis and appreciation in worth will create larger taxable gains which Charlotte will have to pay when she sells her property. However, if Charlotte sells her property after owning it for more than a year, she will receive a preferential long-term capital gains rate on the taxable amount. This means that any difference in her basis and the sale of the property will only be taxed at 15%. As such, Charlotte will get a tax deferment because she was able to take depreciation deductions in excess of the actual diminution in value, but does not have to repay this tax until she sells her property. She will also get a tax reduction because she saved $7,000 for each $20,000 deduction taken, but will only have to pay $3,000 for each $20,000 of miscalculated depreciation. While this may seem strange, this is the

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178 See Case, supra note 133, at 8.
179 However, due to global warming, these appreciated values will eventually begin to plummet once the usefulness of the land is reduced.
180 Most depreciable non-real property does not receive this form of tax reduction. Rather, a tax transaction called recapture will force the taxpayer to pay her ordinary tax rate on any gain that occurred as a result of miscalculated depreciation. I.R.C. §§ 1245, 1250 (2006). However, this note argues that land should be treated the same as other types of depreciable real property. Under the current MACRS system, real property must be depreciated using the straight line method if it was placed in service after 1986. ROSENBERG & DAHER, supra note 17, at 423. However, recapture does not apply to property that was depreciated on a straight line basis. Id. As such, if coastal land is recognized as a depreciable
same treatment that Beth would receive with her building because under MACRS real property provides depreciation deductions each year against ordinary income, but taxpayers receive a preferential rate if there is any gain upon sale.

However, corporate taxpayers who own coastal property will not receive a tax reduction. Corporate entities do not receive preferential tax treatment on long-term capital gains. As such, corporate entities will be allowed to take deductions against ordinary income for each year of depreciation, but if there is a gain upon a sale of the property, the corporate taxpayer must then pay the money back at the same tax rate.\textsuperscript{181} Therefore, a corporate entity will only receive a tax deferment and not a tax reduction.\textsuperscript{182}

The real purpose of depreciation is to benefit the property owners who sell their land at approximately the same value as their reduced basis.\textsuperscript{183} Imagine Charlotte instead sold the property for $500,000 after owning it for twenty-five years and taking depreciation deductions each year. Rather than realizing a $500,000 loss, as she would now, she would instead realize no gain or loss. This is because the basis of the property has been properly depreciated as the corresponding value in the property has been reduced. Under this scenario, Charlotte would be allowed to take deductions on a yearly basis similar to any other taxpayer who has depreciable property—including Beth, the building owner. This is far more beneficial to Charlotte than the current tax laws that would require Charlotte to take a massive loss upon the sale of her property. This loss would have to be matched with a gain to find any tax benefit from the sale because deductions are only valuable if you have gains to offset.\textsuperscript{184} This benefit to Charlotte, who must sell her coastal property at a loss due to its exhaustive nature, recognizes the purpose of depreciation deductions—to spread the loss throughout the useful life of the property—and applies it to an asset, land which—in light of global warming and sea level rise—is now wasting away.

\begin{itemize}
\item[asset, and only on property placed in service after the change, then recapture will not apply to coastal property.]
\item[That is, assuming that tax rates remain the same and the taxpayer remains in the same tax bracket.]
\item[However, every tax deferment is, in effect, a tax reduction due to the time value of money. Christopher H. Hanna, \textit{The Real Value of Tax Referral}, 61 F.L.A. L. REV. 203, 247 (2009). See also supra note 39.]
\item[After the basis had been reduced yearly due to the depreciation adjustments.]
\item[The IRS will not give you back 35\% of your losses, it merely allows you to reduce the amount of taxes owed.]
\end{itemize}
V. PLEADING IN THE ALTERNATIVE: WHY COASTAL PROPERTY OWNERS SHOULD RECEIVE A § 611 DEPLETION DEDUCTION

While coastal property owners should be allowed a depreciation deduction in light of global warming, they should, in the alternative, be allowed a depletion deduction. Section 611 of the IRC allows for a reasonable deduction based on the depletion of natural deposits.185 The depletion deductions are intended to allow a property owner to recover some of the cost of acquiring an exhaustible natural deposit.186 Among the many natural resources recognized under § 611 is sand.187 A coastal property owner who uses her beach to appeal to tourists has purchased a natural deposit, the sandy beach.188 In light of global warming, this sand has become an exhaustible deposit because each year the water rises, the public trust doctrine forces the property owner to give up her rights to the sand, and thus the owner’s sand deposit becomes further depleted.

A beach which does not actually lose its sand but instead the quality of the sand diminishes would not be able to seek the benefits of § 611. In A. Duda & Sons v. U.S., the taxpayer attempted to take a § 611 depletion deduction for peat soil which would be exhausted within a calculable period of time.189 The court noted that while the peat soil was a natural deposit under § 611 and had a useful life, the taxpayer did not deplete the resource because it remained in place.190 As such, the court ruled that for a deposit to be subject to § 611, it must be “depleted by extraction.”191

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188 IRC §§ 611 and 613 also reference a number of other natural deposits which might, instead of sand, constitute the makeup of coastal property. While this argument is made for coastal property that has sandy beaches as part of its appeal, the same argument could apply for taxpayers who own property consisting of rocks, stone, or soil and these deposits are subject to the same concerns of rising sea level. See Treas. Reg. § 1.611-1 (as amended in 1973) (defining which types of property apply to § 611); I.R.C. § 613 (2006).
190 Id. at 672, 678.
191 Id. at 678.
In line with the “depleted by extraction” rule, the tax court in *Meyers v. Commissioner* allowed for a taxpayer to take depletion deductions because the taxpayer was actually selling sod for removal from the property. Following the rulings in *A. Duda & Meyer*, a coastal property owner should receive depletion deductions because the rising sea is actually depleting the sand deposits by removing them from the taxpayer’s property. While the sand may stay, more or less, in the same location once the sea level has risen, the property no longer belongs to the owner. As such, the sand has been extracted, if not from the exact location, at least from the ownership of the taxpayer.

Another requirement for § 611 is an “economic interest” in the depletion of the natural deposit. Most cases involving economic interest try to determine which party is allowed to take a depletion deduction when the deposit is rented, shared, or under some other form of agreement. For the purposes of this note, it is assumed the taxpayer owns the property in fee simple and uses it exclusively for the production of income. However, it is important to look at the rules behind deciding economic interest because they may adversely affect the taxpayer’s ability to take depletion deductions. Economic interest requires an investment in the deposit and income derived from the extraction of the mineral. The investment in the deposit is readily satisfied if the taxpayer owns and uses the beach. On the other hand, determining whether income is derived from the extraction may prohibit coastal property owners from taking a § 611 depletion deduction.

Most cases of § 611 depletion deductions involve a property owner receiving income from selling a finite natural resource on their property. In the case of a coastal property owner, the owner is not receiving income from selling the sandy beach. However, the owner may be able to argue that use of the sandy beaches—for which the owner receives income—increases erosion and expedites the loss of the deposit. While this may be difficult to argue, the property owner may be able to justify the deduction in light of the spirit of § 611. In a § 611 analysis judges see the deduction as an “act of grace” and allow

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193 Treas. Reg. § 1.611-1(b) (as amended in 1973).
194 *See e.g.*, Callahan Mining Corp. *v. Comm’r*, 428 F.2d 721, 722 (2d Cir. 1970); Laudenslager *v. Comm’r*, 305 F.2d 686, 687 (3d Cir. 1962); Comm’r *v. I.A. O’Shaughnessy, Inc.*, 124 F.2d 33, 34 (10th Cir. 1941).
195 Treas. Reg. § 1.611-1(b) (as amended in 1973).
these deductions because the deposits are a wasting asset and the deduction is intended to compensate the owner for the amount exhausted as its capital expense is impaired. Although the "economic interest" test typically looks for an economic gain through extraction, this may be the court's desire to not see the property increase in value. An increase in value would negate the purposes of § 611—to compensate for a wasting asset. However, coastal property owners who are losing their sandy beaches will not see the value of their property increase, at least not due to the loss of their beach.

Section 611 allows owners of exhaustible natural deposits to take deductions for the loss in value of their property through depletion. Because sand is a natural deposit, global warming is causing coastal property owners to exhaust their resources, and this exhaustion decreases the value of the property, coastal property owners should be allowed to take § 611 depletion deductions. The fact that the owners are not realizing some economic gain on the direct extraction of their deposit should not restrict their deductions in light of § 611's intended purpose of compensating for a wasting asset.

VI. HOW COASTAL PROPERTY OWNERS CAN SEEK A CHANGE IN TAX POLICY

Any change in tax policy must go through one of three established pipelines. Each of these paths has its own challenges and likelihood of success. First, coastal property owners could petition Congress. Congress enacts the IRC, which is the foundation of all tax law. Second, a taxpayer could petition the IRS. The IRS issues treasury regulations and various less formal publications to inform the public how it will treat specific tax issues. However, as the IRS's main


197 This is unlike a common § 611 disallowance for property owners who pay to have their land excavated for the purpose of making the land suitable for some type of building, which, in turn, increases the overall value of the property.

198 ROSENBERG & DAHER, supra note 17, at 11. Most tax policy must originate in the House of Representative’s Ways and Means Committee. Id. at 12 (citing the Constitution’s Article I Section Eight requirement that all bills for raising revenue must originate in the House, though the Senate may initiate a new tax law though an amendment of a previous bill).

199 Id. at 15. While the Treasury Department issues interpretations of the code in a number of formats—for example, revenue rulings and private letter rulings—
goal is to collect revenues, the agency is less likely to promote policies which reduce tax revenues.  

Finally, the taxpayer could petition the courts. Courts may be the easiest place to seek tax policy reform. Any taxpayer seeking to challenge the current stance of land as a non-depreciable asset can either argue in a federal district court or the Tax Court. The court system’s primary goal is to seek justice, rather than collect revenues. Also, the history of land as a non-depreciable asset has always been rooted in treasury regulations. Treasury Regulations are not promulgated by Congress and should therefore receive less deference than the IRC. As such, any party wishing to argue that coastal property should be depreciable should have an easier time than if challenging a section of the IRC. An added benefit of winning in the courts is that while Congress can override the court’s decision by promulgating new and conflicting laws, surveys show that Congress is more likely to defer to the Supreme Court and codify its decisions. As such, if the issue reached the Supreme Court, a win could call the

treasury regulations are given the greatest amount of deference by the courts. Kristen E. Hickman, The Need for Mead: Rejecting Tax Exceptionalism in Judicial Deference, 90 MINN. L. REV. 1537, 1538 (2006).


ROSENBERG & DAHER, supra note 17, at 16. The benefit of arguing in the Tax Court is that the taxpayer does not need to pay her deficiency before challenging the IRS’s assessment.

Most cases which cite to this rule can either be traced back to the modern Treasury Regulation 1.167(a)-2 or Hoboken Land & Improvement Co., which itself cites to older regulations. See e.g. Bender v. U.S., 383 F.2d 656, 659 (6th Cir. 1967) (citing Treas. Reg. § 1.167(a)-2; Hoboken Land & Improvement Co.); Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 n.2 (3d Cir. 1943) (citing treasury regulations).


attention of Congress to codify the decision and increase the legitimacy of coastal land as a depreciable asset.\textsuperscript{205}

**CONCLUSION**

Depreciation deductions have long been recognized as a way of adjusting a taxpayer’s basis in a capital expenditure while providing yearly deductions as the value is exhausted. Throughout the history of depreciation deductions a number of types of assets were considered non-depreciable because they were thought to last forever. Courts have always seen land as a key example of a non-depreciable asset because it was not subject to wear and tear. However, in light of global warming, the resulting sea level rise, and the public trust doctrine, coastal property now has a finite useful life.

While the idea of coastal property as a depreciable asset has been highly ignored within academic circles, hopefully this idea will be expanded upon in future writings or courtroom challenges. This note hopes to spur a discussion over the rightful place of coastal property as a depreciable asset. While coastal property exhausts at a slower and less predictable rate than many depreciable assets, Beth’s depreciable building and Charlotte’s non-depreciable coastal property look more similar than ever before. As discussed in Part III above, most of the initial problems underlying the treatment of coastal property as a depreciable asset can be easily resolved through an application of current tax doctrine or by comparisons to other types of depreciable property. Finally, even if the risk of complete inundation of land is not visibly a current problem, the rate of global warming and sea level rise is predicted to be far worse after the year 2050.\textsuperscript{206} By beginning the debate now, legal experts can decide how to react to the vulnerability of coastal land and how to adjust U.S. tax policy.

\textsuperscript{205} Of course, few appeals actually make it to the Supreme Court. Less than 5% of all appellate petitions were reviewed by the Supreme Court in 2010. *The Supreme Court, 2010 Term—The Statistics*, 125 HARV. L. REV. 362, 369 (2011).

\textsuperscript{206} *Future Climate Change*, supra note 4, at 5–6 (predicting a significant change in sea level which could be further exacerbated by the melting of the West Antarctic and Greenland ice sheets); Peter Tatchell, *Global Warming Warning Isn’t Working: It Will Take Bodies on the Street Before We See Serious Global Action to Stop Catastrophic Climate Change*, THE GUARDIAN, Nov. 7, 2006, http://www.guardian.co.uk/commentisfree/2006/nov/07/globalwarningisntworking (reporting a likely 2–5 degree increase in global temperatures which will increase the melting of glaciers and accelerate the rise in sea level).