The Waters are Rising! Why Isn’t My Tax Basis Sinking?: Why Coastal Land Should be a Depreciable Asset in Light of Global Warming and the Rise in Sea Level

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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, the rate of global warming has increased rapidly over the past fifty years and is expected to grow even faster in the future. This increase in global temperature causes ice caps to melt and oceans to expand, which lead 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 begins to inundate the dry land. This is because the Public Trust Doctrine typically requires navigable waters to become public property. As such, coastal property is now a wasting asset because private lands are becoming public once they are underwater.

This Article argues that in light of global warming coastal property should now be a depreciable asset. By looking at existing tax doctrine and drawing comparisons to other types of depreciable property, this Article explains why coastal property should still be depreciable even though it may appreciate in value, it is difficult to determine its useful life, and taxpayers can extend its useful life by building sea walls. Finally, this Article argues that even if coastal property owners are not allowed to depreciate their property, they should, in the alternative, be
allowed to take depletion deductions on the deposits of sand which are lost as a result of the rising sea level.

INTRODUCTION

Imagine two small business owners, Beth and Lily. Beth buys a building for $1,000,000 and Lily spends the same on a piece of land. Both Beth and Lily use their property for the production of income. Over the next 39 years Beth and Lily will receive wildly different tax treatments. Each year Beth will receive a depreciation deduction on her building and her basis in the building will also 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, Lily will not be allowed to take any depreciation deductions on her land and its basis will remain at $1,000,000. After 39 years Beth will not have any basis in her property and Lily 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 Lily 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 39 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. Lily never had deductions because her property value—all else equal—remained the same. However, now

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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 (3rd 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).
imagine a third small business owner, Charlotte. Charlotte purchases coastal property for $1,000,000 and uses it for the production of income. Similar to Lily, Charlotte’s land will retain its basis and she will not be allowed to take any depreciation deductions. This treatment has always been considered fair because land does not waste away.

However, now, 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 United States is at risk of becoming inundated by a rise in sea level over this period. Once in the water, the land is no longer the property of the original owner, but available to the public under the Public Trust Doctrine. As a result of global warming and the Public Trust Doctrine, coastal property now has a finite life.


\[5\] JAMES G. TITUS & CHARLIE RICHMAN, MAPS OF LANDS VULNERABLE TO SEA LEVEL RISE: MODELED ELEVATIONS ALONG THE U.S. ATLANTIC AND GULF COASTS 25 (2000), available at http://www.epa.gov/climatechange/effects/downloads/maps.pdf. This is unlike the farm in Rev. Rul. 55-730 which had lost its peat soil, but the land remained. See supra note 3. The rise in sea level will cause coastal property to completely sink into the water.

This Article argues that, in light of the rising sea level, coastal properties which 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 Article 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 how to calculate depreciation. This Part also looks at the differences between traditional straight line depreciation and depreciation under the IRS’s current MACRS scheme. Finally, it provides a brief history of land as a non-depreciable asset and how land itself has never been allowed to be depreciated.

Part II argues that there should be a different tax treatment for coastal properties in light of global warming. This Part first summarizes global warming, different predictions on the rise of sea level, and the scope of global warming’s effect on coastal property within the next century. This effect will result in some coastal properties completely wasting away because the Public Trust Doctrine causes this private land to become public property. Thus, a taxpayer’s amount of privately owned coastal land will diminish at a steady rate until it is completely under water.\(^7\) Finally, this Part discusses how the features of coastal property should affect the method of depreciation.

Part III addresses potential critiques against the idea of treating land as a depreciable asset. First, this Part looks at relevant law demonstrating that depreciation has been allowed on property even if the value of the property appreciates over the given period. Then, it draws a comparison to buildings, a depreciable asset, to show why any difficulty in determining a useful life for coastal property should not prevent it from being depreciable. Part III also explores the

\(^7\) Id.
ways expenditures for repairs should affect the depreciation process. This is especially important because many owners of coastal property will build sea walls or undergo beach nourishment to increase the life of their property. Finally, this Part will address the difficulty of which coastal properties should receive this tax treatment and how the government should implement this new rule.

Part IV explores the implications of applying the suggested new rule. The IRS will see an immediate decrease in tax revenues. However, many property owners will not benefit from the rule because the property must be used for the production of income. This part walks through the tax consequences to the property owner if depreciation deductions are allowed. It ends by showing why this treatment should be allowed—to provide coastal property owners who lose significant value in their property due to global warming yearly deductions as their asset wastes away instead of forcing them to take one major loss when they sell the property.

Part V explores section 611 of the Internal Revenue Code (the “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 depletion deduction under section 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 the taxpayer’s ownership in the sand. This Part looks at the factors involved in a section 611 analysis and where a taxpayer may have the most trouble arguing for this type of deduction.

Part VI explains how taxpayers can seek a change in policy. It provides a quick explanation of the role of Congress, the courts, and the IRS in the tax system. It then suggests

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that the courts are likely the best venue for seeking a change on the classification of coastal property as a non-depreciable asset.

I. DEPRECIATION DEDUCTIONS: THEIR ROLE IN THE UNITED STATES TAX SYSTEM AND WHY THEY HAVE NEVER APPLIED TO LAND

As mentioned above, this Article argues that coastal land should now be depreciable in light of global warming. To help understand why, this Part first sets out to explain the place of depreciation deductions in the current tax system. Then, it explains the different methods of depreciation, most importantly MACRS. Finally, this Part explains the history of land as a non-depreciable asset.

A. The Basics of Taxable Income

Generally, the IRS determines taxable income by subtracting certain deductions from gross income.10 The Supreme Court has ruled that gross income is an “accession of wealth, clearly realized, and over which the taxpayer has complete control.”11 The requirement of clear realization means that property which increases in value, if not sold or transferred, does not generate gross income.12

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10 I.R.C. § 63 (2006). This definition does not apply to individuals who elect not to itemize deductions. Id. Income may be in the form of cash, services, or property. Treas. Reg. § 1.61-1 (1960).
11 Comm’r v. Glenshaw Glass Co., 348 U.S. 426, 431 (1955). However, many exclusions exist in the IRC and are not required to be reported as income. 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 notable exclusions include gifts, inheritances, compensation and non-punitive damages from a personal injury suit, and scholarships. I.R.C. §§ 102, 104, 117 (2006).
Deductions allow a taxpayer to reduce taxable income by specific expenses.\textsuperscript{13} Typically, business expenses are deductible in the year of purchase.\textsuperscript{14} However, expenses on property which will not be used up within a year are considered capital expenditures.\textsuperscript{15} 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 Article will focus on depreciation deductions and why coastal property owners should be allowed this tax treatment.

B. The Treatment of Capital Expenditures and Depreciation Deductions

Capital expenditures include costs to buy land, buildings, machinery, or other property which have a useful life of over one taxable year.\textsuperscript{18} However, depreciation is only allowed when (1) the capital expenditures are for property which is used in a trade or business or held for the production of income;\textsuperscript{19} (2) the property is subject to exhaustion, wear and tear, decay, or

\textsuperscript{13} I.R.C. § 161 (2006).
\textsuperscript{14} I.R.C. § 162 (2006).
\textsuperscript{15} Treas. Reg. § 1.263(a)-1.
\textsuperscript{17} ROSENBERG & DAHER, THE LAW OF FEDERAL INCOME TAXATION 191 (2008). See also Alton A. Murakami, “Useful Life” Has Outlived Its Useful Life: Tax Depreciation After Simon and Liddle, 72 N.Y.U. L. Rev. 1211, 1213-15 (1997) (discussing the policy behind depreciation). 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. Depreciation spreads these costs throughout the life of the asset to better match revenues with costs.
\textsuperscript{18} Treas. Reg. § 1.263(a)-2 (1960).
\textsuperscript{19} I.R.C. § 167 (2006).
obsolescence—or in other words, it has a finite useful life;\(^{20}\) (3) the useful life of the property is reasonably ascertainable;\(^{21}\) and (4) the taxpayer owns the property.\(^{22}\)

Deprecation allows a taxpayer to allocate the cost of the capital expenditure over the period of its useful life.\(^{23}\) However, using depreciation deductions may adversely affect the seller. When deductions are taken, the asset’s basis must also be reduced by the amount depreciated.\(^{24}\) 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.\(^{25}\)

Historically, the method of depreciation did not matter as long as it was reasonable and consistently applied to the asset.\(^{26}\) A popular method of depreciation is the straight line method.\(^{27}\) Using the straight line method the taxpayer must first determine the cost or basis of the asset and deduct the estimated salvage price.\(^{28}\) The remainder is then divided into equal portions over the

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\(^{20}\) Treas. Reg. § 1.167(a)-2. The useful life of an asset is the period over which it should produce income for the taxpayer.

\(^{21}\) Treas. Reg. 1.167(a)-1 (1960).

\(^{22}\) I.R.S. Pub. 946, 30 (2010), available at http://www.irs.gov/pub/irs-pdf/p946.pdf. This includes property subject to a debt. Id. at 4. For the purposes of this Article, it is assumed that each taxpayer owns the subject property.

\(^{23}\) Id. at 3.

\(^{24}\) I.R.C. § 1016 (2006). 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).

\(^{25}\) This is not the result of taxpayer error. Rather, the IRS has tables which tell the taxpayer the appropriate rate of depreciation. See I.R.S. Pub. 946. However, in very few cases will an asset lose its value at the exact rate the IRS has predicted.

\(^{26}\) Treas. Reg. § 1.167(b)-0 (1960).

\(^{27}\) Treas. Reg. § 1.167(b)-1 (1960).

\(^{28}\) 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. Treas. Reg. § 1.167(a)-1 (1960).
life of the asset. These equal portions may then be deducted from gross revenue to calculate taxable income.

For example, now assume 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 of the ten years she owns the building. The total amount depreciable would be the $1,000,000 difference between the amount for which it was purchased 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. While the reduction in basis means she does not get to take a $1,000,000 loss in the year of sale, she was able to spread this loss through deductions in each of the ten years prior.

Today, most property is depreciated under the Modified Accelerated Cost Recovery System (MACRS). MACRS is divided into two systems of depreciation, the General

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29 Treas. Reg. § 1.167(b)-1.
31 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. However, the salvage value may be readjusted if the original estimated useful life of the property is found to be incorrect. Id.
32 If she owns the building for the entire ten-year period.
33 She has no gain or loss because the basis was reduced by the amount of depreciation each year.
34 Beth does not need to hold onto the asset for its entire determined life. If she sold the building after 5 years for $600,000, then her basis at that time would be $600,000 because she took $100,000 depreciation deductions for each of 5 years.
35 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 (2010). With few exceptions, MACRS only applies to property placed in service after 1986. Id.
36 Id. at 34.
Depreciation System (GDS) and the Alternative Depreciation System (ADS). Each system provides a different method for recovering depreciation. While GDS is the more common system, the government requires some types of property to be depreciated under ADS. This Article will focus on GDS because it assumes the typical taxpayer prefers a quicker rate of depreciation and because generally real property is not required to be depreciated under ADS.

Under GDS, property is placed into one of nine separate property classes. The government has extensive lists that tell the taxpayer in which class the property should be placed. 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.

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37 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 all property depreciated under ADS must use the straight line method where GDS has three different conventions. Id. at 40-42.

38 Id. at 34.

39 Id. The taxpayer may also elect to use ADS for many types of property. Id. at 35.

40 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 because the owner can invest the dollar and the value of a dollar is typically reduced by inflation—few taxpayers prefer to delay deductions. For a better understanding of the time value of money, see Stephen F. Gertzman, Definition of Time Value of Money, Federal Tax Accounting ¶ 11.01 (2011). A taxpayer may choose 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 their property has a higher book value and, on paper, the overall value of the company will appear greater.

41 I.R.S. Pub. 946 at 34.

42 3-year property, 5-year property, 7-year property, 10-year property, 15-year property, 20-year property, 25-year property, residential rental property, and nonresidential real property. Id. at 35-36, 39.

43 Id. at 102-12.

44 Id. at 114.

45 Id. at 39.

46 Under the declining balance method the property is depreciated at an accelerated rate in the first years of use. Id. at 41. This accelerated rate allows the taxpayer to take the majority of its
or straight line method.\textsuperscript{47} However, real property must be depreciated using the straight line method.\textsuperscript{48}

Under MACRS, depreciation begins when the property is placed in service for the production of income or for use in a trade or business.\textsuperscript{49} Property which 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.\textsuperscript{50}

In the example above, now imagine that Beth depreciates the building using MACRS. Rather than depreciate the 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.\textsuperscript{51} Rather than 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.\textsuperscript{52}

\textbf{C. The History of Land as a Non-Depreciable Asset}

Since the passage of the Revenue Act of 1916, it is a well settled position that land is not a depreciable asset.\textsuperscript{53} On a number of occasions taxpayers have attempted to take depreciation deductions soon after purchasing the property. For examples of calculating depreciation using the declining balance method see \textit{id.} at 48-50.

\textsuperscript{47} \textit{Id.} at 41-42.
\textsuperscript{48} \textit{Id.} at 42.
\textsuperscript{49} \textit{Id.} at 38.
\textsuperscript{50} \textit{Id.} This is important because very little land is new, so—if allowed to depreciate—most land has been used for a substantial period before conversion. \textit{See} A New Island in the Red Sea: Peekaboo, ECONOMIST, January 7, 2012 (discussing the rare occurrence of a new island created off the coast of Yemen in December 2011).
\textsuperscript{51} I.R.S. Pub. 946 at.49.
\textsuperscript{52} $1,100,000 divided by 39 years = $28,205.13. \textit{See id.} Technically, GDS uses a mid-month convention. 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. \textit{See id.}
\textsuperscript{53} Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 (3rd Cir. 1943); Treas. Reg. § 1.167(a)-2 (1960).
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.54

In 1931, the taxpayer in Hoboken Land & Improvement v. Commissioner attempted to depreciate property defined as “Piers and Waterfronts.”55 Within “Piers and Waterfronts” the taxpayer included depreciation for buildings, but also the land they were built upon.56 The Commissioner of the IRS disallowed the taxpayer’s claimed depreciation deduction, and after the taxpayer challenged the assessment the lower court held for the Commissioner.57 The Third Circuit Court of Appeals upheld the lower court’s ruling.58 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.59 As far as the court was concerned, the land itself did not fall into any of these categories.60

In 1955, a taxpayer asked the IRS whether he could depreciate the price of his farm.61 The taxpayer’s farm was in Florida where subsidence62 is a major problem.63 After a certain

55 Hoboken Land & Improvement Co., 138 F.2d at 106.
56 Id.
57 Id.
58 Id.
59 Id. at 106-07.
60 See id.
amount of subsidence the soils were expected to become useless for farming, or at least incredibly difficult to maintain. The IRS even recognized that the land would likely be abandoned within fifty years due to its inadequate peat soils. Nevertheless, the IRS ruled that depreciation was not allowed because the land itself would remain after the fifty years. Therefore, land which has lost all of its useful purposes is still not a depreciable asset because the earth itself does not waste away.

While never allowing depreciation on the land itself, the Tax Court has allowed landfill operators to depreciate the part of their land used to store garbage. In Sexton v. Commissioner, the taxpayers purchased an excavated clay pit from a brick company to use as a landfill. The IRS contended that the pit was not depreciable because it was land. The taxpayers argued that their purchase was not only land but also the pit and that they should be able to depreciate the loss of the storage capacity of the pit as it was filled with garbage. The Tax Court allowed the deductions holding that the taxpayer purchased the land for the hole which would be exhausted over 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 all value in the hole for the taxpayer’s business would have been

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64 Id. See also U.S. GEOLOGICAL SURVEY, supra note 62, at 3 (“In the Everglades agricultur[e] . . . as currently practiced has a finite life expectancy because of the ongoing subsidence”).
66 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).
68 Id. at 1096.
69 Id. at 1100.
70 Id.
71 Id. at 1104.
72 75 T.C. 157, 164 (1980).
73 Id.
exhausted. 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. It is expected to 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.

A. Global Warming and Sea Level Rise

Global warming is the average increase in temperature near the Earth’s surface. In

74 Id.
75 Treas. Reg. § 1.167(a)-2 (2006); Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 (3rd Cir. 1943).
79 ENVIRONMENTAL PROTECTION AGENCY, supra note 4, at 3. It is important to note that some people believe that global warming is a hoax or unproven. See Darryl Fears, Climate Skeptics in VA. Oppose Preparations for Sea-Level Rise, PITTSBURGH POST-GAZETTE, December 19, 2011, at A3; Michael Madigan, Life 'Was' a Beach Down Under, WINNIPEG FREE PRESS, October 30, 2009, at A14; Chris Davis, Opportunities Seen in Global Phenomenon: Firms Involved in Clean Energy Lead the Way for Established Players Looking for the Next Investment Trends, SOUTH CHINA MORNING POST, June 24, 2007, at 15. However, most established agencies and governments do recognize global warming and sea level rise as a serious concern. 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 . . . [they include] ‘the accelerated rise of sea levels during the 20th Century relative to the past few thousand years . . . ’”) (quoting NATIONAL RESOURCES COUNCIL, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS 16 (2001)) (the U.S. Supreme Court recognizing global warming); Christopher D. Johnsen, Fueling the Heated Debate Over Global Warming: Why Florida Should Follow California’s Lead in Enacting a Mandatory Cap-and-Trade Program for Greenhouse Gases, 38 STETSON L. REV. 163, 164 (2008) (recognizing global warming as a largely non-partisan concern); Kyoto Protocol to the United Nations Framework Convention on Climate Change, December 10, 1997, 37 I.L.M. 32-
modern times, industrialization and the increased burning of coal and oil have exacerbated the rate of global warming.80 While global warming has a number of adverse effects, for the purposes of this Article a rise in sea level is the most important.81 Global warming increases the sea level by melting glaciers and expanding ocean waters.82

As a result of global warming, sea level may increase anywhere from 0.33 to 1 meter in the next century.83 However, many estimates do not take into consideration the increased melting rate of Greenland’s ice sheet, which contains enough water to raise the sea level by almost seven meters.84 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.85 The effect of this inundation will be detrimental, and a one-meter rise in sea level is predicted to force over one hundred million people in Asia alone to find new homes.86

The United States will also be severely impacted by a rise in sea level. In 2000, James G. Titus and Charlie Richman published a paper predicting the effects of sea level rise on coastal

33; Environment Agency, supra note 4 (the United Kingdom’s environmental agency recognizing global warming as a problem); THOMAS JOSEPH HATTON ET AL., supra note 4 at 879-880 (recognition of global warming by an independent committee of the Australian government). This Article takes the latter stance and assumes that global warming exists.
81 Id.
82 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, Come Hell or High Water: Reexamining the Takings Clause in a Climate Changed Future, 18 DUKE ENVT'L. L. & POL’Y F. 371, 374 (2008).
83 TITUS & RICHMAN, supra note 5, at 1 (predicting a one meter rise could occur by 2100); Monroe Cnty. Growth Mgmt. Div. ET AL., supra note 4 (predicting a rise in sea level between one and three feet in the next century).
85 TITUS & RICHMAN, supra note 5, at 2.
lands. While it was impossible to draw future shorelines, the authors were able to predict some likely effects of global warming on certain coastal states. Most importantly, the authors predicted that over 20,000 km² of the United States is within one meter of sea level and at a 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 km² of land below one meter of elevation and about 12,200 km² below 1.5 meters of elevation. Louisiana only has an estimated 4850 km² 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 km² of land. North Carolina has about 2000 km² of land below 1.0 meter of elevation, but over 5800 km² within 1.5 meters. Further, there are many small towns in North Carolina which are entirely below the 1.5 meter mark and therefore are at risk of complete inundation within the next fifty to one hundred and fifty years.

The report also noted that sea level changes have already created problems in the Chesapeake Bay area. In parts of Virginia and Maryland the rising sea level has turned some yards into marshy land and caused septic tank failures. These failures make the houses nearly

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87 TITUS & RICHMAN, supra note 5, at 1.
88 Id. at 3.
89 Id. at 2.
90 Id. at 28.
91 Id. at 25.
92 Id.
93 Id.
94 Id. at 25.
95 Id. at 30.
96 Id. at 29.
97 Id.
impossible to sell and difficult to live in. As a result, there are instances of abandoned houses next to inhabited houses on slightly elevated lots.

As the Titus and Richman study shows, a significant amount of coastal property, especially in the Southeast is at risk of becoming completely inundated as a result of sea level rise. This land, which is typically thought of as a non-wasting asset, will have literally wasted away into the sea as an effect 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. As a result, many coastal properties will be inundated within the next fifty to one hundred years. When these lands are covered in water and become unusable, it is hard to argue that they do not fit the IRC’s definition of a depreciable asset—one that is exhausted, subjected to wear and tear, or obsolescence. This is especially true in light of the Public Trust Doctrine.

The Public Trust Doctrine states that navigable waters are owned by the state government and held in trust for the public. The boundary typically begins at either the high or low water

\[98 \text{ Id.} \]
\[99 \text{ Id.} \]
\[100 \text{ Rev. Rul. 2001-60, 2001-2 C.B. 587.} \]
\[101 \text{ See Monroe Cnty. Growth Mgmt. Div. ET AL., supra note 5; TITUS & RICHMAN, supra note 5, at 28.} \]
\[102 \text{ As much as 20,061 km}^2 \text{ of land near the Atlantic Ocean and Gulf of Mexico may be flooded with water in the next century due to sea level rise. TITUS & RICHMAN, supra note 5, at 25.} \]
\[103 \text{ SLADE ET AL., supra note 6, at 3. The Public Trust Doctrine is an umbrella term for a number of state doctrines. Shively v. Bowlby, 152 U.S. 1, 26 (1894) ("there is no universal [Public Trust Doctrine], but that each state has dealt with the lands under the tide waters within its borders according to its own views of justice and policy . . . as it considered for the best interests of the public"). Nevertheless, each doctrine has similar consequences; navigable waters become part of the public trust. See e.g., Shively v. Bowlby, 152 U.S. 1 (1894) (discussing Oregon’s Public Trust Doctrine); Phillips Petroleum Co. v. Mississippi, 484 U.S. 469 (1988) (discussing Mississippi’s Public Trust Doctrine); Arnold v. Mundy, 6 N.J.L. 1 (1821) (discussing New Jersey’s Public Trust Doctrine); Thiesen v. Gulf, F. & A. Ry. Co., 78 So. 491, 500 (1918) (discussing Florida’s Public Trust Doctrine); LA. CIV. CODE Art. 450-51 (the Louisiana Civil} \]
mark and extends through the state’s navigable water.\textsuperscript{104} Typically, rivers, lakes, and ocean shores are all affected by the Public Trust Doctrine.\textsuperscript{105} As such, a person cannot own the land beneath the ocean, rather, it is held in trust for the public. The effect of the Public Trust Doctrine means that coastal property which sinks under the rising sea is no longer the property of the original owner. Rather, this land is converted into public property.

Now assume Charlotte’s property runs 50 meters along the coast and 10 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 over 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 her 500 m$^2$ 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. This rule would not apply to all coastal property, only property used in a trade or business or for the production of income.\textsuperscript{106} However, there are still resorts, rental homes, and businesses which could benefit from this rule.

To depreciate an asset, the taxpayer must prove that it has a useful life.\textsuperscript{107} The taxpayer also has the burden of providing the IRS with the cost of the property.\textsuperscript{108} However, only a reasonable estimate of an asset’s life is required for determining whether it is depreciable.\textsuperscript{109}


\textsuperscript{105} Robert Thompson, \textit{Property Theory and Owning the Sandy Shore: No Firm Ground to Stand On}, 11 \textit{Ocean and Coastal L.J.} 47, 49-50 (2006). Other states define the line as the debris line, where natural vegetation begins, or where there is dry sandy beach. \textit{Id.}


\textsuperscript{107} Pohlen v. Comm’r, 165 F.2d 258, 259 (5th Cir. 1948).
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 which 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 $1/50^{th}$ of the value per year.\footnote{110}

C. Apportioning to Create Increased Benefits for Land Owners

Some types of property are more valuable than others. Coastal property is often purchased at a premium.\footnote{111} Even if a specific piece of property will not become 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.

The IRS has ruled that 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.\footnote{112} The basis applied to each part of a larger property should be equitably apportioned.\footnote{113} Often, this means that the basis should be reduced by the percentage of the land sold.\footnote{114} However, there are also times when the value of property should be equitably apportioned based on a different metric.

\footnote{108} 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 often mention the price paid. \textit{See} Keith H. Hirokawa, \textit{Property as Capture and Care}, 74 ALB. L. REV. 175, 185 (2010/2011).\footnote{109} Hawkins v. Comm’r, 713 F.2d 347, 353 (8th Cir. 1983).

\footnote{110} 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. \footnote{111} \textit{See} Thompson, \textit{supra} note 104, at 47, 71.

\footnote{112} Treas. Reg. § 1.61-6 (1960).\footnote{113} \textit{Id.}\footnote{114} Example 1 in Treas. Reg. § 1.61-6. This would be the case when the land is generally homogenous. If a homogenous 100 acre farm had a basis of $100,000 and 25% of it was sold, the basis should be reduced to $75,000.
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.\footnote{Example 2 in Treas. Reg. §1.61-6.}

Different types of land have different values. Beachfront property is often thought of as some of the most valuable private property.\footnote{See Thompson, \textit{supra} note 104, at 47, 71.} Whether it is the scarcity of the beachfront, the proximity to the ocean, or the sandy beaches, beachfront property is considered a desirable place to live and play.\footnote{See \textit{id.} at 57-58, 68.} While some states have restricted the rights of private citizens to own the beach,\footnote{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 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 (1974) (holding that public access to some private beaches in Florida has become a local custom and should remain so); \textit{STEVEN W. BENDER, CASTLES IN THE SAND: BALANCING PUBLIC CUSTOM AND PRIVATE OWNERSHIP INTERESTS ON OREGON’S BEACHES 77 OR. L. REV. 913, 913 (1998) (discussing Oregon’s extensive history of allowing public access to privately owned beaches).}} most still allow an individual to own the beach and exclude others from trespassing.\footnote{Thompson, \textit{supra} note 104, at 47, 68.}

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.\footnote{See \textit{id.} at 57, 58, 68.} 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.\footnote{Because it may take global warming centuries to completely flood the property.} 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.\textsuperscript{122} 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.\textsuperscript{123}

For example, imagine Charlotte’s coastal property. Rather than having her entire property spanning below 0.33 meters, assume that she owns 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 contains a large portion of the value of her property, may become completely inundated. 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 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.\textsuperscript{124} 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.\textsuperscript{125}

\begin{footnotesize}
\textsuperscript{122} See Treas. Reg. §1.61-6 (1960).
\textsuperscript{123} See Example 2 in Treas. Reg. §1.61-6.
\textsuperscript{124} $600,000 divided by 50 years.
\textsuperscript{125} This assumes that the market for land has not increased substantially over the fifty years. See Part III below for a discussion of depreciating property which may appreciate in value over time.
\end{footnotesize}
D. Implementing a Depreciating Land Scheme

In light of global warming’s adverse effect on coastal property, the government\textsuperscript{126} should recognize that coastal land is now a wasting asset and allow taxpayers to take a depreciation deduction on qualifying property. Today, real property must be depreciated using MACRS.\textsuperscript{127} 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.\textsuperscript{128} Non-residential real property is depreciated over a period of 39 years.\textsuperscript{129} Recognizing the extended period in which real property depreciates,\textsuperscript{130} the IRS should categorize coastal land as a 50-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.\textsuperscript{131} But by recognizing that some land does waste away, the IRS can allow coastal property owners to depreciate their property and recognize the 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 vast majority, of their property value over the next fifty years without being able to deduct these losses in the years they occur.\textsuperscript{132}

\textsuperscript{126} The status of land as a non-depreciable asset can be changed by the IRS, the courts, or Congress. \textit{See} Part VI of this Article for an explanation of how coastal property can be adopted as a depreciable asset.
\textsuperscript{127} \textit{See} I.R.S. Pub. 946, 11 (2010). Real property depreciation under MACRS applies to buildings, not land.
\textsuperscript{128} \textit{Id.} at 39.
\textsuperscript{129} \textit{Id.}
\textsuperscript{130} Real property has the longest depreciation period under MACRS. \textit{Id.}
\textsuperscript{131} To ensure that this treatment is only given to property which actually has a reasonably ascertainable life, the IRS may require a land survey determining the range of elevation of the taxpayer’s property.
\textsuperscript{132} The ability to deduct the cost of the property over its useful life is the whole purpose of depreciation. ROSENBERG & DAHER, \textit{supra} note 17, at 191.
III. ARGUMENTS AGAINST LAND AS A DEPRECIABLE ASSET

Even if the government recognizes that land is a wasting asset, four major issues must be addressed. 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 deprecating 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 10 years? After 10 years of depreciation, her basis will be 20% of its original value. However, what if in those 10 years the cost of land rises considerably? Now, after decreasing her basis each year, and with the price of land increasing, the Charlotte has a gain on her sale. Should her land still be depreciable even if it appreciates in value?

In Fribourg Navigation Company v. Commissioner the taxpayer purchased a Liberty ship for $469,000. 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. 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 amount as opposed to its depreciated value of just less than $200,000.

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133 This is because the property should be depreciated over fifty years and 10/50 = 20%.
135 383 U.S. 272, 274.
136 Id. at 274.
137 Id. at 274-75.
The taxpayer sold the 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{138} The Commissioner disallowed the depreciation deduction because the ship did not depreciate in value over the year.\textsuperscript{139} The Court held that depreciation is merely an estimate of how to allocate an expense over a period of time and a market fluctuation should not change what property the process is applied to.\textsuperscript{140} As such, the Court held that an asset that appreciates in fair market value may be depreciated over the same period.\textsuperscript{141}

In \textit{Simon v. Commissioner}, the taxpayers bought two violin bows, one for $30,000 and one for $21,500.\textsuperscript{142} 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{143} The taxpayers began taking depreciation deductions on their bows.\textsuperscript{144} The Commissioner disallowed the deductions and argued that to depreciate property you need both wear and tear and a determinable life and that the bows’ appreciation in value and antique character made depreciation inappropriate.\textsuperscript{145} 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{146} Because the bows were losing their tonal quality, and thus becoming exhausted for the purpose

\textsuperscript{138} \textit{Id.} at 275.
\textsuperscript{139} \textit{Id.} at 275-76.
\textsuperscript{140} \textit{Id.} at 277.
\textsuperscript{141} \textit{Id.}
\textsuperscript{142} \textit{Simon v. Comm’r}, 68 F.3d 41, 43 (2nd Cir. 1995).
\textsuperscript{144} \textit{Simon}, 68 F.3d at 43.
\textsuperscript{145} \textit{Id.} at 44.
\textsuperscript{146} \textit{Id.} at 47.
of making music, their appreciation in value as an antique did not disqualify depreciation deductions.\textsuperscript{147}

\textit{Fribourg} and \textit{Simon} both stand for the idea that a taxpayer may take depreciation deductions on a piece of property which has appreciated over time. With coastal property, each year the size of the taxpayer’s property diminishes as a result of the rising sea level. While the area of property the taxpayer owns diminishes each year, the value of the property may not diminish at an equal rate.\textsuperscript{148} At first, the value of the property may actually increase despite a decrease in area.\textsuperscript{149} Nevertheless, as the holdings in \textit{Fribourg} and \textit{Simon} illustrate, a piece of 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.

\textbf{B. The Incredible Difficulty in Estimating the Useful Life of Coastal Property}

Another argument against land as a depreciable asset involves the requirement that depreciable assets have estimable lives.\textsuperscript{150} According to the 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 for the production of income.”\textsuperscript{151} Some critics of

\textsuperscript{147} Id. Similarly, in \textit{Liddle v. Commissioner} the taxpayer, a professional musician, purchased a seventeenth century viol. 65 F.3d 329, 330 (3rd 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.

\textsuperscript{148} In fact, the decreases in both value and size will vary by year since neither global warming nor markets grow at an even pace.

\textsuperscript{149} The finite quantity of land and previous market booms make such an issue a very real possibility in the short run. See \textit{CASE}, supra note 134, at 8.

\textsuperscript{150} Treas. Reg. 1.167(a)-1 (1960).

\textsuperscript{151} Id.
the proposal of land as 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.\textsuperscript{152} 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.\textsuperscript{153} 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 39 years.\textsuperscript{154} However, few buildings actually last for exactly 39 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,\textsuperscript{155} the College of William and Mary’s Christopher Wren Building was built in 1700,\textsuperscript{156} and the Pyramids of Giza were built roughly 4500 years ago.\textsuperscript{157}

\textsuperscript{152} See Titus & Richman, \textit{supra} note 5, at 1 (predicting a one meter rise could occur by 2100); Monroe Cnty. Growth Mgmt. Div. \textit{et al.}, \textit{supra} note 4 (predicting a rise between 1 and 3 feet).
\textsuperscript{153} Hawkins \textit{v. Comm’r}, 713 F.2d 347, 353 (8th Cir. 1983).
\textsuperscript{154} I.R.S. Pub. 946, 39 (2010).
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 years suggested above—this time period is no more arbitrary than the 39 years given to buildings.\textsuperscript{158}

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.\textsuperscript{159} Others spend exorbitant amounts of money to pump in sand from other locations to build sand dunes, a process called beach nourishment.\textsuperscript{160} Each of these methods should substantially increase the life of coastal property, but at great costs.\textsuperscript{161}


\textsuperscript{158} Trademarks are another example of an asset that has a useful life which is very difficult to determine. See 15 U.S.C. § 1059 (2006). According to the Lanham Trademark Act, registered trademarks can be renewed every ten years. Id. However, a trademark is amortizable over a fifteen-year period. I.R.C. § 197. 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 than depreciation; the word amortization is used instead of depreciation for intangible assets. As a result, a taxpayer which purchases a trademark, purchases property with a possibly indefinite life but is allowed to take amortization deductions. While trademarks must be renewed, the costs of these renewals are treated as separate acquisitions. 15 U.S.C. § 1059; I.R.C. § 197. This draws a very similar comparison to coastal land which would deteriorate in a finite number of years if not for repairs.


\textsuperscript{161} 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. Elizabeth C. Black, supra note 159, at 375; David Reyes, Hoping to Turn Tide Against Seawall Surfrider Foundation Battles a Plan to Bolster a
However, even if property owners can extend the life of their property through sea walls and beach nourishment, this ability 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.\(^\text{162}\) Rather, the improvement to the property is treated as a separate depreciable piece of property.\(^\text{163}\) 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.\(^\text{164}\) 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.\(^\text{165}\)

\(^\text{162}\) I.R.S. Pub. 946, 13 (2010).
\(^\text{163}\) Id. at 39. Many types of improvements to land are currently considered non-depreciable. While Treas. Reg. 1.167(a)(2) 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. 29 T.C. 1205, 1220-21 (1958). The court ruled that depreciation deductions would be allowed on clearing, grading, and landscaping required 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.
\(^\text{164}\) While minor repairs to property may be deducted, something which substantially prolongs the useful life of property must be capitalized. Rev. Rul. 2001-4, 2001-1 C.B. 295.
\(^\text{165}\) The recovery period for land improvements under MACRS is fifteen years. I.R.S. Pub. 946, at 103.
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.166 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, goodwill167 and many other intangible assets were not amortizable.168 Goodwill was not considered amortizable because it had no useful life.169 In fact, even when goodwill diminishes it can regenerate.170 However, in the early 1990s Congress passed the Omnibus Budget Reconciliation Act of 1993 which created section 197 of the IRC and allowed the amortization of goodwill and many other intangible assets.171 Section 197 only

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166 See e.g., TITUS & RICHMAN, supra note 5, at 1, 29.
167 Goodwill is the added benefit from a “business’s reputation, patronage, and other intangible assets” that makes the company more valuable as a whole than the sum of its parts. BLACK’S LAW DICTIONARY 763 (9TH ED. 2009).
170 Id.
171 Catherine L. Hammond, supra note 168, at 933. All section 197 intangible assets are amortized over a fifteen-year period. I.R.C. § 197 (2006). This uniform amortization period may seem arbitrary as some forms of intangible property have a very short useful life, such as a one-year covenant not to compete, while others have incredibly long lives, such as copyrights which typically last for seventy years after the author’s death. 17 U.S.C. § 302 (2006). Nevertheless, both one-year covenants not to compete and copyrights must be amortized over a fifteen-year period. I.R.C. § 197.
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 coastal 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 section 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.

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174 Id.
176 See e.g., Treas. Reg. § 1.197-2.
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.\(^{177}\) Similarly, if the deductions are only allowed proactively, 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.\(^{178}\) 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.\(^{179}\) Due to this appreciation, many coastal properties will sell for more than they were purchased, even if they have been reduced substantially in size.\(^{180}\) This depreciation in

\(^{177}\) Treas. Reg. § 1.167(a)-2.


\(^{179}\) Between 2000 and 2005 the value of all residential real property in the United States increased 60%. Half of this increase reflects a rise in land prices over that period. CASE, supra note 134, at 8.

\(^{180}\) However, due to global warming, these appreciated values will eventually begin to plummet
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.\(^\text{181}\) While this may seem strange, this is the 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

once the usefulness of the land becomes reduced.\(^{181}\) 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 which occurred as a result of miscalculated depreciation. I.R.C. §§ 1245, 1250 (2006). However, this Article 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 which was depreciated on a straight line basis. Id. As such, if coastal land is recognized as a depreciable asset, and only on property placed in service after the change—the same method of adoption as goodwill—then recapture will not apply to coastal property.
pay the money back at the same tax rate. As such, a corporate entity will only receive a tax deferment and not a tax reduction.

The real purpose of depreciation is to benefit the property owners who sell their land at approximately the same value as their reduced basis. Imagine Charlotte instead sold the property for $500,000 after owning it for 25 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 which 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. 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.

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182 Assuming that tax rates remain the same and the taxpayer remains in the same tax bracket.
183 However, every tax deferment is, in effect, a tax reduction due to the time value of money. Christopher H. Hanna, *The Real Value of Tax Referral*, 61 Fla. L. Rev. 203, 247 (2009). See also note 40 of this Article.
184 After the basis had been reduced yearly due to the depreciation adjustments.
185 The IRS will not give you back 35% of your losses, it merely allows you to reduce the amount of taxes owed.
V. PLEADING IN THE ALTERNATIVE: WHY COASTAL PROPERTY OWNERS SHOULD RECEIVE A SECTION 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.186 The depletion deductions are intended to allow a property owner to recover some of the cost of acquiring an exhaustible natural deposit.187 Among the many natural resources recognized under section 611 is sand.188 A coastal property owner who uses her beach to appeal to tourists has purchased a natural deposit, the sandy beach.189 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 section 611. In A. Duda & Sons v. U.S., the taxpayer attempted to take a section 611 depletion deduction for peat soil which would be exhausted within a calculable period of time.190 The court noted that while the peat soil was a natural deposit under section 611 and had a useful life, the taxpayer did not deplete the resource

189 IRC §§ 611 & 613 also reference a number of other natural deposits which may, instead of sand, constitute the makeup of coastal property. While this argument is made for coastal property which 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 similarly becoming inundated by the rising sea level. See Treas. Reg. § 1.611-1 (1960) (defining which types of property apply to § 611); I.R.C. § 613.
190 560 F.2d 669, 671 (1977).
because it remained in place. As such, the court ruled that for a deposit to be subject to section 611, it must be “depleted by extraction.”

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 section 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 Article, 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

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191 *Id.* at 672, 678.
192 *Id.* at 678.
194 Treas. Reg. 1.611-1.
195 *See e.g.*, Callahan Mining Corp. v. Comm’r, 428 F.2d 721, 722 (2nd Cir. 1970); Laudenslager v. Comm’r, 305 F.2d 686, 687 (3rd Cir. 1962); Comm’r v. I.A. O’Shaughnessy, Inc., 124 F.2d 33, 34 (10th Cir. 1941).
196 Treas. Reg. 1.611-1.
other hand, determining whether income is derived from the extraction may prohibit coastal property owners from taking a section 611 depletion deduction.

Most cases of section 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 section 611. In a section 611 analysis judges see the deduction as an “act of grace” and allow 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.\footnote{Parsons v. Smith, 359 U.S. 215, 220 (1959) (citing Helvering v. Bankline Oil. Co, 303 U.S. 362, 366 (1938); Comm’r v. Sw. Exploration Co., 350 U.S. 308, 312 (1988)).} While 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 section 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.\footnote{This is unlike a common section 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.}

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 section 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 section 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.199 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.200 However, as the IRS’s main goal is to collect revenues, the agency is less likely to promote policies which reduce tax revenues.201

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.202 The court system’s primary goal is to seek justice, rather than collect revenues. Also, the history of land as a non-depreciable

199 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).
200 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—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).
202 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.
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, surveys have shown that Congress is more likely to codify Supreme Court decisions than overrule. As such, if the issue reached the Supreme Court, a win could call the attention of Congress to codify the decision and increase the legitimacy of coastal land as a depreciable asset.

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.

203 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 to both Treas. Reg. 1.167(a)-2 and Hoboken Land & Improvement Co.); Hoboken Land & Improvement Co. v. Comm’r, 138 F.2d 104, 106 n.2 (3rd Cir. 1943) (citing Art. 162 of Treas. Regs. 33, 45, 62, 65, 69; Art. 202 of Treas. Regs. 74, 77; Art. 23(1)-2 of Treas. Regs. 86, 94).
206 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).
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 Article 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{207} By beginning the debate now, legal experts can decide how to react to the vulnerability of coastal land and how U.S. tax policy should be adjusted.

\textsuperscript{207} ENVIRONMENTAL PROTECTION AGENCY, \textit{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, \textit{Global Warning isn’t Working: It Will Take Bodies on the Street Before We See Serious Global Action to Stop Catastrophic Climate Change}, THE GUARDIAN (U.K.), November 7, 2006 (reporting a likely 2-5 degree increase in global temperatures which will increase the melting of glaciers and accelerate the rise in sea level).