



LINCOLN INSTITUTE
OF LAND POLICY

Improving the Property Tax by Expanding Options for Monthly Payments

Working Paper WP18AL1

Adam H. Langley

Lincoln Institute of Land Policy

January 2018

The findings and conclusions of this Working Paper reflect the views of the author(s) and have not been subject to a detailed review by the staff of the Lincoln Institute of Land Policy. Contact the Lincoln Institute with questions or requests for permission to reprint this paper.

help@lincolninst.edu

© 2018 Lincoln Institute of Land Policy

Executive Summary

For roughly half of U.S. homeowners, the property tax is unlike practically any other bill or tax because it is paid in just one or two large lump sums each year rather than in smaller (monthly) payments. This payment schedule appears to cause several problems for homeowners and local governments; it can create financial challenges for households, increase tax delinquency, foster political opposition to the property tax, and requires governments to deal with irregular revenue inflows.

Fortunately, there is a fairly simple solution to this problem: local governments can expand options to pay property taxes on a monthly basis. In the United States, there are two existing models for paying property taxes monthly: 1) prepayment programs that allow taxpayers to apply to pay monthly and have the funds accumulate in an escrow account to pay off their annual or biannual tax bill; and 2) a monthly installment plan in Milwaukee, Wisconsin, where every tax bill includes the option to either pay in full or in monthly installments.

This report describes these two approaches for allowing monthly property tax payments and outlines some best practices that can enhance the effectiveness of these programs. Some key findings from the report include:

Roughly half of U.S. homeowners pay their property taxes in just one or two large lump sums each year. In the U.S., there are two key features of the property tax system that affect the frequency with which homeowners pay their taxes.

- **Property tax escrow accounts managed by lenders:** Many homeowners have tax escrow accounts managed by their lender. The owner pays their property taxes as part of their monthly mortgage bill, the funds accumulate in their escrow account, and then the lender uses funds in the escrow account to pay the owner's property tax bill. However, only 44 percent of U.S. homeowners paid their property taxes along with their monthly mortgage payment in 2015. The remaining 56 percent either did not have a mortgage (36.6 percent), or they had a mortgage but did not escrow their property taxes (19.8 percent). Seniors are far less likely to pay their property taxes along with their monthly mortgage bill. Only 20 percent of homeowners 65 years or older had property tax escrow accounts, compared to 55 percent of homeowners under age 65. There are also large variations across states in the share of homeowners with escrow accounts, ranging from less than 40 percent in 13 states—including California, Pennsylvania, and Texas—to over 60 percent in Colorado and Maryland.
- **Installment payments:** In 36 states, state law provides for installment payments, which are used to break the annual property tax bill into smaller increments, usually two biannual payments but sometimes three or four payments per year.

Billing property taxes as large lump sums causes problems for both homeowners and local governments. While there has not yet been extensive study of these issues, evidence suggests that collecting property taxes as large lump sum payments causes several problems.

- **Creates financial challenges for homeowners who struggle to save for large expenses:** Very few homeowners can afford to pay an annual or biannual property tax bill out of their monthly cash flow; they need to save in advance. However, about half of

American households are financially insecure, and have practically no savings to cover an unexpected expense. If these households have not saved in advance for their property taxes, an annual or biannual tax bill could easily force them to either: 1) borrow money and accrue debt, often credit card debt; 2) become delinquent in paying their property taxes; and/or 3) skip some other bill payments to pay their property taxes, such as becoming late on a mortgage payment.

- **Increases property tax delinquency:** Evidence suggests that as the number of tax installments decreases, the property tax delinquency rate increases. Homeowners who become delinquent face high interest rates on their delinquent taxes, typically face penalties and fees, and can eventually lose their homes through property tax foreclosure.
- **Fosters political opposition to the property tax and erodes municipal fiscal health:** Research shows that paying in large lump sums makes the property tax a very salient tax, which increases political opposition to the tax, and can in turn result in property tax limits and other policies to reduce property taxes. Many of these policies have serious unintended consequences and erode the fiscal health of local governments.
- **Irregular revenue inflows for local governments:** Collecting taxes in large lump sums means that governments receive property tax revenue just once or twice per year, and need to rely upon short-term borrowing and/or hold large amounts of idle cash in safe and liquid assets that earn little interest, in order to meet their regular spending requirements.

In the United States, there are two approaches used to allow monthly property tax payments.

- **Prepayment programs administered by local governments:** At least sixteen states have local option programs allowing tax collectors to establish prepayment programs for property taxes where taxpayers can apply to pay on a monthly basis. The monthly payments are held in an escrow account managed by the city or county treasurer, where the payments accumulate and are then used to pay off a taxpayer's annual or biannual property tax bill, and at that point the funds are distributed to taxing districts. States use a variety of names for these programs, including prepayment agreements, property tax escrow accounts, monthly installments, early payment plans, or simply monthly property taxes. While the number of localities that have established prepayment programs is still small, there are several large jurisdictions that do allow monthly prepayments, including Indianapolis, Travis County (Austin, TX), and the largest counties in Ohio (Cuyahoga, Franklin, and Hamilton).
- **Monthly installments:** In Milwaukee (WI), every tax bill includes the option to either pay in full or in monthly installments, and taxpayers are automatically enrolled in the monthly installment plan when they make their first monthly payment. Taxpayers do not need to submit an application to pay monthly, and there are no escrow accounts so the funds are distributed to local taxing districts every month and could be spent immediately. Taxpayers can set up automated monthly transfers from their checking or savings account, or mail a check each month.

Our research has identified some best practices that can enhance the effectiveness of monthly property tax payment plans.

- **Allow taxpayers to pay monthly without requiring an application:** Arguably the most important difference between the prepayment programs and Milwaukee's monthly installment plan is that only Milwaukee's plan allows taxpayers to enroll in the monthly

payment plan without first submitting an application. This difference is likely the biggest reason why participation rates are 5-10x higher in Milwaukee than in jurisdictions with prepayment programs that require an application.

- **Create established processes that make it easy for taxpayers to pay monthly:** Some jurisdictions that allow prepayments use ad hoc processes to reach payment agreements with individual homeowners. Other localities have more established processes, where the treasurer's office provides application forms, estimates taxpayers' monthly payments, and provides all necessary information about the program on their website. These more formal programs make it easier for taxpayers to pay monthly and tend to have higher participation rates.
- **Encourage automated monthly payments, but provide other options:** Many local governments allow taxpayers to establish automated monthly payments with transfers from their checking or savings accounts, which eliminates the need for them to remember to make monthly payments.
- **Monthly payment plans should be authorized as a local option, but not required for all governments:** There are large differences across local governments in the upfront costs to start accepting monthly payments, depending on whether their existing software for tax collection allows them to track monthly payments. Some jurisdictions could start accepting monthly payments for practically no cost, while others would need to spend millions of dollars to implement a new property tax collections software module. While these upfront costs can be substantial, the ongoing administrative costs and staff time needed to manage monthly payment programs are small once the necessary software is in place, according to interviews with tax collectors.
- **Consider shared service arrangements to reduce the cost of tax collections:** If new collections software is needed to start accepting monthly payments, governments can substantially reduce these cost by sharing collections software. For example, the Iowa County Treasurers eGovernment Alliance allows taxpayers in 56 of the state's 99 counties to set up monthly recurring property tax payments.
- **Minimize transaction costs for monthly payments:** To avoid penalizing taxpayers for making monthly payments, localities can cover transaction costs for payments made from checking or savings accounts. Local governments can use a request for proposals to minimize these transaction costs by soliciting bids from multiple companies that provide these payment services. For example, in Milwaukee, the cost for automated monthly transfers is just 1.5 cents per payment, with the city government covering this cost.
- **Use outreach and advertising to increase participation rates:** To make sure taxpayers know about the option to pay monthly, tax collectors could include a separate flyer with the tax bill publicizing the option to pay monthly, or put a highly visible notice on the tax bill itself or on the envelope used to mail out tax bills.

About the Author

Adam H. Langley is a senior research analyst in the Department of Valuation and Taxation at the Lincoln Institute of Land Policy. His research focuses on state and local public finance, with dozens of publications, primarily on property tax relief programs, business tax incentives, the charitable property tax exemption, and nonprofit payments in lieu of taxes. Adam's research has been covered in hundreds of media outlets, including the *New York Times*, *Wall Street Journal*, *Washington Post*, *Boston Globe*, *The Economist*, and *Governing*. In addition, he regularly speaks to policymakers, practitioners, and researchers, with presentations to groups such as the National Conference of State Legislatures, Government Finance Officers Association, International Association of Assessing Officers, and the National Tax Association. He has also created a number of data resources available on the Lincoln Institute's website, including the *Fiscally Standardized Cities* database, which provides detailed data on revenues and spending for 150 large U.S. cities. He previously worked in the New York State Assembly. Adam earned his B.A. in political studies from Bard College and his M.A. in economics from Boston University.

Adam H. Langley
Senior Research Analyst
Department of Valuation and Taxation
Lincoln Institute of Land Policy
113 Brattle Street
Cambridge, MA 02139
617-503-2117
ALangley@lincolninst.edu

Acknowledgements

Special thanks go to the tax collectors and other practitioners who were interviewed for this report and whose insights are the basis for most of the report's findings: Tonya Blackwell, Linda Bridge, Spencer Coggs, Alan Dornfest, Michelle French, Debbie Kauffman, Melinda Marshall Kennett, Jim Klajbor, Rex Norman, Sally Powers, and David Reinhardt. I greatly appreciate the excellent work done by Vincent Reitano who wrote a related Lincoln Institute working paper on "Investing in Collections Software to Allow for Monthly Property Tax Payments," and who also reviewed a draft of this report. Mike Mucha was also instrumental in completing the paper on collections software. Colleagues from the Lincoln Institute significantly improved this report by providing feedback at many stages of the research project, including reviewing drafts of the report: Daphne Kenyon, Semida Munteanu, Andrew Reschovsky, Joan Youngman, and Sydney Zelinka. Several of the tax collectors who were interviewed also reviewed a draft of the report and provided useful comments, including Spencer Coggs, Michelle French, and Jim Klajbor.

Table of Contents

Introduction	1
How Property Taxes are Currently Paid in the United States.....	1
Property Tax Escrow Accounts Administered by Mortgage Lenders.....	2
Installment Payments.....	4
Summary.....	5
Problems Caused by Billing Property Taxes as Large Lump Sum Payments	5
Creates Financial Challenges for Homeowners Who Struggle to Save for Large Expenses	6
Increases Property Tax Delinquency.....	7
Fosters Political Opposition to the Property Tax and Erodes Municipal Fiscal Health.....	10
Irregular Revenue Inflows Impose Costs on Local Governments	10
Programs that Allow Monthly Property Tax Payments	10
Prepayment Programs	11
Payment Options	12
Escrow Accounts to Hold Monthly Payments	13
Reconciling Monthly Payments with Final Tax Bill	13
Monthly Installments in Milwaukee	14
Participation Rates for Monthly Payment Plans	15
Recommendations for Monthly Property Tax Payment Plans.....	17
Allow Taxpayers to Pay Monthly Without Requiring an Application.....	17
Create Established Processes that Make it Easy for Taxpayers to Pay Monthly	17
Encourage Automated Monthly Payments, But Provide Other Options.....	18
Consider Whether to Require Payments Every Month	18
Participation in a Monthly Payment Plan Should be Optional.....	19
Minimize Transaction Costs and Other Disincentives for Making Monthly Payments	20
Use Outreach and Advertising to Increase Participation Rates.....	20
Other Recommendations	20
Costs to Implement and Administer Monthly Payment Plans	21
Conclusion	24
References.....	25
Appendix Table 1: The Prevalence of Property Tax Escrow in 50 States (2015)	27
Appendix 2: Summary of State Statutes on Prepayments for Property Taxes and Related Programs (2016).....	29
Appendix 3: Experts Interviewed for this Study.....	35

Introduction

For roughly half of U.S. homeowners, the property tax is unlike practically any other bill or tax in one important respect: it is paid in one or two large lump sums each year rather than being spread out into smaller (monthly) payments. This is very different than how most taxpayers pay their income taxes and sales taxes, which occurs automatically and in small increments via income tax withholding and sales taxes on individual purchases. Similarly, most major bills are paid monthly, including mortgage payments, utilities, cable/internet, cell phone plans, and more.

The fact that property taxes are billed in one or two large lump sums for so many homeowners appears to cause significant problems for both homeowners and local governments. There has not yet been extensive study of these issues. The evidence that does exist suggests that collecting property taxes as large lump sum payments creates financial challenges for some households and drives some to either become delinquent on their property taxes, or forces them to borrow money or skip other bills to pay their property taxes. For local governments, there is evidence that billing in large lump sums increases property tax delinquency and political opposition to the property tax, and it requires governments to deal with irregular revenue inflows.

Fortunately, there is a fairly simple solution to this problem: tax collectors can expand options to pay property taxes on a monthly basis. In the United States, there are two existing models for paying property taxes monthly. At least sixteen states have local option programs allowing tax collectors to establish prepayment programs for property taxes where taxpayers can apply to pay monthly and have the funds accumulate in an escrow account to pay off annual or biannual installments (with biannual installments, taxpayers make two payments per year). A second approach is used in Milwaukee, Wisconsin where every tax bill includes the option to either pay in full or in monthly installments, so there is no need to submit an application to pay monthly and there are no escrow accounts so the funds are immediately available to local taxing districts.

This paper first describes how property taxes are currently paid in the United States, including some data on the share of homeowners paying their property taxes as part of their monthly mortgage payment and variations across states in the number of installment payments. The paper then presents some evidence on possible negative consequences of billing in large lump sums, describes the two approaches used in the United States to allow taxpayers to pay property taxes monthly, outlines some best practices for these programs, and presents information on the costs to implement and administer monthly payment plans. The findings in the paper are largely based on ten interviews with tax collectors and other experts (see appendix 3), and draw from a review of related research and a survey of state statutes on prepayment programs.

How Property Taxes are Currently Paid in the United States

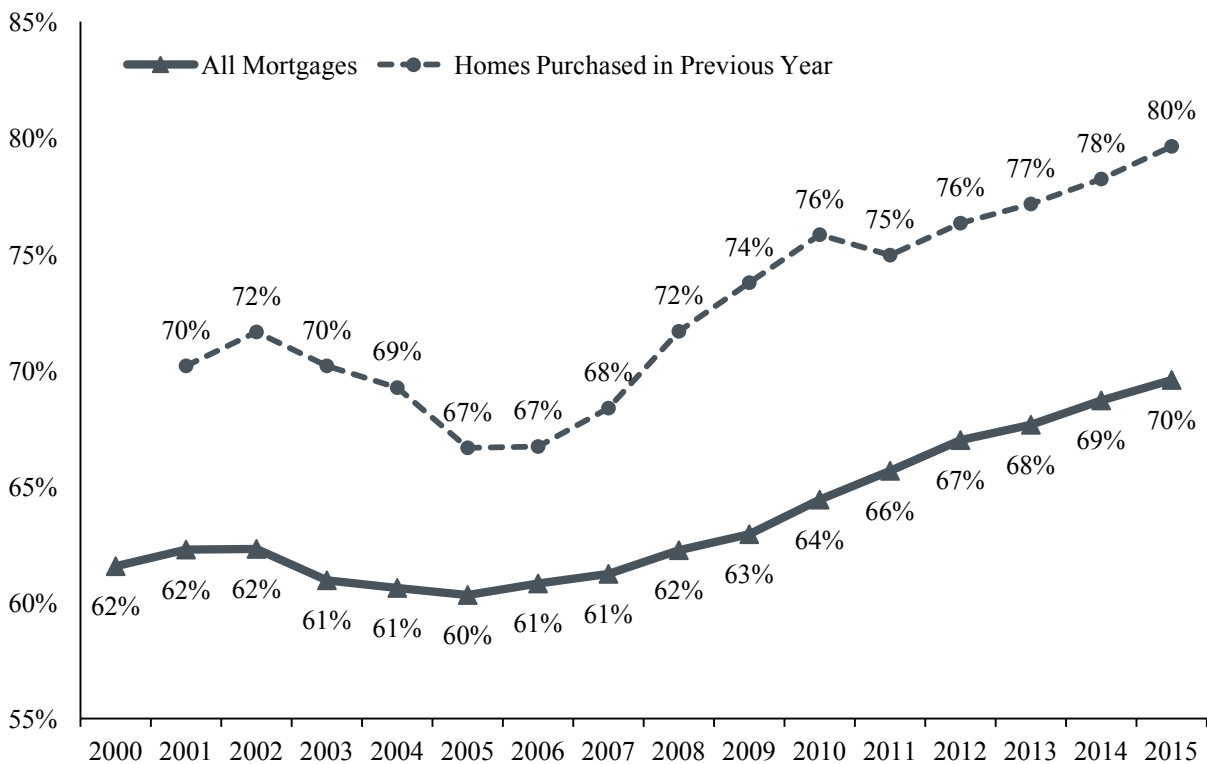
In the United States, there are two key features of the property tax system that affect the frequency with which homeowners pay their property taxes. First, many homeowners have property tax escrow accounts managed by their lender where the owner pays their property taxes along with their monthly mortgage bill, the funds accumulate in their escrow account, and then the lender uses funds in the escrow account to pay the owner's property tax bill. Second, in 36 states, installment payments are used to break the annual property tax bill into smaller

increments, usually two biannual payments but sometimes three or four payments per year. Despite these two features, about half of all U.S. homeowners still pay their property taxes in one or two large lump sums each year.

Property Tax Escrow Accounts Administered by Mortgage Lenders

Property tax escrow accounts are by far the most common way for homeowners to pay their property taxes on a monthly basis, but they are not as widespread as many people believe. In 2015, only 44 percent of U.S. homeowners paid their property taxes as part of their monthly mortgage payment. The remaining 56 percent of homeowners either did not have a mortgage (36.6 percent), or they had a mortgage but did not escrow their property taxes (19.8 percent).¹

Figure 1: Percent of Home Mortgages with Property Tax Escrow



Source: American Community Survey via IPUMS-USA.

Figure 1 shows that the share of mortgage-holders who pay their property taxes monthly as part of their mortgage payment has grown considerably since the peak of the housing bubble, from 60 percent in 2005 to 70 percent in 2015. There has been even faster growth for mortgages on homes purchased in the last year, with 80 percent of mortgages for homes purchased in 2015 including property tax escrow. This growth has been driven both by regulatory changes as well as greater awareness by lenders of the risks posed by property tax foreclosure. For lenders, escrowing property taxes through monthly mortgage payments reduces the risk of losing their collateral due to property tax foreclosure because it forces homeowners to save for their property

¹ 2015 American Community Survey via IPUMS-USA.

taxes. Because of these risks, Fannie Mae and Freddie Mac recommend—but do not require—escrowing property taxes as part of the regular monthly mortgage payment, and thus the majority of conventional mortgages include escrow accounts. In contrast, during the housing boom, roughly 75 percent of subprime borrowers did not have property tax escrow accounts.² Furthermore, survey evidence from 2006 found that property taxes caused as much as 12 percent of subprime mortgage delinquencies, as property tax bills reduced households’ liquidity and thus their ability to make mortgage payments.³ More recently, regulatory changes have required the use of property tax escrow accounts on subprime mortgages.

Despite growing use of escrow accounts for property taxes, more than half of all homeowners still do not pay their property taxes along with their monthly mortgage bill. It is also important to note that seniors are far less likely to use tax escrow than working-age homeowners. In 2015, only 20 percent of homeowners 65 years or older had property tax escrow accounts, compared to 55 percent of owners under age 65 (See table 1). While continuing to expand banks’ use of property tax escrow for mortgage holders would increase the number of borrowers paying their property taxes monthly, this is not an option for homeowners who do not have a mortgage. Since seniors are disproportionately mortgage-free, they could particularly benefit from policies that allow homeowners to pay their property taxes on a monthly basis.⁴

Table 1:
Percent of Homeowners Who Pay Property Tax with Monthly Mortgage Payment (2015)

Under 65	65+	All Ages	
55%	20%	44%	Have Property Tax Escrow <i>Pay property tax as part of mortgage bill</i>
45%	80%	56%	No Property Tax Escrow
20%	16%	20%	<i>Have mortgage, but no property tax escrow</i>
25%	63%	37%	<i>Do not have a mortgage</i>

Source: American Community Survey via IPUMS-USA.

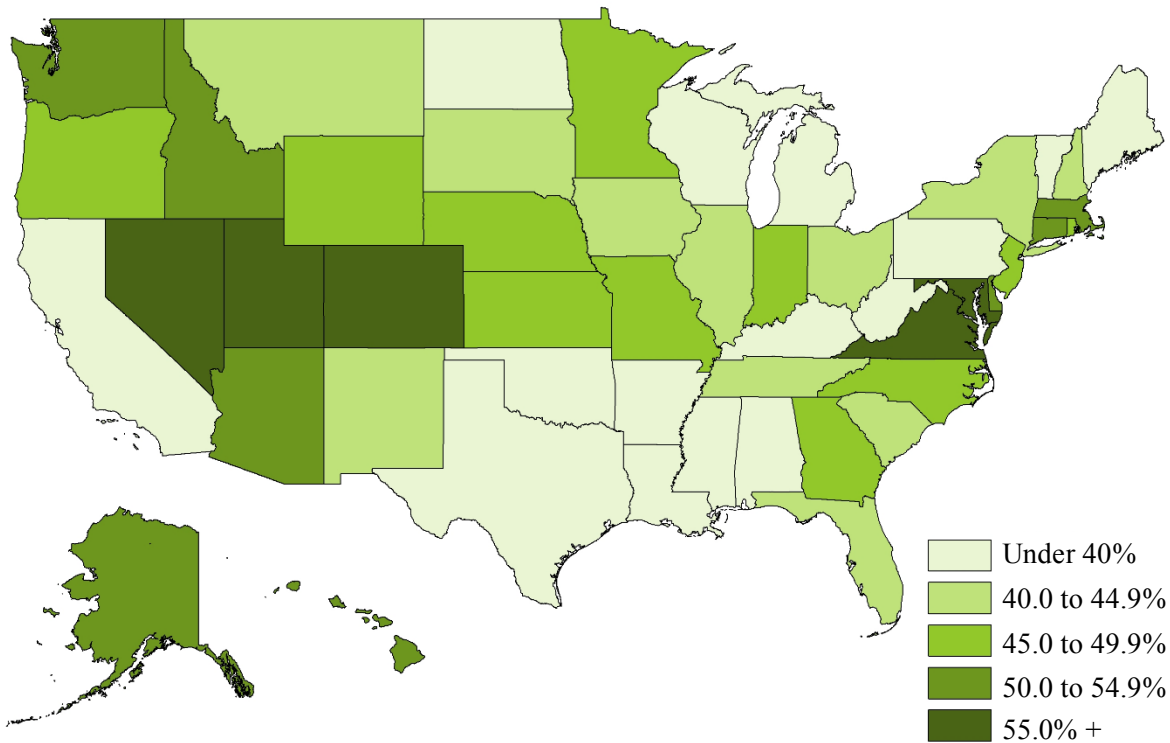
On the low end, less than 30 percent of homeowners pay their property taxes through their mortgage in Vermont and West Virginia. On the high end, more than 60 percent of homeowners use property tax escrow in Colorado and Maryland. On the next page, figure 2 presents data for all states, and there is more detailed data in appendix 1.

² “Partnership Lessons and Results: Three Year Final Report.” See page 31 on Home Ownership Preservation Initiative (July 17, 2006). www.nhschicago.org/downloads/82HOPI3YearReport_Jul17-06.pdf (Cited by Anderson and Dokko 2010, 3).

³ National Mortgage News MortgageWire Archive, March 7, 2005 (Cited by Anderson and Dokko 2010, 2).

⁴ There are also many types of property tax relief programs targeting seniors, include property tax deferrals (Munnell et al. 2017), circuit breakers (Bowman et al. 2009), and homestead exemptions (Langley 2015).

Figure 2: Percent of Homeowners Who Pay Property Taxes Along With Monthly Mortgage Bill (2015)



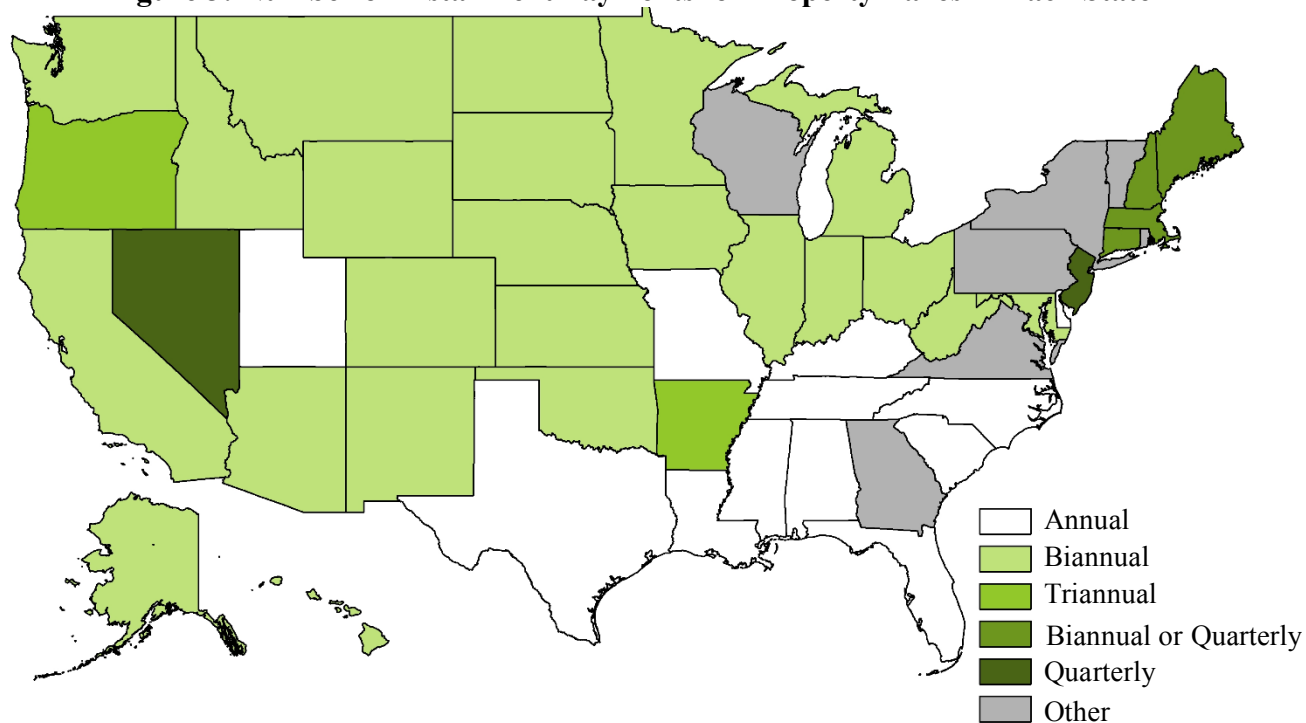
Source: American Community Survey via IPUMS-USA.

These variations are driven in part by differences in the share of homeowners without mortgages. However, when looking at mortgage-holders alone, there are also major differences across states in the share who have escrow accounts, ranging from under 60 percent in Vermont (42%), California (55%), Wisconsin (57%), and West Virginia (57%) to 85 percent in Alaska, Arizona, and Nevada (See appendix table 1). According to experts, the use of escrow varies geographically based in large part on the complexity of the property tax billing system. Lenders are less likely to pay the start-up costs to handle tax escrow “in areas where local jurisdictions have unautomated or idiosyncratic billing systems, [because] the paperwork may differ from property to property, causing errors that can only be eliminated through vigilant attention to individual property tax bills” (Cabral and Hoxby 2012, 12). In contrast, in areas where most jurisdictions have simple paperwork, lenders are more likely to set up a process to handle tax escrow and then ask all borrowers to use escrow even if their specific jurisdiction has more complicated paperwork (Cabral and Hoxby 2012).

Installment Payments

The number of installment payments for property taxes also varies across states and has a direct impact on the frequency with which homeowners pay their property taxes. State law dictates the number of installments that local governments can use for billing property taxes, with some states providing multiple options for installments that localities can choose between.

Figure 3: Number of Installment Payments for Property Taxes in Each State



Source: 2015 U.S. Master Property Tax Guide, Poer (2017), Anderson and Dokko (2009)

Figure 3 shows that property taxes are collected once per year in 12 states, twice per year in 23 states, three times per year in Arkansas and Oregon, and four times per year in Nevada and New Jersey. Other states provide local governments a choice on the number of installments, including annual or biannual in Georgia, annual or quarterly in Rhode Island, biannual or quarterly in four states, and there are five states with more than two options for installments (NY, PA, VA, VT, and WI).

Summary

While the share of mortgage-holders who pay their property taxes along with their monthly mortgage bill has grown considerably in the past decade, 56 percent of all U.S. homeowners still pay their property taxes directly in a few large lump sum payments each year. Among homeowners age 65 or older, fully 80 percent pay their property taxes in few lump sums. In two-thirds of all states, property taxes are paid in just one or two installments per year, and the remaining states allow at most four installments per year. Thus, roughly half of U.S. homeowners pay their property taxes in one or two large lump sums each year.

Problems Caused by Billing Property Taxes as Large Lump Sum Payments

The fact that property taxes are billed in one or two large lump sums for so many homeowners appears to cause significant problems for both homeowners and local governments. While the impact of billing property taxes as large lump sum payments has not been researched extensively, there are compelling arguments for why billing property taxes in this way is problematic and some limited empirical evidence of these problems. In particular, billing in large

lump sums will create financial challenges for some homeowners who struggle to save for large expenses and have not saved in advance for their taxes, driving them to borrow money, become delinquent on their property taxes, or skip other bill payments to pay their property taxes. In addition to increasing the property tax delinquency rate, billing property taxes this way is also likely to foster political opposition to the property tax and lead to policies that erode municipal fiscal health, and means that governments will need to deal with irregular revenue inflows. This limited evidence is not enough to justify requiring all homeowners to switch to monthly payments for property taxes, and in any case, many taxpayers prefer to make just one or two payments per year. However, there are compelling reasons to at least provide the option of monthly payments for taxpayers who would prefer to pay monthly.

Creates Financial Challenges for Homeowners Who Struggle to Save for Large Expenses

Collecting property taxes as large lump sum payments can create serious financial challenges for some homeowners. An annual property tax bill is quite high relative to most households' monthly budgets, and so paying property taxes requires that households save in advance (Cabral and Hoxby 2012). However, there are a large number of American households who are not good savers and live paycheck-to-paycheck (Gabler 2016).

For example, an analysis of survey data by Lusardi et al. (2011) found that nearly half of U.S. households are financially fragile, and would probably be unable to come up with \$2,000 in 30 days for an emergency expense: 28 percent of households would *certainly* be unable to come up with \$2,000, and 22 percent would *probably* be unable to do so. While low income households are more likely to be financially fragile, the relationship between income and financial security is not very strong, and a large number of middle income households are also at risk. Their analysis also revealed a "pecking order" that households tend to use to come up with funds for an unexpected expense, with the majority of households using more than one method:

- Savings: Most households will first draw upon savings (61% of survey respondents said they would draw from savings during a financial emergency), including some who would sell retirement funds and pay a penalty (11% of respondents).⁵
- Help from family and friends (34% of respondents).
- Resort to mainstream credit (31%), primarily using a credit card (21%).
- Work overtime or get a second job (23%).
- Sell possessions, other than their home (19%).
- Use alternative credit (11%), mainly payday loans and pawn shops.

Similarly, a survey by the Federal Reserve Board (2016) showed that 46 percent of Americans would struggle to come up with \$400 to cover an emergency expense.

For homeowners who pay their property taxes in one or two large lump sums each year, their property tax bill will usually be one of the single largest bills they face, because the cost is not spread out like so many other major expenses. For example, in 2016 the median property tax bill was \$2,340, while the median household income for homeowners was \$73,127.⁶ Thus, on an *annual* basis, the typical homeowner spends about 3.2 percent of their income on property taxes.

⁵ Note that the percentages reported by the authors for each coping method excludes the 28 percent of households who would *certainly* be unable to come up with \$2,000 in 30 days.

⁶ American Community Survey (2016).

But property taxes are very high relative to most owners' *monthly* income, as the median annual tax bill equals 38 percent of their median monthly income. Therefore, very few homeowners could afford to pay their property taxes on an annual or biannual basis out of their monthly cash flow; they need to save in advance. Given the median property tax bill of \$2,340, most homeowners who have not saved in advance will struggle to pay their property taxes on an annual (\$2,340), semi-annual (\$1,170), or quarterly (\$585) basis, even if they could afford a monthly payment (\$195) which effectively works as an instrument for forced savings.

This means that billing property taxes as a few large lump sum payments would presumably drive some financially insecure households to either: 1) borrow money and accrue debt, often credit card debt; 2) become delinquent in paying their property taxes, and/or 3) skip some other bill payments to pay their property taxes, such as becoming late on a mortgage payment. While there is currently little direct evidence of these effects, it seems likely that large infrequent payments would cause financial challenges for some households. For example, imagine what might happen to the mortgage delinquency rate if mortgages were billed just once or twice per year, or the impact that eliminating income tax withholding would have on income tax collections.

Increases Property Tax Delinquency

As noted above, some homeowners who have not saved in advance for their property taxes will be unable to pay their property tax bill by the due date, and will become delinquent on their property taxes. While the impact that billing property taxes in large lump sums has on delinquency rates has not been researched extensively, there is some evidence that more frequent payments can reduce the property tax delinquency rate. Most notably, Waldhart and Reschovsky (2014) studied Wisconsin municipalities, and found that increasing the number of installments from two to three payments per year reduced the property tax delinquency rate by about a third. Based on this finding, it is reasonable to suspect that moving to even more frequent installments, such as monthly payments, would result in further reductions in the delinquency rate.

Property tax delinquency can have serious consequences for taxpayers. The first consequence is that there are usually high interest rates charged on delinquent taxes, and delinquency typically triggers penalties and fees (Mikesell 2017; Pew Charitable Trusts 2013). Most governments charge interest rates of 1.0 – 1.5 percent per month on delinquent taxes, or 12 – 18 percent per year, which means the cost to repay property taxes will compound quickly for delinquent taxpayers. Penalties for late payment vary much more widely across governments. In 2015, the penalty for late payment ranged from \$1 in New Hampshire to 10 percent of the tax due (not just the delinquent amount) in Arkansas and Georgia, with a number of states charging penalties of 2 – 5 percent of the tax due.⁷ These penalties and interest charges are necessary for local governments to be able to enforce property tax collection, but they also increase the property tax burden for homeowners already struggling to pay their taxes and make it more difficult for them to become current on their taxes. Failure to pay property taxes for several years has very serious consequences, as owners will eventually lose their homes through property tax foreclosure.

⁷ Data on interest rates and penalties are from the *2015 U.S. Master Property Tax Guide*. Data are not provided for all states, so the ranges are representative, but do not show the states with the absolute highest or lowest penalties.

Delinquency also has consequences for governments. When governments collect less than what they are owed, that means they have less money to provide services and/or need to raise property tax rates. In any given year, a typical city will collect around 96 percent of the property taxes they are owed (Mikesell 2017; Pew Charitable Trusts 2013). It may take a few years, but a typical city will ultimately collect around 99 percent of what it is owed. For example, Mikesell (2017) collected data for the two most populous cities in each state. In 2009, the median city only collected 95.9 percent of their tax levy due that year, but by 2013, the median city had received 99.4 percent of their 2009 levy since many delinquent taxpayers were able to pay back their taxes within a few years.

While delinquency rates are low for most jurisdictions, they can be quite high in some poorer cities. For example, in 2011 the same-year delinquency rate was 20 percent in Detroit and Cleveland, and 21 percent in Flint (Pew Charitable Trusts 2013). Thus, property tax delinquency can seriously erode the fiscal health of some municipalities. In addition, property tax foreclosure can lead to abandonment of a property, which leads to lower property values, higher crime, and other negative effects in the surrounding area (Han 2014). Particularly in cities with low property values, delinquent taxes, plus interest charges, penalties, and legal fees can exceed the value of the property itself, which makes it difficult to find a buyer for the property and can lead to abandonment.

Of course, billing property taxes in large lump sums is only one of many reasons why homeowners could become delinquent on their property taxes. Table 2 lists several other reasons for delinquency and some solutions to address each of these causes. Allowing homeowners to pay their property taxes on a monthly basis does not actually reduce the amount of tax due each year. Thus, there is still an important role for property tax circuit breakers, deferrals, and other public policies. However, allowing monthly payments is easier to administer and far less expensive than many of the other policies to reduce delinquency.

Table 2: Reasons Homeowners Become Delinquent on Their Property Taxes

Reason	Possible Solutions
Behavioral Factors: Homeowners at risk of delinquency because they have not saved in advance for their annual or biannual tax bill, but who should be able to afford their taxes given their income	
Research shows that about half of U.S. households are financially insecure and would struggle to pay an annual or biannual tax bill if they have not saved in advance	<p>Prepayment Programs: Tax collectors administer property tax escrow accounts where taxpayers can apply to pay taxes monthly</p> <p>Monthly Installments: In Milwaukee, every tax bill includes the option to pay in monthly installments, and there is no application required to start monthly payments</p> <p>Increase the number of installments: More frequent payments reduces the amount of tax due per installment, such as moving from two to four installments per year</p> <p>Increase use of property tax escrow among mortgage lenders: Simplifying property tax billing systems can make lenders more willing to administer escrow; Governments could mandate tax escrow for more borrowers</p>
Temporary Factors: Homeowners who are delinquent once, but have low risk of future delinquency	
Forget to pay their taxes by due date	<p>Automated monthly payments: Milwaukee’s monthly installment program and most property tax escrow programs (whether run by tax collectors or mortgage lenders) allow taxpayers to set up automated payments</p> <p>Reminders: Tax collector can send email reminders and/or use robocalls shortly before taxes are due to reach homeowners who have not yet paid their bill; Use social media and advertising to remind taxpayers of approaching deadline for paying their taxes</p>
<i>Income shock makes property taxes unaffordable:</i> Sudden decline in wages (due to layoff or illness), business income for entrepreneurs, or investment income for retirees (due to stock market drop)	<p>Property tax circuit breaker: See below</p> <p>Other: Unemployment insurance, disability insurance, food stamps, cash welfare (TANF), homeowners build rainy day fund (i.e., higher cash savings)</p>
<i>Expenditure shock makes property taxes unaffordable:</i> Unexpected large expenses that cannot be postponed, such as health emergency, natural disaster, housing costs (i.e., replace roof), need to replace car, etc.	<p>Short-Term Loans: Lending funds before a homeowner becomes delinquent helps owners reduce penalties and interest charges, while a modest upfront fee and monthly payment plan protects the local government and partnering bank [See Arlington (VA) TAP 2017]</p> <p>Other: Homeowners build rainy day fund (i.e., higher cash savings)</p>
Long-Term Factors: Homeowners who cannot afford their property taxes, and are at risk of repeated delinquency and possible tax foreclosure	
Homeowners whose property taxes have grown relative to their income since they purchased their home (due to higher property taxes and/or lower income)	Property tax circuit breaker: State programs that target tax relief to homeowners who have the heaviest property tax burdens relative to their incomes (See Bowman et al. 2009)
Retirees who want to stay in their current home despite lower income than when they were working	Property tax deferral: Older homeowners (65+) can defer payment of their taxes until their house is sold (See Munnell et al. 2017)
Homeowners who buy a home that they cannot afford and which has higher property taxes than a less expensive home	Higher lending standards: Mortgage underwriting should account for total housing costs (property taxes, insurance, and typical maintenance), not just the mortgage amount
Local property taxes too high relative to residents’ ability to pay or willingness to pay for public services	<p>Lower property taxes: Higher state aid to local governments, lower reliance on property taxes in local government revenue mix, lower local government spending</p> <p>Truth in taxation: Requires a public notice and possibly an election if tax revenues rise from prior year, even if tax rates did not increase, which can occur with rising property values (See Haveman and Sexton 2008, 36)</p>

Note: Solutions that are bolded are the focus of this paper.

Fosters Political Opposition to the Property Tax and Erodes Municipal Fiscal Health

In addition to increasing tax delinquency, collecting property taxes in large lump sums can also erode municipal fiscal health by fostering political opposition to the property tax. Public acceptance of the property tax is important since it is the linchpin of municipal fiscal health in the United States: it is the largest revenue source controlled by local governments (72 percent higher than user charges) and by far the largest tax source for local governments (6x higher than sales taxes).⁸ Compared to other taxes, the property tax is much more visible because of how it is paid, particularly for homeowners who only make one or two payments per year. Cabral and Hoxby (2012) present evidence that paying in large lump sums makes the property tax a very salient tax, which increases political opposition to the tax, and can in turn result in property tax limits and other policies that reduce property taxes.

There is a need for targeted property tax relief for households facing the heaviest tax burdens and some governments are overly reliant on the property tax and could benefit from revenue diversification. However, political opposition to the property tax can lead governments to adopt policies to reduce property taxes that have serious unintended consequences (Haveman and Sexton 2008). These policies erode municipal fiscal health in a variety of ways, including making the tax system less equitable and making government budgets more volatile over the business cycle due to increased reliance on sales and/or income taxes. Allowing monthly payments is one way for policymakers to respond to voters' dissatisfaction with the property tax in a way that avoids these unintended consequences.

Irregular Revenue Inflows Impose Costs on Local Governments

Another problem with collecting property taxes in large lump sums is that local governments receive property tax revenue just once or twice per year. To meet payroll and other regular spending requirements, local governments need to rely upon short-term borrowing and/or hold large amounts of idle cash in safe and liquid assets that earn little interest, like U.S. treasury bills or money market mutual funds (Marlowe 2013).

Allowing monthly property tax payments could provide more regular revenue inflows depending on how a monthly payment plan is administered.⁹ In addition, monthly payments would allow governments to more closely monitor trends in late payments and tax delinquency, and better forecast revenue collections for the rest of the year. This information could allow governments to spend cautiously earlier in the year, and avoid large mid-year budget cuts that could be necessary if there is an unexpected drop in the collection rate.

Programs that Allow Monthly Property Tax Payments

Given the problems that seem to be caused by billing property taxes in one or two large payments each year, policymakers should consider options to allow monthly payments. In the United States, there are currently two approaches used to allow taxpayers to pay their property

⁸ In 2014, local governments raised \$452 billion from property taxes, \$263 billion from user charges, and \$73 billion from general sales taxes (2014 Survey of State and Local Government Finances, U.S. Census Bureau).

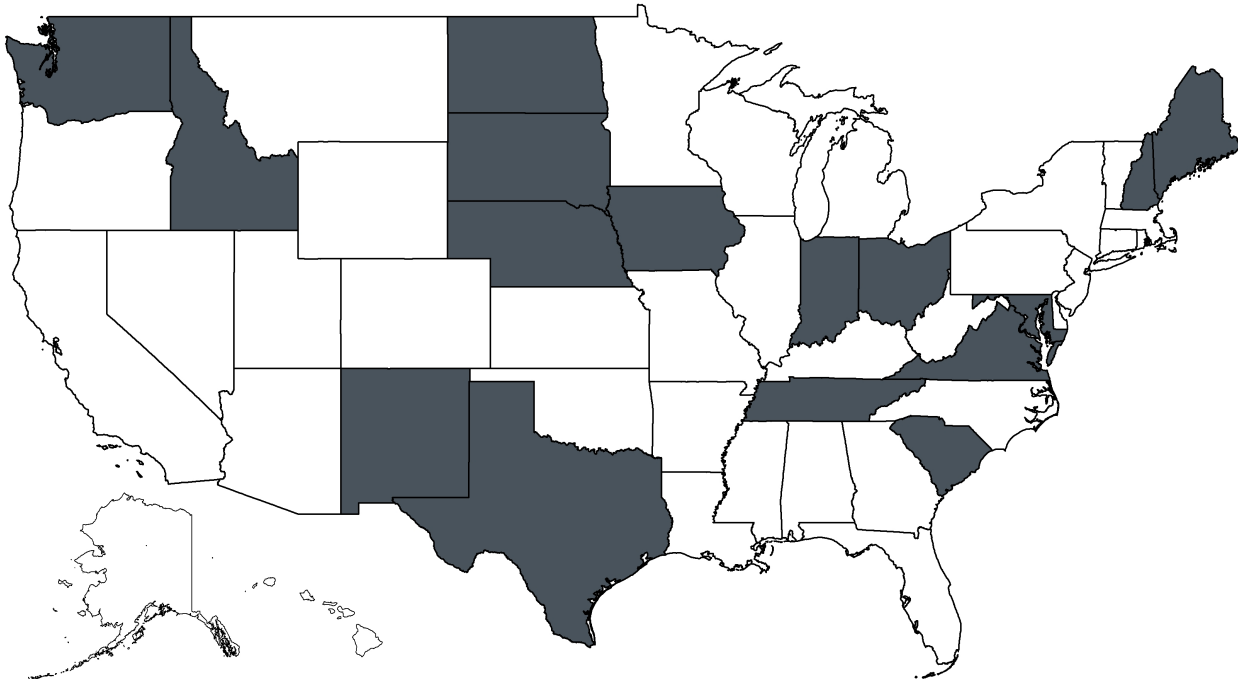
⁹ Milwaukee's monthly property tax installment plan provides a more regular stream of revenue, as funds are distributed to local taxing jurisdictions every month. However, monthly payments collected through prepayment programs do not provide revenue that local governments can use immediately, as the payments accumulate in escrow accounts and are only distributed to taxing jurisdictions when the annual or biannual tax bill is due.

taxes on a monthly basis. The first are prepayment programs where states allow local tax collectors to set up property tax escrow programs where taxpayers can apply to pay on a monthly basis. A second approach is used in Milwaukee, Wisconsin where every tax bill includes the option to pay in monthly installments, and there is no application required to start monthly payments and no escrow accounts so the funds from monthly payments are immediately distributed to taxing districts. This section summarizes these two approaches, and concludes by highlighting the most important difference between these two models, which is that Milwaukee has a far higher share of taxpayers paying monthly because the city allows taxpayers to enroll in the monthly installment plan without requiring an application.

Prepayment Programs

Currently, prepayment programs are the most common approach used to allow monthly payments for property taxes. Prepayments are allowed in at least 16 states (See figure 4), although there are significant differences across states in how these programs work. These state laws typically allow local legislative bodies—usually the county or city council—to adopt an ordinance that allows the tax collector to enter agreements with taxpayers to pay their property taxes on a monthly basis. States use a variety of names for these programs, including prepayment agreements, property tax escrow accounts, monthly installments, early payment plans, or simply monthly property taxes. Appendix 2 provides details on these programs in each state.

Figure 4: States with Statutes that Allow Prepayments for Property Taxes (2016)



Source: State statutes; See appendix 3 for more details.

Note: This map shows states with statutes explicitly allowing local governments to accept prepayments for property taxes. However, tax collectors in some states appear to be able to accept monthly payments without explicit state authorization. Also, it is possible that the review of state laws could have missed some authorizing statutes, especially in states with long or complex statutory codes.

While one in three states have statutes explicitly allowing local governments to accept prepayments, the number of localities that have actually established monthly payment programs is still fairly small. However, there are several large jurisdictions that do have prepayment programs. One notable example is in Iowa, where the Iowa County Treasurers eGovernment Alliance allows taxpayers in 56 of the state's 99 counties to set up monthly recurring property tax payments.¹⁰ Monthly payment programs are also relatively common in Ohio, where the five largest counties all accept monthly payments.¹¹ Another example is Indiana, where two of the three largest counties accept monthly payments.¹² In Texas, Travis County allows prepayments for all taxpayers, while Bexar County has a monthly plan for homeowners who receive exemptions because they are 65 or older, disabled, or disabled veterans.¹³ Other places with monthly installments include Shreveport; Calgary and Toronto in Canada; and Philadelphia, which has a program for low-income households and seniors (Reitano 2017).¹⁴ In contrast to these leaders on monthly payments, many localities that allow prepayments have an *ad hoc*, informal process, where the tax collector reaches payment plans with individual homeowners, but there is no regular process to start paying monthly and little information available about the monthly option.

Prepayment programs work like escrow accounts managed by mortgage lenders, but in this case it is the tax collector who accepts the monthly payments and puts them into accounts for individual taxpayers to accumulate funds that are then used to pay their annual or biannual tax bill. To start making monthly payments, taxpayers usually need to submit an application to the tax collector, or reach a signed agreement with the tax collector to authorize prepayments.

Payment Options

There are typically several different payment options for taxpayers choosing to prepay, including check, credit/debit card, E-check, and ACH (Automated Clearing House) or EFT (Electronic Funds Transfer). Credit and debit cards carry high convenience fees—2.95% is typical—and this cost is almost always covered by the taxpayer. Transaction costs are usually far lower for E-check, ACH, and EFT payments, in the range of \$0.25 to \$0.95 per payment, with some governments covering the transaction costs and others having taxpayers cover this expense. Local governments can use a request for proposals to minimize these transaction costs by soliciting bids from multiple companies that provide these payment services. Many local governments with prepayment programs allow taxpayers to establish automated monthly payments via ACH or EFT transfers from their checking accounts, which eliminates the need to remember to submit a payment each month. Providing a range of payment options is good for covering people who like the ease of an automatic payment, while still having options for those who prefer to write a check each month or do not have checking accounts.

¹⁰ <https://www.iowatreasurers.org/mapsearch.php>

¹¹ Cuyahoga County ([EasyPay Plans](#)), Franklin County ([Budget Payment Program](#)), Hamilton County ([Treasurer's Optional Payment Program](#)), Montgomery County ([Pre-Payment Options](#)), Summit County ([Tax Installment Plan](#)).

¹² Allen County ([Monthly Pay Plan](#)), Marion County ([Payment Options](#)).

¹³ Travis County ([Prepay with escrow accounts](#)), Bexar County ([10-Month Payment Plan](#)).

¹⁴ Shreveport ([Prepayment Plan](#)), Toronto ([Pre-Authorized Property Tax Payment Program](#)), Philadelphia ([Real Estate Tax installment plan](#)).

Escrow Accounts to Hold Monthly Payments

Funds from these monthly payments are not immediately available for local governments to spend. Instead, tax collectors hold the monthly payments, which accumulate and are then used to pay off the taxpayer's annual or biannual property tax bill, and at that point the funds are distributed to taxing districts. In some places, the monthly payments are held in a designated account, and in other places they are commingled with other county funds. In order to accept monthly payments, governments need a billing system that can track monthly escrow payments, which is discussed in the section on the costs of implementing monthly payment plans. Governments usually earn at least some interest on the escrowed funds, which can help cover the administrative costs of running the monthly payment plan. Some states allow tax collectors to pay interest to taxpayers on their escrowed payments, which would create an incentive for taxpayers to pay monthly, although none of the tax collectors interviewed for this report paid interest to taxpayers.

Reconciling Monthly Payments with Final Tax Bill

One challenge with having taxpayers pay their property taxes each month is that at least some of those payments will be made before their tax bill for the year has been determined. For example, in Indiana, most local government budgets and tax rates are finalized in March, with property tax bills sent in late March or early April for installments due by May 10th and November 10th. This means that monthly payments from December to March will need to be made before the tax bill is known.

Local governments use different approaches to estimate monthly payments before tax bills have been determined and then to reconcile the difference between the accumulated monthly payments and the actual tax owed. In many cases, tax collectors will estimate monthly payments by increasing the prior year's bill by a small amount, like 5 percent. One approach to reconcile taxes at the end of the year is to wait for the taxpayer to make their 12th monthly payment, and to then either send out a 13th bill for taxpayers who have underpaid or a refund for taxpayers who have overpaid (or provide a credit on the following year tax bill). Alternatively, after receiving the 11th payment, tax collectors could send out a bill for the 12th payment that would pay off the rest of the taxpayer's bill.

In Butler County, Ohio, the Treasurer's Office starts the reconciliation process in the sixth month to help smooth out monthly payments over the course of the year. Monthly payments for the first five months (September-January) use an estimate based on the prior year's tax bill. Taxpayers paying monthly then receive a second statement for the sixth payment, which is due in February and will bring them into balance for the first half of the tax year. At that point the tax bill is known, so the six payments made from March to August will pay off the remainder of the taxpayer's bill without any need to reconcile at the end of the year.

Monthly Installments in Milwaukee

A second approach to allowing monthly property taxes is used in Milwaukee, Wisconsin. There are a few important differences between Milwaukee's approach and the prepayment programs.

One key distinction is that Milwaukee does not require any application or signed agreement before a taxpayer can start making monthly payments, as is the case with the prepayment programs. Instead, every tax bill lists two amounts: taxpayers can either pay the full tax bill or pay the first monthly installment. Figure 5 shows an example of what the tax bill looks like in Milwaukee. Taxpayers who send in the first monthly payment by January 31st are automatically enrolled in the monthly installment plan. Thus, paying monthly is considerably easier in Milwaukee than in jurisdictions with prepayment programs. The option to pay monthly is also very salient since it is listed directly under the full tax amount, whereas taxpayers in jurisdictions with prepayments are less likely to know about the option to pay monthly if it is just described in small print on the back of the tax bill or on the FAQ section of the Treasurer's website.

Figure 5: Example of Property Tax Bill in Milwaukee

WARNING: If the first installment payment is not paid by the due date, the installment option is lost. The total tax becomes delinquent and is subject to interest and penalty charges.			TOTAL DUE	4,393.64
Monthly Installment Payment Due: February through July 2017	483.98	Net Assessed Value Rate Before Credits	FULL PAYMENT DUE ON OR BEFORE JAN. 31, 2017	4,393.64
Monthly Installment Payment Due: August, September, and October 2017	335.25		FIRST INSTALLMENT PAYMENT DUE ON OR BEFORE JAN. 31, 2017	484.01

2016 CITY OF MILWAUKEE COMBINED PROPERTY TAX PAYMENT COUPON

ACCOUNT TYPE: REAL ESTATE

TAX KEY/ACCOUNT NO:

LOCATION OF PROPERTY:

Monthly or
Full Payment

CHECK FOR ADDRESS CHANGE
 PAID UNDER PROTEST

Make Check Payable and Mail to: CITY OF MILWAUKEE OFFICE OF THE CITY TREASURER P O BOX 78776 MILWAUKEE, WI 53278-0776	FULL PAYMENT DUE 01/31/2017	4,393.64
	1ST INSTALLMENT DUE 01/31/2017	484.01
PLEASE WRITE IN AMOUNT ENCLOSED		
\$		M

Note: Milwaukee has six taxing districts with different numbers of installments. The county, state, and sewer district have seven monthly installments (January to July), whereas the city, school district, and technical college have ten monthly installments (January to October). Thus, monthly installments are higher for the first seven monthly installments that include all six taxing districts (\$484 in this example), than in the last three monthly installments that only include taxes for the city, school district, and technical college (\$335 in this example). In this example, the January installment is \$0.03 higher than the February-July payments, so that the total of ten payments sums to the full payment; each installment could not be for exactly the same amount without charging fractions of cents.

Another important difference is that Milwaukee does not hold monthly payments in an escrow account like local governments with prepayment programs. Instead, monthly payments go directly to receivables and the City Treasurer settles with the six taxing districts serving city

residents once per month. This means that monthly installments in Milwaukee provide a more stable revenue stream for local governments than in jurisdictions with prepayment programs where funds from escrow accounts are usually only distributed to taxing districts once or twice per year.

A third difference is that Milwaukee uses ten monthly payments rather than twelve payments, and thus avoids needing to reconcile the difference between estimated monthly payments and the actual tax due at the end of the year as is done in most jurisdictions with prepayment programs. In Milwaukee, the tax levy is adopted no later than November, with state aid data available by late November, and tax rates are set in December. With tax bills known in December, all ten monthly payments from January to October are based on the actual tax bill rather than estimates. While a twelve-month system might be better, this timing also means taxpayers could redirect the money that would normally go towards property taxes towards purchasing gifts for the holidays.

One thing that is similar to prepayment programs is that Milwaukee provides several payment options. Taxpayers can set up automated monthly transfers from their checking or savings account using the EFT installment payment program.¹⁵ Taxpayers do not need to pay any convenience fee under the EFT installment program, as the city covers the low cost for each transaction (1.5 cents per payment). Taxpayers can also mail in a check each month, or pay in person at City Hall or at one of 12 U.S. Bank branches in the city.

According to City Treasurer Spencer Coggs, there are few challenges with administering the monthly payment plan in terms of staff time or cost because of the city's automated tax system. Monthly installments have been allowed in Milwaukee since 1942 and are a routine part of their property tax collections process.

It is hard to judge how monthly installments have affected taxpayers in Milwaukee. However, it is worth noting that an analysis by the Pew Charitable Trusts (2014) showed that Milwaukee had one of the lowest property tax delinquency rates out of 14 large U.S. cities with high poverty rates included in their study, even though Milwaukee had nearly the highest property tax burden included in this group of cities.¹⁶

Participation Rates for Monthly Payment Plans

Table 3 presents data for four jurisdictions that allow monthly property tax payments. While the data are for a small set of places, the large differences in participation rates suggest some best practices for monthly payment plans that are elaborated on in the next section.

¹⁵ Electronic Funds Transfer (EFT) for Property Tax Installment Payment Plan.
<http://city.milwaukee.gov/eft#.WTgY8-vyvDA>

¹⁶ According to the 2015 American Community Survey, the median property tax bill (\$3,133) was 5.2 percent of median household income for homeowners (\$59,940) in Milwaukee, which was the second highest percentage among the 14 cities included in the Pew study.

Table 3: Participation Rates in Four Jurisdictions with Monthly Payments

	Milwaukee (WI)	Butler County (OH)	Twin Falls County (ID)	Denton County (TX)
% Taxpayers Paying Monthly	20.8%	3.7%	2.1%	0.03%
# Taxpayers who Pay Monthly	33,753	5,700	625	50
Total Number of Accounts	162,035	155,000	30,000	143,000
Participation Rate for Homeowners who do NOT have Tax Escrow as Part of Mortgage (Est.)	33.0%	6.5%	4.3%	0.1%

Source: Data provided by city or county treasurers.

Notes: Milwaukee data is for all property tax accounts, not just residential parcels (2016 data). Butler County data are estimates, and the total number of accounts is for all parcels (2015 data). Twin Falls data uses an estimate for the number of accounts (2014 data). Denton County data are estimates, and the total number of accounts is for homesteads (2015 data). The participation rate for homeowners who do NOT have property tax escrow accounts managed by their mortgage lender is estimated by dividing the number of taxpayers who pay monthly installments by an estimate of the number of accounts in the jurisdiction that do not have property tax escrow as part of their mortgage. The number of homeowners without property tax escrow as part of their mortgage is estimated by multiplying the number of accounts in the jurisdiction by the percentage of homeowners in each state that do not have tax escrow (63.1% in WI, 56.9% in OH, 48.4% in ID, 61.2% in TX) (See appendix table 1).

The most striking difference across the four jurisdictions is that the share of homeowners participating in Milwaukee's monthly installment plan is far higher than the participation rate for the three prepayment programs. In Milwaukee, 21 percent of taxpayers pay monthly installments to the city. Among homeowners who do *not* have property tax escrow accounts managed by their mortgage lender, roughly one-third use the monthly installment option. The higher participation rate in Milwaukee is likely driven in large part by the fact that Milwaukee taxpayers are automatically enrolled in the monthly installment plan after they make their first monthly payment, whereas the three prepayment programs require taxpayers to submit an application before starting monthly payments. In addition, Milwaukee's installment plan allows taxpayers to *postpone* payment of their full tax bill, whereas prepayment programs typically have taxpayers start making monthly payments 5-11 months *before* their full tax bill is due. Allowing taxpayers to delay payment of their full tax bill could also help explain why the participation rate is so much higher in Milwaukee.

There are also large differences in participation rates between the three counties with prepayment programs shown in table 3. In Butler County (OH), 3.7 percent of taxpayers participate in the monthly prepayment program, which is nearly twice as high as the 2.1 percent participation rate in Twin Falls County (ID). The lowest participation rate is in Denton County (TX), where only 0.03 percent of taxpayers are enrolled in escrow payments. One important cause of these discrepancies is probably the ease with which taxpayers can enroll in the prepayment program. Butler County (OH) has established processes for taxpayers to easily enroll in the monthly payment plan, whereas Twin Falls County (ID) and Denton County (TX) have less formal programs that require taxpayers to communicate directly with the tax collector's office before they can start escrow payments.

Another cause of the differences is simply the amount of time the programs have been running. Butler County started allowing monthly payments in the late 1980s, whereas Denton County did not until 2013. In Twin Falls County, the participation rate has tended to grow a little bit each

year.¹⁷ Particularly with robust outreach efforts, localities can expect the participation rate in monthly payment plans to grow over time.

Recommendations for Monthly Property Tax Payment Plans

Programs allowing monthly property tax payments are still rare, so there has been little study of monthly payment plans. However, interviews with tax collectors and the data on participation rates shown in table 3 suggest some best practices that will likely enhance the effectiveness of these programs.

Allow Taxpayers to Pay Monthly Without Requiring an Application

Table 3 shows that the share of homeowners making monthly payments in Milwaukee is more than five times higher than Butler County (OH) and nearly ten times higher than Twin Falls County (ID). Arguably the most important difference between the prepayment programs and Milwaukee's monthly installments is that the prepayment programs require taxpayers to submit an application before starting monthly payments, whereas Milwaukee taxpayers are automatically enrolled in the monthly installment plan after they make the first monthly payment. This difference likely explains much of the discrepancy in the share of taxpayers who participate in the monthly payment plans, which is far higher in Milwaukee.

It may be surprising that simply allowing taxpayers to pay monthly without first submitting an application appears to so significantly increase the participation rate, but it is consistent with a large body of research in behavioral economics showing that default choices have a major impact on individuals' decisions. For example, data show that employees are significantly more likely to save in 401(k) plans if their employer automatically directs contributions towards a default investment vehicle and provides workers the option to opt-out of the program or change their investments, compared to employers who require workers to actively opt-into the 401(k) plan before they can start investing (Thaler and Sunstein 2009).

Create Established Processes that Make It Easy for Taxpayers to Pay Monthly

There are other things administrators can do to make it easier for taxpayers to pay monthly, in addition to allowing taxpayers to start paying monthly without needing to submit an application. For example, table 3 shows that Butler County (OH) has a participation rate that is nearly twice as high as Twin Falls County (ID). There are several possible explanations for this discrepancy, but one major factor is likely the fact that Butler County has more of a formal program with established processes that make it easier for taxpayers to pay monthly, whereas Twin Falls County has a more *ad hoc* process that arguably places greater demands on taxpayers. For example, in Butler County, the Treasurer's Office calculates monthly payments for taxpayers. In Twin Falls County, the Treasurer's Office will provide some guidance to taxpayers, but it is mainly up to taxpayers to calculate how much to pay each month. In general, it is easier for taxpayers to pay monthly if a tax collector's office calculates monthly payments rather than having individual taxpayers estimate their own payments. In addition, Butler County has an

¹⁷ Data from the Twin Falls County Treasurer's Office shows that the number of real property parcels making tax anticipation payments grew from 439 parcels in 2012, to 468 parcels in 2013, to 625 parcels in 2014.

official application on its website that taxpayers need to complete to enroll in the prepayment program. In Twin Falls County, there is no established system for taxpayers and no existing forms; the Treasurer's Office simply encourages taxpayers to make tax anticipation payments.

Denton County (TX) has by far the lowest participation rate of the four localities in table 3. Part of the reason for low participation is that this is a new process that the tax collector's office wants to test out. Thus, there is no application online to enroll in the county's monthly escrow plan, and little information on their website about escrow payments other than a short description in a press release announcing all payment options for paying property taxes in 2016. The tax collector's office wants people to call or email the office before starting escrow payments, so they can answer taxpayers' questions, make sure the person requesting escrow payments is actually the property owner and does not have a mortgage escrow company, and make sure taxpayers know that they must pay every month once they sign the escrow agreement.¹⁸ While this approach presumably reduces the chance that taxpayers will enroll in escrow payments without understanding their obligations, it also makes it more challenging for them to start paying monthly. The very low participation rate in Denton County could be representative for those local governments that allow prepayments, but use a more *ad hoc* process to reach payment agreements with individual homeowners.

Encourage Automated Monthly Payments, But Provide Other Options

To make it easier for taxpayers to pay monthly, local governments should encourage taxpayers to set up automated monthly payments from their checking or savings account, which eliminates the need for them to remember to make monthly payments. For taxpayers who prefer to mail a check each month or do not have a checking account and need to pay in cash, tax collectors can consider an approach used in several Ohio counties called coupon payments. Twice per year, taxpayers receive two sheets of perforated paper with tri-fold coupons for each monthly payment that includes the amount due, the parcel number, and other information. The coupons help to remind taxpayers when to make their monthly payment and make it easier for the Treasurer's Office to process payments.

Consider Whether to Require Payments Every Month

The jurisdictions studied for this report diverged on whether they *require* taxpayers to make payments every month once they have started on a monthly payment plan, or whether taxpayers can skip some monthly payments. Interviews with tax collectors suggests that making a payment every month is not strictly required in most jurisdictions with prepayment plans. Taxpayers can skip a month or several months, then they can choose whether to make larger payments in future months to catch up with their monthly schedule. When the annual or biannual tax bill is due, the tax collector will notify taxpayers of how much they have accumulated in their property tax escrow account, and how much they owe to pay off their tax bill.

There could be jurisdictions with prepayments that have taxpayers sign a contract requiring them to pay every month, with these taxpayers becoming delinquent if they miss a monthly payment.

¹⁸ The tax collector's office will work with taxpayers if they need to skip a month, but they strongly prefer people to pay every month.

However, none of the jurisdictions studied for this report strictly mandate that taxpayers pay every month. This requirement would be analogous to most other monthly bills that households are required to pay every month, like mortgages, car payments, insurance, etc.

Under Milwaukee's monthly installment plan, taxpayers can miss one monthly installment without becoming delinquent, although 1 percent interest is charged on the missed or short payment. However, if taxpayers miss a second monthly installment, then they become delinquent on the unpaid balance, with interest and penalty accruing back to February 1st. At this point, taxpayers forgo the option to continue with the monthly installment plan for that year, and their full tax bill becomes due.

The choice of whether or not to require taxpayers to make payments every month can impact how a monthly payment plan affects delinquency rates and the administrative challenges associated with running a monthly payment plan. There are arguments for both approaches.

- *Arguments for requiring payments every month:* This approach is easier for governments to administer. In addition, a required payment is a more effective commitment device. As described above, a monthly payment plan is most useful for homeowners who are not good at saving for large irregular expenses. Giving these homeowners the option to skip payments could undercut the effectiveness of a monthly payment plan, as homeowners could once again be left with insufficient savings to pay an annual or biannual tax bill.
- *Arguments for allowing taxpayers to skip months:* This approach provides more flexibility for homeowners, and could be especially valuable for households whose income varies over the year (possibly due to layoff) and/or who face an unexpected large expense (such as a health emergency or car repair). A required monthly payment means taxpayers go from needing to make a large payment once or twice a year, to needing to make a small payment every month. Since some homeowners will experience fluctuations in income and expenses over the course of a year, requiring a payment every month means a monthly payment program could actually end up increasing the tax delinquency rate.

Neither approach is clearly superior. One possible middle ground is to create the expectation that taxpayers should pay every month, but allow them to skip payments in extreme circumstances when they cannot come up with the money for a monthly payment, possibly requiring taxpayers to contact the Treasurer's Office to notify them that they need to skip a payment. Another approach would be to allow taxpayers to skip one or two payments without facing penalties – like in Milwaukee – but not allow them to postpone their payments beyond that point.

Participation in a Monthly Payment Plan Should be Optional

For taxpayers who have *chosen* to make monthly payments, there are good reasons to require payments every month or to allow them to skip some months. However, those arguments do not mean that monthly payments should be mandatory for *all* taxpayers. Many taxpayers prefer to make one or two large payments each year. An annual or biannual payment schedule allows taxpayers to set aside money for their property taxes in a savings account and earn some interest. It also means they avoid risk of forgetting to pay one month and the hassle of writing and mailing a check every month or making an online payment each month, which are problems for homeowners who pay monthly without setting up automated payments. The fact that only one-

third of homeowners in Milwaukee who do not pay their property taxes through their mortgage choose to participate in the city's monthly installment plan suggests that many homeowners prefer to pay their taxes just once or twice per year. Requiring monthly payments could also hurt homeowners whose income or expenses vary significantly over the course of a year.

Minimize Transaction Costs and Other Disincentives for Making Monthly Payments

Local governments can use financial incentives to encourage participation in monthly payment plans or at least avoid disincentives. For example, local governments that offer discounts for early payment of property taxes can schedule their monthly payments so the final payment is paid in time to receive the early payment discount. Bee County, Texas uses this approach by running their escrow plan from October to September even though taxes are not due until the end of January, because having the final monthly payment in September means that taxpayers can receive the 3 percent discount available for paying in October. To avoid penalizing taxpayers for making monthly payments, localities can cover transaction costs for payments made via E-check, ACH, and EFT. Local governments can use a request for proposals to minimize these transaction costs by soliciting bids from multiple companies that provide these payment services.

Use Outreach and Advertising to Increase Participation Rates

Outreach and advertising can increase participation rates by making sure that more taxpayers know about the option to pay monthly. To effectively promote this option, tax collectors could include a separate flyer with the tax bill publicizing the option to pay monthly or put a highly visible notice on the tax bill, but few taxpayers are likely to see a promotion buried in small print on the back of the tax bill. Also, the announcement should make it clear that taxpayers have the option to pay monthly, not just that there is the option to pay online. One constraint is that several tax collectors interviewed for this study said there was not space on the tax bill for an additional alert, because it also needs to include extensive verbiage required under state law. Another option would be to put a notice on the envelope used to mail out tax bills.

It is particularly important that taxpayers who are at greater risk of becoming delinquent on their property taxes know about the option to pay monthly. Butler County, Ohio offers one strategy for reaching these taxpayers. The Treasurer's Office in Butler County encourages taxpayers to enroll in the monthly escrow program when they start on a contract to pay back delinquent taxes. This is a natural time to reach these taxpayers and will hopefully reduce the probability of them becoming delinquent in the future.

Other Recommendations

There are several other best practices for monthly payments described elsewhere in this report:

- **Local Option:** Monthly payment plans should be authorized as a local option but not required for all governments, because of large differences across local governments in the upfront costs to start accepting monthly payments. Some jurisdictions could start accepting monthly payments for practically no cost, while others would need to spend millions of dollars to implement new property tax collections software (See pages 21-23).

- **Consider shared service arrangements to reduce the cost of tax collections:** If new collections software is needed to start accepting monthly payments, governments can substantially reduce these cost by sharing collections software (See page 22). For example, the Iowa County Treasurers eGovernment Alliance allows taxpayers in 56 of the state’s 99 counties to set up monthly recurring property tax payments.
- **Distribute monthly payments to taxing districts each month:** In Milwaukee, revenue from monthly installments is distributed to taxing districts each month, which provides more regular revenue inflows for governments. In contrast, under prepayment programs, revenue from monthly payments is held in escrow accounts and only distributed to governments when the annual or biannual tax bill is due.

Costs to Implement and Administer Monthly Payment Plans

While providing options for taxpayers to pay on a monthly basis has significant benefits for taxpayers and governments, there are some challenges with accepting monthly payments. The biggest challenge is that accepting monthly payments will require some local governments to make large upfront investments to change their billing systems. Conversations with tax collectors and state legislators suggest that this expense is the largest obstacle preventing more widespread use of monthly property tax payment plans. One recent illustration of this concern is from California, where in 2016 the state legislature unanimously passed AB 2691 allowing monthly property taxes, but the governor vetoed it citing concerns from tax collectors and county supervisors about the cost of changing tax collections software.¹⁹

However, many local governments could start accepting monthly prepayments without any additional investment in their tax collections software, because they use billing systems that already have the ability to track monthly payments. Large differences across local governments in the upfront costs to start accepting monthly payments is one reason why existing prepayment programs are simply authorized as a local option under state law, in which case the state avoids imposing any costs on localities unless they choose to enact a program.

In many cases, the cost to implement a monthly prepayment program depends on whether a government uses software purchased from a vendor for tax collections or uses a homegrown system that uses custom software created for the specific government either by government employees or external contractors. One survey found that most small counties use vendor software for tax collections, but nearly half of mid-size and large counties use a homegrown solution (Reitano 2017).

Software from vendors typically includes the ability for users to define their own frequencies for installments, which means it is easy for local governments with vendor software to start accepting monthly payments. Collections software from ACS Tax Systems, Harris Govern, Thomson Reuters, Tyler Technologies, and other vendors all allow for user-defined installment plans (Reitano 2017). For example, seven tax collectors were interviewed for this report and all said that it was easy and inexpensive for their county to start accepting monthly installments, because their existing billing systems were very flexible and included escrow receivables.

¹⁹ Assembly Bill 2691: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160AB2691.

In contrast, homegrown systems are usually based on older technologies that are less flexible, and often cannot accommodate monthly installments without considerable investments to update a government's software. As a result, allowing monthly installments can be an expensive policy change for governments that need to significantly change their existing billing system or purchase new collections software from a vendor. For example, a review of contracts from multiple governments around the United States found that purchasing and implementing a new property tax software module would cost between \$225,000 and \$650,000 for small governments and from \$3.25 to \$9 million for large governments. These costs include "licenses, hardware, system installation and configuration, data conversion training, and other professional services," with the wide differences in costs due to "a variety of factors, such as the number of property parcels a local government assesses, the complexity of tax laws, and the amount of 'change' represented in the transition" (Reitano 2017, 9). This is undoubtedly a large upfront expense, but policymakers should also consider the long-term cost per parcel when weighing the costs and benefits of investing in new collections software (See Box 1 on next page).

Rather than purchasing new vendor software, governments could choose to allow monthly installments by making changes to their homegrown system. This choice depends on the needs and resources of the government, and should consider how adding monthly installments to their homegrown collections system might conflict with other related systems, like billing, assessment, or financial management (Reitano 2017).

Vendor software generally provides a number of important benefits compared to homegrown solutions besides the ability to accept monthly payments. Most homegrown systems were adopted prior to 2000, whereas most governments that have adopted software more recently have chosen a system from vendors. Thus, "governments utilizing a homegrown system are likely using one that was created 15-20+ years ago and is likely to be based on older or outdated technologies" (Reitano 2017, 7). Vendor software is usually more efficient, has fewer security risks, and is easier to maintain over time, especially as the government employees who maintain custom legacy platforms retire (Reitano 2017).

Governments considering switching their tax collections software should conduct a cost-benefit analysis that weighs the short-term costs and long-term benefits, and "review [their] business processes to ensure the [new] system is applied to an efficient and effective process" (Reitano 2017, 11; Roque 2010). Local governments can also consider shared service arrangements with other governments that could reduce the cost of property tax billing and collections by sharing collections software and other technology, including joint powers agreements (Reitano 2017). For example, the Minnesota Counties Computer Cooperative "works with all Minnesota counties...to [provide] software and other cost-effective measures to substantially reduce technology costs for counties, cities, and agencies." As of September 2017, the Cooperative had two options for tax collections software, including 28 counties using the Xerox Conduent Minnesota property tax system and 18 counties using the Thomson Reuters Aumentum system.²⁰ State governments can consider whether to help cover the cost for local governments to update their billing systems to allow for monthly installments, or pass legislation allowing localities to reach joint powers agreements to share collections software.

²⁰ <http://www.mnccc.org/about/mnccc>

Box 1:
The Cost to Implement New Property Tax Collections Software

Table 4 estimates the annual cost per taxpayer for a large county with one million residents that spends \$5 million to purchase and implement a new property tax software module. With a low participation rate in a monthly prepayment plan (2.5% of homeowners), the new module would cost \$80 per year for each taxpayer participating in the plan if spread over 10 years, or \$27 per taxpayer over 30 years. With a high participation rate in a monthly prepayment plan (20% of homeowners), the cost of a new module drops to \$10 for each participating taxpayer over 10 years, or \$3 per taxpayer over 30 years. New collections software can provide many important benefits in addition to tracking monthly payments, so it is arguably more appropriate to consider the cost spread across all taxpayers, not just homeowners participating in a monthly payment plan. In this example, the upfront cost per homeowner to implement a new software module would be just \$10, which works out to \$1 over 10 years and \$0.33 when spread over 30 years.

Table 4:
Annual Cost Per Homeowner to Purchase and Implement New Property Tax Software
(**\$5 Million Software Module Purchased for Large County with 1 Million Residents**)

Cost Per Homeowner Participating in a Monthly Payment Plan

Participation Rate:	Upfront Cost	Annual Cost if Spread Over Multiple Years		
		10 Years	20 Years	30 Years
Low (2.5%)	800	80	40	26.67
Moderate (5%)	400	40	20	13.33
High (10%)	200	20	10	6.67
Very High (20%)	100	10	5	3.33

Participation rate shows the percent of homeowners that sign up for monthly payment plan.

Cost Per Taxpayer, Including Those Who Do Not Participate in Monthly Payment Plan

	Upfront Cost	Annual Cost if Spread Over Multiple Years		
		10 Years	20 Years	30 Years
Cost Per Homeowner	10	1.00	0.50	0.33
Cost Per Capita	2.50	0.25	0.13	0.08
Total Cost Borne by Business	2,500,000	250,000	125,000	83,333

Assumptions Used in the Example

Number of Homeowners: 250,000 (Nationally, for every 100 residents there are: 23.8 homeowners, 40.9 people who live in an owned house but are not the owner, and 35.3 renters. Source: 2016 American Community Survey)

Percent of Property Tax Revenue from Businesses: 50% (Nationally, businesses paid 53% of state and local property taxes in FY2015, if taxes on residential rental property are treated as business taxes. Source: COST 2016).

While many jurisdictions would face large upfront costs to update their tax collections software to allow for monthly installments, the ongoing administrative costs and staff time needed to manage prepayment programs are small once the necessary software is in place, according to interviews with several tax collectors that administer these programs. Monthly prepayments are

easily taken care of within these governments' billing systems. In terms of staff time, the tax collectors interviewed for this report said that they spend slightly more time per taxpayer paying monthly than those paying biannually or annually, but that the extra time spent on these taxpayers is a worthwhile customer service.

Some people worry that allowing taxpayers to set up automated monthly payments online could create security risks for local governments. However, most localities already accept electronic payments for annual or biannual payments, so allowing monthly payments should not create new security risks. Governments can reduce these risks through technological proficiency and following best practices for managing technology (Pfeiffer 2015).

Conclusion

More than half of all U.S. homeowners, and 80 percent of homeowners age 65 or older, pay their property taxes in just one or two large lump sums each year. This payment schedule is very different from income taxes and sales taxes, which are both paid in small increments, and most major bills that households pay monthly. There is some evidence that billing property taxes in large lump sums creates financial challenges for households who do not save in advance for their property taxes, increases the property tax delinquency rate, fosters political opposition to the tax, and that irregular revenue inflows impose costs on local governments. Property taxes are a large expense relative to most homeowners' monthly incomes. Thus, owners who have not set aside funds to pay their upcoming tax bill may become delinquent on their property taxes, or need to borrow money or skip other bills to pay their property taxes, such as accumulating credit card debt or becoming delinquent on their mortgage.

This paper described two approaches used by local governments to allow homeowners to pay their property taxes on a monthly basis. At least 16 states have local option programs allowing tax collectors to establish prepayment programs for property taxes where taxpayers can apply to pay monthly and have those payments accumulate in an escrow account to pay off their annual or biannual tax bill. In Milwaukee, every tax bill includes the option to either pay in full or in monthly installments, so there is no need to submit an application to pay monthly and there are no escrow accounts so the funds are immediately available for local taxing districts. The most important difference between these approaches is that Milwaukee allows for automatic enrollment in the city's monthly installment plan, which results in participation rates that are five to ten times higher than in jurisdictions that require an application before taxpayers can start paying monthly.

Allowing monthly property taxes is not a panacea for homeowners or local governments—there is no property tax relief for overburdened households or new revenue for fiscally stressed municipalities. However, it is a valuable service for some taxpayers that many local governments can provide at minimal cost and with little administrative burden. Monthly payments can also help households avoid financial challenges created from large lump sum payments, reduce property tax delinquency, respond to political demands for property tax reform, and provide more regular revenue for local governments.

References

- Anderson, Nathan B. and Jane K. Dokko. 2009. "Mortgage Delinquency and Property Taxes." *State Tax Notes*. (April 6).
- Anderson, Nathan B. and Jane K. Dokko. 2010. "Liquidity Problems and Early Payment Default Among Subprime Mortgages." Federal Reserve Board Finance and Economics Discussion Series.
- Arlington (VA) TAP. 2017. Taxpayer Assistance Program. <https://taxes.arlingtonva.us/tap/>.
- Bowman, John H., Daphne A. Kenyon, Adam Langley, and Bethany P. Paquin. 2009. *Property Tax Circuit Breakers: Fair and Cost-Effective Relief for Taxpayers*. Cambridge, MA: Lincoln Institute of Land Policy.
- Cabral, Marika and Caroline Hoxby. 2012. "The Hated Property Tax: Salience, Tax Rates, and Tax Revolts." Working paper No. 18514. Cambridge, MA: National Bureau of Economic Research. (November).
- COST (Council on State Taxation). 2016. "Total State and Local Business Taxes: State-by-State Estimates for Fiscal Year 2015." Washington, DC: Council on State Taxation. (December).
- Federal Reserve Board. 2016. *Report on the Economic Well-Being of U.S. Households in 2015*. (May).
- Gabler, Neal. 2016. "The Secret Shame of Middle-Class Americans." *The Atlantic*. (May).
- Han, Hye-Sun. 2014. "The Impact of Abandoned Properties on Nearby Property Values." *Housing Policy Debate* 24 (2): 311-334.
- Haveman, Mark and Terri A. Sexton. 2008. *Property Tax Assessment Limits: Lessons from Thirty Years of Experience*. Cambridge, MA: Lincoln Institute of Land Policy.
- IPUMS-USA [Integrated Public Use Microdata Series: Version 6.0]. 2015. Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Minneapolis, MN: University of Minnesota. <http://doi.org/10.18128/D010.V6.0>.
- Langley, Adam H. 2015. "How Do States Spell Relief? A National Study of Homestead Exemptions and Property Tax Credits." *Land Lines*. (April).
- Lusardi, Annamaria, Daniel Schneider, and Peter Tufano. 2011. "Financially Fragile Households: Evidence and Implications." *Brookings Papers on Economic Activity: Spring 2011*.
- Marlowe, Justin. 2013. "What's the Point of Rainy Day Funds?" *Governing*. (June).
- Mikesell, John L. 2017. Extending a Property Tax Systems Model: Tax Collecting in Large U.S. Cities. Working paper. Cambridge, MA: Lincoln Institute of Land Policy. (December).

Munnell, Alicia H., Anek Belbase, Wenliang Hou, and Abigail Walters. 2017. "Property Tax Deferral: A Proposal to Help Massachusetts Seniors." Boston, MA: Center for Retirement Research at Boston College. (November).

Pew Charitable Trusts. 2013. "Delinquent property tax in Philadelphia: Stark Challenges and Realistic Goals." Washington, DC: Pew Charitable Trusts. (June 27).

Pew Charitable Trusts. 2014. "Philadelphia Improves on Collecting Delinquent Property Taxes." Washington, DC: Pew Charitable Trusts. (December).

Pfeiffer, Marc H. 2015. "Managing Technology Risks Through Technological Proficiency: Guidance for Local Governments." Issue Paper #3. New Brunswick, NJ: Bloustein Local Government Research Center at Rutgers University. (November).

Poer (Marvin F. Poer and Company). 2017. *2017 Property Tax Calendar*.
<http://www.mfpoer.com/resources/taxcalendar.html>

Reitano, Vincent. 2017. "Investing in Collections Software to Allow for Monthly Property Tax Payments. Working paper No. WP17VR1. Cambridge, MA: Lincoln Institute of Land Policy. (October).

Roque, Rob. 2010. "Optimizing ERP in Your Organization." *Government Finance Review*. (August).

Thaler, Richard H. and Cass R. Sunstein. 2009. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New York, NY: Penguin Books.

Waldhart, Paul and Andrew Reschovsky. 2014. "Property Tax Delinquency and the Number of Payment Installments." *Public Finance and Management* 12 (4).

Appendix Table 1: The Prevalence of Property Tax Escrow in 50 States (2015)

	Percent of Homeowners that Have...			Percent of Homeowners with Property Tax Escrow, by Age		Percent of Mortgage-Holders with Property Tax Escrow		
	Mortgage, With Property Tax Escrow	Mortgage, No Property Tax Escrow	No Mortgage	Under 65	65+	2005	2015	Change, 2005-2015
Alabama	39%	17%	44%	50%	19%	59%	70%	11%
Alaska	54%	10%	36%	62%	28%	77%	85%	7%
Arizona	54%	10%	36%	67%	31%	78%	85%	7%
Arkansas	37%	17%	46%	48%	16%	54%	69%	15%
California	39%	32%	29%	47%	21%	41%	55%	14%
Colorado	61%	11%	28%	71%	34%	79%	84%	5%
Connecticut	52%	17%	31%	65%	23%	73%	76%	3%
Delaware	52%	13%	35%	65%	27%	72%	79%	8%
District of Columbia	57%	19%	24%	67%	30%	66%	75%	8%
Florida	41%	16%	43%	55%	21%	65%	72%	7%
Georgia	49%	16%	34%	60%	25%	66%	75%	9%
Hawaii	54%	12%	34%	66%	35%	77%	81%	5%
Idaho	52%	13%	35%	63%	28%	70%	79%	10%
Illinois	41%	23%	36%	51%	17%	56%	64%	8%
Indiana	46%	19%	34%	58%	21%	60%	71%	11%
Iowa	41%	19%	40%	53%	14%	59%	69%	10%
Kansas	46%	13%	41%	58%	19%	68%	78%	9%
Kentucky	36%	22%	42%	45%	15%	49%	62%	13%
Louisiana	34%	19%	48%	43%	14%	50%	65%	15%
Maine	38%	24%	39%	49%	15%	48%	61%	13%
Maryland	62%	12%	26%	74%	33%	80%	84%	5%
Massachusetts	51%	19%	30%	64%	22%	68%	73%	6%
Michigan	39%	21%	40%	49%	17%	54%	65%	11%
Minnesota	50%	17%	34%	60%	20%	67%	75%	8%
Mississippi	33%	16%	52%	42%	15%	52%	67%	15%
Total	44%	20%	37%	55%	20%	60%	70%	9%

	Percent of Homeowners that Have...			Percent of Homeowners with Property Tax Escrow, by Age		Percent of Mortgage-Holders with Property Tax Escrow		
	Mortgage, With Property Tax Escrow	Mortgage, No Property Tax Escrow	No Mortgage	Under 65	65+	2005	2015	Change, 2005-2015
Missouri	46%	16%	38%	58%	20%	64%	74%	10%
Montana	44%	12%	44%	56%	20%	68%	78%	10%
Nebraska	46%	14%	40%	59%	16%	68%	77%	9%
Nevada	57%	10%	33%	67%	38%	78%	85%	7%
New Hampshire	44%	22%	34%	55%	18%	57%	67%	10%
New Jersey	50%	18%	32%	62%	21%	72%	73%	1%
New Mexico	43%	13%	44%	53%	25%	70%	77%	8%
New York	41%	21%	38%	52%	18%	64%	66%	2%
North Carolina	47%	17%	36%	58%	23%	61%	73%	13%
North Dakota	38%	14%	47%	50%	9%	64%	73%	8%
Ohio	43%	20%	37%	54%	19%	61%	68%	7%
Oklahoma	40%	14%	46%	51%	18%	62%	74%	12%
Oregon	45%	21%	34%	58%	23%	54%	69%	14%
Pennsylvania	39%	22%	40%	50%	15%	55%	64%	9%
Rhode Island	47%	22%	31%	60%	20%	59%	69%	9%
South Carolina	41%	17%	42%	51%	21%	55%	70%	16%
South Dakota	41%	14%	44%	53%	13%	61%	75%	14%
Tennessee	43%	17%	41%	55%	19%	59%	72%	13%
Texas	39%	18%	43%	48%	16%	58%	68%	10%
Utah	58%	12%	30%	70%	26%	75%	83%	7%
Vermont	26%	36%	38%	34%	10%	30%	42%	12%
Virginia	56%	13%	31%	68%	28%	76%	81%	6%
Washington	53%	15%	32%	65%	25%	67%	78%	11%
West Virginia	26%	20%	54%	35%	10%	40%	57%	18%
Wisconsin	37%	28%	35%	47%	14%	47%	57%	10%
Wyoming	47%	10%	42%	59%	18%	68%	82%	14%
Total	44%	20%	37%	55%	20%	60%	70%	9%

Source: American Community Survey via IPUMS-USA.

Note: Due to rounding, numbers may not sum to 100 percent in the first three columns and the column for “Change, 2005-2015” may not equal the difference between the columns for 2005 and 2015.

Appendix 2: Summary of State Statutes on Prepayments for Property Taxes and Related Programs (2016)

Note: This appendix includes states with statutes explicitly allowing local governments to accept prepayments for property taxes. However, tax collectors in some states appear to be able to accept monthly payments without explicit state authorization. Also, it is possible that the review of state laws could have missed some authorizing statutes, especially in states with long or complex statutory codes.

Arizona

County treasurers shall accept partial payments that are at least 10 percent of the biannual installment and at least \$10. Treasurers shall issue receipts for partial payments.
Sec. 42-18056, A.R.S.

Florida

Tax collectors may accept partial payments in any amount. Each partial payment carries a \$10 processing fee payable to the tax collector and partial payments are not eligible for the early payment discounts of up to 4 percent that are provided for under Florida law (197.162, F.S.). The tax collector shall mail at least one notice of the balance due after accounting for the partial payments.
Sec. 197.374, F.S.; Added in 2009, with amendment in 2011

Idaho

Any taxpayer can submit an application to the tax collector to establish a payment schedule on a monthly, quarterly, or other periodic basis with the payments accumulated towards the payment of current or future property taxes. Tax collectors may deposit payments into a depository account as allowed under Idaho law, but no interest on interim payments shall be paid to taxpayers. Tax collectors shall issue a receipt for each interim payment. Taxpayers cannot withdraw interim payments after they have been made.
IC Sec. 63-906; Added in 1996, with amendment in 2006
These payments are often referred to as “tax anticipation payments” in Idaho.

Indiana

County councils can adopt ordinances to allow all county taxpayers to pay property taxes with monthly automatic deductions from a checking account, credit card, or other account or under a monthly installment plan without an automatic deduction. County treasurers shall provide a form where taxpayers can authorize automatic deductions. For taxpayers that submit this form, the treasurer shall provide a statement with the amount that will be deducted each month, the day each month when the deduction will occur (as chosen by the taxpayer), and an explanation of how property taxes will be reconciled at the end of the year. State statute outlines how the monthly payments should be calculated, although counties may adopt ordinances allowing taxpayers to choose to pay a different amount than what has been calculated by the treasurer. The treasurer shall issue a reconciling statement to taxpayers after they have made their last monthly payment for the current year and the tax liability for the current year has been determined. This statement shows the difference between the taxpayer’s actual liability for the current year and what they have paid in total from monthly payments. If the actual tax liability exceeds what has been paid via monthly payments, then the taxpayer must pay the difference within thirty days. If the total of monthly payments exceeds the actual tax liability, then the difference will be credited

against the taxpayer's tax bill for the following year unless the taxpayer seeks a refund for the difference. The treasurer shall deposit these monthly payments into a county's depository account and then distribute them to the appropriate political subdivisions as part of the regular biannual distribution made by the county auditor, although jurisdictions can request an advance of taxes that have been paid up to that date.

IC 6-1.1-22-9.7; Added in 2008, with amendment in 2009

Iowa

County treasurers may accept partial payments of property taxes. Prior to the due date for each semiannual installment, the treasurer shall transfer accumulated funds in the taxpayer's account to pay the tax due. If the taxpayer's account balance exceeds the tax due, then excess funds shall remain in the account to be used for the next semiannual installment. If the account balance is less than the tax due, then the difference will have interest attached to it unless the taxpayer pays the rest of the bill before the delinquency date. Interest earned on the account shall go into the county's general fund to cover administrative costs. The treasurer shall notify taxpayers of the option to make partial payments, either as a notice with the tax statement or a separate mailing. Sec. 445.36A, Code of Iowa; Added in 1990, with amendments in 1991, 1992, 2001, 2005, 2009

Maine

Municipalities may authorize their tax collectors to accept prepayment of taxes not yet committed. Municipalities are allowed to pay interest of up to 8 percent per year on prepayments. If prepayments exceed the amount committed, then the difference must be repaid with interest due on the whole transaction.

Sec. 506, Title 36, M.R.S.A.; Added in 1993

Maryland

Counties may authorize advance property tax payments, which are calculated by applying the current property tax rate to the prior year's assessment. If prepayments are less than the finally determined property tax bill, then the tax collector shall send a bill for the difference. Counties are allowed to pay interest on advanced payments, but it cannot exceed discounts allowed by law.

Sec. 10-205, Prop. Tax Art.

Nebraska

County boards may allow escrow payments for current or delinquent real property taxes, personal property taxes, or both. Payments will be held in escrow by the county treasurer, or by another party under contract, until the accumulated payments are sufficient to pay at least half the taxes currently due on the property or the full amount of delinquency. The county board's resolution may require a minimum, limited, or periodic payment amount as a condition for accepting payments to be held in escrow, and may also require that an escrow agreement be executed between the person making escrow payments and the county treasurer. Escrow payments may be held in a designated bank account or be commingled with other county funds. The county may pay interest on amounts held in escrow at a rate determined by the county board, or may retain any interest received.

77-1704.02, R.S.; Added in 2000

New Hampshire

Cities and towns may authorize the prepayment of property taxes, which allows any taxpayer to make partial payments for taxes that will be due for the current year. The tax collector shall give a receipt for any payment and credit it against the amount of taxes that will be assessed against the taxpayer's property. Taxpayers shall not accrue any interest from their prepayment.
NH RSA 80:52-a

New Mexico

A board of county commissions may provide the option to prepay property taxes in ten monthly payments beginning June 1st of the year the tax bill is prepared and ending March 1st of the following year. The first nine monthly payments shall equal 10 percent of the prior year's property tax bill, and the final payment on March 1st shall equal the balance of the tax due.
NM Stat Ann Sec. 7-38-38.3; Added in 2008

New York

New York law does not provide for prepayment agreements between taxpayers and tax collectors. However, banks and other mortgage institutions are allowed to enter into agreements with taxpayers who do *not* have a mortgage to establish property tax escrow accounts.
Sec. 953-a, Real Property Tax Law

North Dakota

Real estate taxes, either current or delinquent, may be paid in installments of at least 10 percent of the amount of tax due, plus any penalty and interest.
Sec. 57-20-10

Ohio

County treasurers may enter prepayment agreements with taxpayers. The prepayments may be made through an electronic funds transfer or by credit card. The treasurer will hold the prepayments in an escrow fund or separate depository account, and then use these funds to pay the taxpayer's bill when it is due. Any interest earned on the escrow fund will go first to cover the costs incurred by the treasurer to establish and administer the prepayment system, with any remaining interest earnings used to provide a discount against the taxpayer's tax liability. The treasurer shall provide a receipt for taxpayers who make a prepayment in person at the treasurer's office, but only provide a receipt to taxpayers who have mailed in their prepayment if they included an addressed envelope with sufficient postage. For taxpayers that have made prepayments, the treasurer shall add to their tax bill a tax escrow statement that shows the total amount of prepayments they have made, any discount that has been applied to their total taxes due, and the balance due for taxes which have not been covered by prepayments. The county treasurer's office shall bear all costs of establishing and administering a prepayment system.
Sec. 321.45, Ohio R.C.; Effective date March 11, 2004

South Carolina

A county governing body may allow taxpayers to pay real property taxes in six installments with payments due every other month. Taxpayers must notify the county treasurer in writing if they wish to pay in installments. Installment payments are based on the property tax bill for the prior year after accounting for all credits and adjustments. The first five installments shall be equal to

16 2/3 percent of the prior year's tax bill, with the remaining balance due in the sixth installment. The installment payments are a credit against the property tax due for that tax year, with installments deposited by the county treasurer in an interest-bearing account with the interest used to offset administrative expenses of managing installment payments. Tax notices for taxpayers that have elected the installment option must contain a calculation of the estimated property tax due, a payment schedule, and return envelopes for the payments.
Sec. 12-45-75, Code; Added in 1994, with amendments in 1995, 2005, and 2006

While a review of South Carolina statutes did not uncover any mention of monthly payments, it seems that they are used by some counties in the state. For example, Richland County offers the option to pay property taxes monthly on its website and the *U.S. Master Property Tax Guide 2015* says counties may provide for monthly installment payments.
Richland County: <http://www.rcgov.us/Government/Departments/Taxes/Treasurer/PlannedPayments.aspx>

South Dakota

The Board of County Commissioners may permit the payment of property taxes by electronic transmission in ten equal monthly installments. The first payment shall be made January 1st and the final payment shall be made by October 1st. The Board of Commissions may establish criteria for which taxpayers are allowed to pay property taxes by electronic transmission. Property taxes paid monthly are considered delinquent if not remitted by the third day of the month, and interest shall be added to the delinquent taxes for days the taxes are delinquent. County treasurers are not required to provide a duplicate tax receipt for each tax payment made monthly.
SDCL Sec. 10-21-7.1, 10-21-7.2, 10-21-7.3, 10-21-7.4; Added in 1995

Tennessee

Partial payments of property taxes are authorized with a two-thirds vote of a county's legislative body. County trustees may accept partial payments of property taxes via preauthorized payments made by credit card, electronic funds transfers, or other methods. Partial payments shall be held in a designated account used to hold undistributed taxes and then transferred to an account for current year taxes after the later of July 1st or the property tax rate for the current year has been adopted by the county's legislative body.
Sec. 67-5-1808, T.C.A.; Added in 1990, with amendments in 2008 and 2009

Texas

The tax collector for a taxing unit may enter contracts with taxpayers where property owners make monthly deposits into escrow accounts maintained by the tax collector for the payment of property taxes. The contract must provide for deposits that will, by the time the tax bill is due, equal the prior year's tax bill or the current year's tax bill as estimated by the tax collector, whichever is less. The tax collector may accept larger deposits if requested by the taxpayer. When the taxpayer's bill is prepared, the tax collector shall apply the money in the escrow account to pay for the imposed taxes and deliver a receipt to the taxpayer. If the monthly deposits exceed the tax bill, the tax collector shall refund the excess to the taxpayer. If the monthly deposits are less than the tax bill, then the tax collector shall send a tax bill for the unpaid amount.
Sec. 31.072, Tax Code; Added in 1989, with amendments in 2005 and 2007

Utah

County treasurers can accept partial property tax payments of at least \$10.
Sec. 59-2-1331(4) Utah Code Ann.

Virginia

Taxpayers are allowed to prepay taxes (Sec. 58.1-3920) and earn interest on these payments at an interest rate established by ordinance (Sec. 58.1-3920.1). The governing body of any county, city, or town may establish coupon books and payroll deductions, which allow taxpayers to pay tangible personal property taxes through monthly, bimonthly, quarterly, or semiannual installments (Sec. 58.1-3916).

The governing body of Prince William County may allow for the payment of real estate taxes on homesteads for taxpayers who are at least 65 years of age or permanently and totally disabled in monthly, bimonthly, quarterly, or semiannual installments. Due dates for monthly, bimonthly, or quarterly payments may extend into the subsequent tax year by up to 180 days.

Sec. 58.1-3916.02; Added in 2004

More information: <http://www.pwcgov.org/government/dept/finance/pages/monthly-installment-info-on-real-estate-taxes.aspx>

Washington

County treasurer may reach payment agreement with taxpayers allowing for the prepayment of current taxes on a monthly or other periodic basis. The payment agreement must be signed by the taxpayer and treasurer (this can be done online), which must include a payment plan for current year taxes and any prepayment collection charges. Payments are via electronic bill payment, which means statements and bills that are delivered and paid using the internet, which can include automatic payments from a checking account, credit card, or debit account. The treasurer must direct any collection charges and investment earnings to an account to be used solely to cover costs incurred by the treasurer to administer the prepayment system. Payment agreements are also authorized for delinquent taxes.

RCW 84.56.020(11); Also see RCW 36.32.120 (Counties authorized to allow prepayment of taxes) and RCW 35.21.650 (Cities and towns authorized to allow prepayment of taxes)

Wisconsin

The Milwaukee common council may, by ordinance, permit payment in ten equal installments, without interest, of general property taxes, special charges and special assessments of the city, technical college, and public school system, other than for special assessments for which no payment extension is allowed. Each installment shall be paid on or before the last day of each month from January through October.

The Milwaukee common council may, by ordinance, permit the payment in seven equal installments, without interest, of a portion of all general property taxes and special charges of the state, county, and metropolitan sewerage district. Each installment shall be paid on or before the last day of each month from January through July.

Taxpayers may exercise the installment option by making the first installment payment by January 31st. Taxpayers can miss one installment without the unpaid balance becoming delinquent—although 1 percent interest on the missed or short payment will be collected—but missing a second

installment renders the unpaid balance delinquent, with interest and penalty accruing back to February 1st.

Sec. 74.87, Wis. Stats.; Added in 1987, with amendments in 1991 and 1999.

Note that other Wisconsin tax districts may allow three or more installments, but the first installment must be paid by January 1st, at least half of the obligation must be paid by April 30th, and the total due must be paid by July 31st.

Sec. 74.12, Wis. Stats.

Appendix 3: Experts Interviewed for this Study

Tonya Blackwell, Deputy Treasurer for Butler County (OH)

Linda Bridge, Tax Collector-Assessor for Bee County (TX)

Spencer Coggs, City Treasurer of Milwaukee (WI)

Alan Dornfest, Property Tax Policy Supervisor, Idaho State Tax Commission

Michelle French, Tax Collector-Assessor for Denton County (TX)

Debbie Kauffman, Treasurer for Twin Falls County (ID)

Melinda Marshall Kennett, Tax Collector Coordinator for Coos County (NH), President of the New Hampshire Tax Collectors Association

Jim Klajbor, Deputy City Treasurer of Milwaukee (WI)

Rex Norman, Consultant/Appraiser, CAE Consulting & Mediation Services, LLC

Sally Powers, Fellow, Lincoln Institute of Land Policy

David Reinhardt, Treasurer for Clark County (IN), President of the Indiana County Treasurers' Association