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## Report on Compiling and Analyzing Manufactured Housing Tax Records:

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## Report on Compiling and Analyzing Manufactured Housing Tax Records

Prepared for Energy Trust Oregon

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# Project Background and Understanding

In January of 2016, the Center for Public Service (CPS) was approached by Energy Trust of Oregon to conduct a review of the tax assessor data on manufactured houses in Oregon. The purpose of this review was to find the average age at which manufactured housing units in Oregon are decommissioned. A brief review of the literature on this topic that has been published indicated that this question had not yet been answered in the field.

Energy Trust Oregon is invested in making manufactured housing living more energy efficient, and less costly for occupants. To that end, the organization designed this investigation into the relative savings of replacing an inefficient unit today, versus waiting for the unit to be decommissioned in the future. The organization believes that they can demonstrate that it is both environmentally sustainable relating to energy usage and economically prudent to support a program that aims to swap out old, inefficient units for new, sustainable ones.

Work on this project began in March 2016, and was conducted by a group of CPS researchers (CPS Research Team). Details about the team members are included at the end of this report.

The CPS Research Team considered this project in three parts: case identification, data collection, and data analysis. These efforts are detailed below. Our analysis included over 600,000 tax records. We identified over 6,500 tax accounts that were closed during the period of analysis. The average age of manufactured housing unit at the time of tax account closure – across all counties and years considered – was found to be **33.36**.

Additionally, the CPS Research Team compiled an encompassing dataset for Energy Trust of Oregon. This file (in Excel format) has the latest tax information on manufactured housing in each county considered in this study. We hope that this will be of use for Energy Trust of Oregon's future endeavors.

## Methods

### Identification of Cases

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The identification of cases to include in this study was an iterative, co-production process with Energy Trust of Oregon. Together, we had initially identified 13 counties of interest. The selection of these counties relied, in part, on the work previously done by the CPS Research Team for an Energy Trust of Oregon-ally, Neighborworks Umpqua.

However, after the CPS Research Team made contact with the identified counties, it became clear that the 13 were not feasible. Some counties did not archive tax data; others were prohibitively expensive. In the end, we identified eight counties for inclusion: Deschutes, Jackson, Josephine, Klamath, Linn, Marion, Morrow, and Yamhill. As detailed in the Data Collection section below, eight eventually became six (Klamath and Morrow were not included).

#### Counties Selected for Study

- Deschutes
- Jackson

- Josephine
- Klamath\*
- Linn
- Marion
- Morrow\*
- Yamhill

\* these counties were eventually eliminated from the study as the data was either unavailable or incomplete. For more details, see the Data Collection section.

## Data Collection

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When we co-produced the project proposal, the intention was to collect data from 2000 – 2014 for analysis. The data collection process highlighted that this was not always possible. Energy Trust of Oregon was informed of all unavailable data. On the other hand, some counties were able to provide data that was more recent than 2014. We collected everything that was available.

It is an interesting side note to consider how much of the tax assessor data in Oregon is incomplete. The CPS Research Team was genuinely surprised to find that many of the counties that we contacted simply did not have any archival records. Some had only piecemeal snapshots from, for example, 2010 – 2012. There is no state database that tracks the county property tax assessor information, and no state-mandated rules on the collection and storage of said data. Therefore, some of our data is rich, detailing taxpayer information, location, number of bedrooms, square footage, and so forth. Other data is anemic, with counties providing only the barest of information. Marion County, for example, claimed that releasing property details was against their privacy protection policies. This includes the year built information.

Our data collection process involved many points of contact with county tax assessor and data processing offices. The CPS Research Team graduate students were dogged in their pursuit of the data. Contact information for each county's tax assessor office and data processing department can be provided to Energy Trust of Oregon, if that is of interest.

As alluded to, this project was reframed in May 2016, based on data availability. With Energy Trust of Oregon, the CPS Research Team revised the list of counties included. Since this process, however, two additional counties have been made unavailable for analysis.

Klamath County was included in the revised project. The CPS Research Team had made contact with the tax assessor office and they quoted a price for the data, and indicated which years were available. However, when the CPS Research Team wanted to order the data, we were told that our request was not possible. Archival data was not stored. Klamath County was eliminated from the study.

Morrow County tax assessor offered us the data that was stored – two years – for free. Upon receipt of that data, however, we learned that it provided past tax information for current properties. That is, historical account closures were not captured. Morrow County, too, was eliminated from the study.

The following table illustrates the counties that were included: Deschutes, Jackson, Josephine, Linn, Marion, and Yamhill. Also indicated in the table is the data years available through the tax assessor's office, and the relative size of each county. The size metric is

indicated by the number of manufactured housing units in the latest data year available (2014-2016).

**Table 2.1: Selected Counties and Data Available**

County	Relative Size (# manufactured units in last year available)	Years Available
Deschutes	11,331	2000 – 2014
Jackson	13,371	2002 – 2016
Josephine	7,188	2000 – 2015
Linn	8,101	2009 – 2014
Marion	8,708	2000 – 2014
Yamhill	3,664	2000 – 2015

## Data Analysis Approach

The goal of this project is to calculate the average age at which manufactured housing units are decommissioned. There is no direct report of this variable. As a proxy for this variable, our analysis identified manufactured housing property tax accounts that were closed in our period of analysis.

The data analysis approach taken by the CPS Research Team was conducted in three phases. First, we looked for units – as indicated by property identification number, provided by the county – that were included on the tax roll one year and not the next. We identified these closures for each year, for each county.

Second, we calculated the age of each unit at the time of the account closure. This was done by taking year built from the tax assessor roll year. I.e. Age = Roll Year – Year Built.

The CPS Research team then calculated descriptive statistics both by county and cumulatively. We have reported the average age at the time of account closure for each county, as well as the average age at the time of account closure across all counties.

### Special Case: Marion County

As noted above, Marion County would not release the year built information for our study. The CPS Research Team devised a work-around option, approved by Energy Trust Oregon, to collect the data manually.

Over 3,000 account closures were identified in Marion County. Of those, we were able to collect and analyze the year built data for 1,370 units. The averages (both for Marion County and the overall) reported below are based on the subset of data that was available.

### Special Case: Josephine County

Josephine County was particularly helpful to our study, providing data very quickly and very cheaply. However, when analyzing the information provided, there was a slight problem. It

appears that in 2011, Josephine County adopted a different approach to reporting and recording their tax information. More specifically, in 2011 the CPS Research Team identified over 1,000 account closures; in 2010 we identified 100.

To account for this anomaly, the CPS Research Team excluded 2011 from our overall analysis. We do not believe that this undercuts the validity of the findings from the county or overall.

## Results

The CPS Research Team analyzed records from 2000 to 2016. In all, we considered approximately 650,000 manufactured housing unit tax records. Of those units, we identified 6,861 tax accounts that were closed during the period of analysis. The average age of manufactured housing units when accounts were closed is **33.36**. Please see the chart below for a by-county breakdown of the results.

Table 3.1: Results

County	Number of fall offs	Average Age
Deschutes	598	26.09
Jackson	306	32
Josephine	3,955	33.01
Linn	315	30.17
Marion	1,370	39.80
Yamhill	317	28.2
<b>TOTAL</b>	<b>6,861</b>	<b>33.36</b>

In conclusion, the CPS Research Team, through thorough analysis of Oregon county tax assessor roles has determined the average age for manufactured housing at the time of account closures to be **33.36**. The CPS Research Team hopes that this piece of information will help inform Energy Trust of Oregon’s energy efficiency and economics modelling.

## Research Team Biographies

### Stephanie Hawke, Senior Research Assistant, Center for Public Service

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Stephanie Hawke is the Senior Research Assistant for the Center for Public Service. She is a doctoral student in Public Affairs and Policy program at Portland State University (estimated completion in June 2017), and holds a BA in International Relations from University of California, Davis (completed in 2009). Her applied research focuses on local government and issues of civic engagement and inclusion. Her academic research focuses on comparative urban politics, the politics of representation, and policy analysis. She is currently writing on her dissertation, "The Dynamic Returns of Representation: Descriptive Representation and Policy Outcomes in Urban Government."

### Robert Cheney, Graduate Research Assistant, Center for Public Service

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Robert Cheney is a MPA candidate with an emphasis in local government at the Hatfield School of Government at PSU. His interests include city/county management and public policy implementation.

### Aaron Kaufman, Graduate Research Assistant, Center for Public Service

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Aaron Kaufman is a second year Master of Public Administration candidate specializing in Local Government at Portland State University's Hatfield School of Government. His passions include environmental and socio-economic equality policy and innovative public management.