Yield Control: A Technician's Guide

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Introduction

Under the title "Additional Limitations on Property Tax Rates," Section 7-37-7.1 New Mexico Statutes Annotated contains some of the more complex material in the New Mexico Property Tax Code.[2] The provisions are commonly referred to as "yield control" by people familiar with the New Mexico property tax system, although the term "yield control" is not used in the New Mexico statutes. The yield control legislation's purpose is to encourage property reassessment by preventing reassessment from increasing property tax revenues, or yields. Consistent reappraisal is necessary to insure a fair property tax system. Without rate adjustments via yield control as reappraisal occurs, however, reappraisal would create windfall revenues for local governments and discourage assessors from reassessing because they would otherwise be blamed for tax increases following reassessment. The mechanism therefore forces rates subject to it[3] to fall as assessed value increases due to reappraisal. Yield control also causes rates to increase when total assessed values fall and thus, in a sense, works in reverse.

The mechanism is difficult to understand, even among tax professionals familiar with it, partially due to the manner in which it appears in statute and other factors. Provisions of the yield control statute are applied when property tax rates are determined. Its formula is fairly complex and the data applied to the formula is not readily available to the public. Also, many of the terms in the formula are unique to the statute. Examples include "base year value, "growth control factor" and "valuation maintenance". It is thus not surprising that the yield control mechanism is not well understood. The present document is therefore intended to address this problem by helping its readers understand yield control and how its effects have changed due to recent legislation. The discussion that follows describes what the yield control mechanism is designed to accomplish in detail. The focus then turns to how the basic yield control formula emerges from statute. The third section of this report manipulates the basic yield control formula to illustrate how it accomplishes its objectives by examining how each of the major variables in the yield control formula affect property tax rates and revenues. A section that illustrates how yield control equalizes tax burdens in a hypothetical jurisdiction then precedes the document's final sections, which discuss the question of whether yield control is necessary due to legislation enacted in 2000 that limits assessed value increases and serves a purpose that is similar to that of yield control.

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[1] with assistance from James P. O'Neill.

[2] Articles 35 through 38 of Chapter 7, New Mexico Statutes Annotated.

[3] Essentially all rates that produce revenue for operating purposes are subject to the statute. Most rates that generate revenue for debt-service purposes are not, although some debt-service rates are subject to yield control.

Objectives of the Yield Control Legislation

The general purpose of yield control is to produce tax equity by encouraging reassessment without simultaneously increasing property tax revenues. Maintaining constant revenue yields would, however, cause some serious fiscal problems among government entities that rely on property tax revenues. First, particularly during periods of rapid inflation, governments would find their property tax revenues declining in real or inflation-adjusted terms if the revenues were consistently prevented from increasing. Secondly, as property is added to the tax base due to new construction or annexation, the demand for services tends to outstrip property tax revenues. Hence framers of the yield control statute were required to find a mechanism that would 1) constrain revenue yields by causing rates to fall when net taxable value increased due to reassessment; 2) maintain revenues at inflation-adjusted levels via some sort of index that increases revenues at approximately the rate of inflation; and 3) allow revenues to grow in rough proportion to increases in net taxable value because revenue needs increase in rough proportion to service demands on governments as population expands. As is described below, these objectives are reflected in statutes that created the yield control mechanism.

How the Yield Control Formula Emerges from Statute

As shown in this report's appendix, Paragraph A of Section 7-37-7.1 NMSA 1978 (the "yield control statute") requires property tax rates subject to the statute to be determined in a way that prevents property tax revenues from exceeding the product of the "growth control factor" and previous year's revenue. This condition effectively states that revenues may be equal to or less than the product of the previous year's revenues and the growth factor:

$$(1) \; new \; revenues \leq previous \; year's \; revenue \; x \; growth \; control \; factor.$$

The requirement is stated as "equal to or less than" because the intent is to permit governments to impose rates that generate revenues that are *less than* previous year's revenue multiplied by the growth control factor. Since most governments simply accept the rates set by the yield control formula, however, the best way to think of the condition stated in (1) above is as inequality:

$$(1a) \; new \; revenues = previous \; year's \; revenue \; x \; growth \; control \; factor.$$

Equation (1a) is, in essence, the basic yield control equation used in calculating most New Mexico property tax rates.

This can be shown by substituting various subcomponents of terms in equation (1a) into equation (1a) and solving for the rate, as follows:

The growth control factor (G) in the right-hand portion of equation (1a) is defined in paragraph A of Section 7-37-7.1 as the sum of two variables represented by capital letters V and I:

$G = V + I.$

V is defined in the statute by a formula as:

(2) $V = \frac{(base\ year\ value\ +net\ new\ value\ )}{base\ year\ value}, or\ \ V = 1 + \frac{net\ new\ value}{base\ year\ value},$

and I is the percent change in the cost of government services. Hence

(3) *growth control factor (G)* $= 1 + \frac{net\ new\ value}{base\ year\ value} + \ I$.

The middle term in equation (1a) above – previous year revenue – is the product of the previous year's net taxable value and previous year's rate, i.e.:

(4) *previous year revenue = base year value x base year rate.*

The left-hand term in equation (1a) – new revenue – is the product of new (computed) rate and new net taxable value. New net taxable value is the sum of base year value, net new and valuation maintenance. Net new value is the assessed value of property added to tax rolls. Valuation maintenance is the increase in net taxable value of existing properties resulting from reassessment. Hence:

(5) *new revenue = computed rate x (base year value +net new value + valuation maintenance).*

Substituting the right-hand terms in equations (3), (4) and (5) into equation (1a) and solving for computed rate produces the basic yield control equation shown below.

$$\text{computed rate} = \frac{\text{base year value x base year rate x} \left(1 + \frac{\text{net new value}}{\text{base year value}} + \text{ government cost index}\right)}{\text{base year value} + \text{new construction} + \text{valuation maintenance}}.$$

Net new value is property added to tax rolls for various reasons but consists primarily of the value of newly-constructed property and property that is annexed. Since the term 'net new value" is similar to "new taxable value", the term "new construction" is substituted for "net new value" in the basic yield control equation employed in what follows. The computed rate is the rate computed by formula. The correct or actual rate (not defined in statute) is the rate that is applied to net taxable value. It consists of the computed rate plus any additional rate added to an existing rate by an imposing entity. The additional rate may not allow the resulting rate total to exceed the maximum allowed by law by the imposing entity, however.[4]

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[4] Section 7-37-B authorizes governing units of counties to impose rates of up to 11.85 mills without voter approval. Similar authority is provided for municipalities to impose rates totaling 7.65 mills, and for school districts to impose rates totaling no more than 0.5 mills. The stipulation in 7-37-7.1 is that rates resulting from yield control may not exceed these maximums.

The Department of Finance and Administration defines prior year revenue as "property tax effort" or base year value x base year rate. Moreover, base year value + new construction + valuation maintenance = current year net taxable value. Hence the basic yield control formula may also be stated as:

$$\text{computed rate} = \frac{\text{prior year revenue x growth control factor}}{\text{current year net taxable value}} = \frac{\text{property tax effort x growth control factor}}{\text{current year net taxable value}}.$$

Section 7-37-7.1 contains several constraints on the manner in which "yield controlled" rates may be applied. These include: 1) requiring rates to be calculated separately for residential and nonresidential property[5]; 2) limiting the government cost index to five percent[6]; 3) preventing the figure for new construction used in the formula from being less than zero[7]; 4) preventing actual rates from exceeding rates imposed by governments when calculated by the formula -- "yield controlled rates" as they are sometimes called;[8] and 5) explicitly preventing yield control from being applied to property taxed under the Oil and Gas Ad Valorem Tax Act, the Ad Valorem Production Equipment Tax Act, or the Copper Production Tax Act.[9]

Impacts of Specific Yield Control Variables on Rates and Revenues

As indicated in the previous section, the basic yield control equation is:

$$\text{computed rate} = \frac{\text{base year value x base yea rate x}\left(1 + \dfrac{\text{new construction}}{\text{base year value}} + \text{government cost index}\right)}{\text{base year value} + \text{new construction} + \text{valuation maintenance}}$$

Or:

$$Rc = \frac{Bv \text{ x } Rb \text{ x }\left(1 + \frac{Nc}{Bv} + I\right)}{Bv + Nc + Vm}, \text{ or } Rc = (Bv \text{ x } Rb \text{ x } (1 + Nc/Bv + I))/(Bv + Nc + Vm) \text{ where:}$$

Rc = computed rate;
Rb = base year rate;
Vm = valuation maintenance;
 I = government cost index;
Bv = base year value; and
Nc = new construction.

How the yield control formula works can perhaps best be understood by allowing various combinations of variables to equal zero and examining the resulting equations as follows.

1) Impact of Government Cost Index:
The rate (Rc) and revenues increase in proportion to the index, e.g., if the index is .04, the rate increases by 1.04 and revenues increase by four percent assuming net taxable value does not change.

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[5] Section 7-37-7.1 A: "…The calculation described in this subsection shall be separately applied to residential and nonresidential property…."
[6] Section 7-37-7.1 A(4): "…"percent change in I" means a percent not in excess of five percent…"
[7] Section 7-37-7.7 A(1) stating that the growth control factor may not be less than 100 percent.
[8] Section 7-37-7.1 B.
[9] Section 7-37-7.1 F.

Proof: Let valuation maintenance and new construction = 0.

$$Rc = \frac{Bv \times Rb \times \left(1 + \frac{Nc}{Bv} + I\right)}{Bv + Nc + Vm} = \frac{Bv \times Rb \times (1+I)}{Bv} = Rb(1 + I).$$

2) Impact of New Construction:

The new rate (Rc) is the same as the base year rate (Rb). The value of new construction is added to the previous year's base and revenues increase in proportion to the ratio of new value/base year value.

Proof: Let valuation maintenance and the government cost index = 0.

$$Rc = \frac{Bv \times Rb \times \left(1 + \frac{Nc}{Bv} + I\right)}{Bv + Nc + Vm} = \frac{Bv \times Rb \times \left(1 + \frac{Nc}{Bv}\right)}{Bv + Nc} = \frac{Bv \times Rb \times \left(1 + \frac{Nc}{Bv}\right)}{Bv\left(1 + \frac{Nc}{Bv}\right)} = Rb.$$

3) Impact of Valuation Maintenance:

The rate adjusts in the opposite direction of valuation maintenance and revenues do not change.

Proof: Let new construction and the government cost index = 0.

$$Rc = \frac{Bv \times Rb \times \left(1 + \frac{Nc}{Bv} + I\right)}{Bv + Nc + Vm} = \frac{Bv \times Rb}{Bv + Vm} = Rb \times \frac{Bv}{(Bv + Vm)}.$$

Example: Assume base rate = 20, base value is 100 and valuation maintenance = 20. Base year revenues total 20 x 100 = 2,000. After yield control, the rate becomes 20 x 100/(100 + 20) = 16.67. New taxable value = 120 or base year value plus valuation maintenance. Hence new revenue =16.67 x 120 = 2,000. This can also be demonstrated by multiplying the right-hand term above, which is the new rate, by new value when new construction and the government cost index are each zero:

$$new\ revenue = new\ rate\ x\ new\ value = Rb\frac{Bv}{(Bv + Vm)} \times (bv + Vm) = Rb \times Bv.$$

In other terms, new revenue is the same as previous year revenue – base year rate x base year value.

These impacts are illustrated graphically below to emphasize the manner whereby valuation maintenance reduces rates but has no effect on revenues. The illustration was developed by substituting increasing values for valuation maintenance into equation 4) above and solving for rates and revenue.

Illustration: Impacts of Valuation Maintenance on Rates & Revenue

Rate	Valuation Maintenance	Revenue
20.00	0	2,000
16.67	20	2,000
14.29	25	2,000
12.50	30	2,000
11.11	35	2,000
10.00	40	2,000
9.09	45	2,000
8.33	50	2,000

Valuation Maintenance Impacts on Rates

Valuation Maintenance Impacts on Revenues
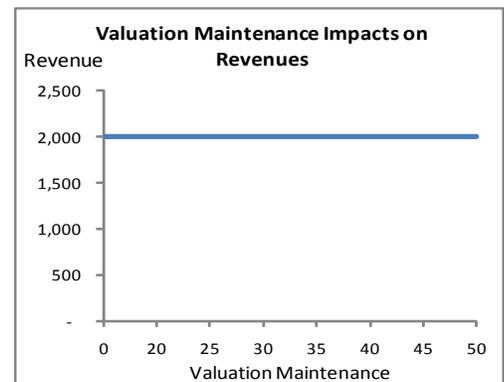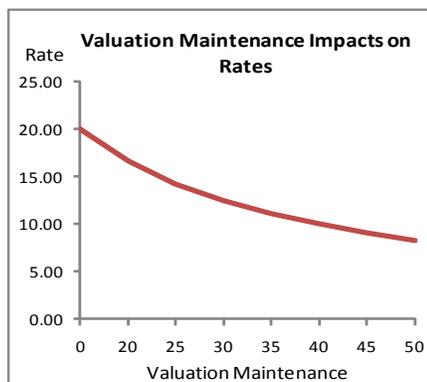
4) Impact on Rate if Aggregate Property Values Fall:

Valuation maintenance will be negative under these circumstances. The rate will increase but revenues will not change.

Proof: Let new construction and the government cost index $= 0$, as above. The new rate becomes: $Rc = Rb \times \frac{Bv}{(Bv+Vm)}$, but since Vm is negative, the rate rises. However, the term Vm in the formula for revenues has no impact on revenues because its two occurrences offset each other:

$$new\ revenue = new\ rate\ x\ new\ value = Rb\frac{Bv}{(Bv+Vm)} x\ (bv + Vm) = Rb\ x\ Bv.$$

5) Impact on Rate and Revenues if All Yield Control Variables Equal Zero:
The rate does not change.

Proof: Let all yield control variables $= 0$.
The new (calculated) rate (Rc) is the same as the base year rate (Rb), and revenues are not affected.

$$Rc = \frac{Bv\ x\ Rb\ x\ \left(1+\frac{Nc}{BV}+I\right)}{Bv+Nc+Vm} = \frac{Bv\ x\ Rb}{Bv} = Rb.$$

6) Impact on Rate when the Government Cost Index Exceeds the Ratio of Valuation Maintenance to Base Year Value:

Jim O'Neill, former Policy Director of the New Mexico Taxation and Revenue Department and one of the architects of yield control, has said the three percent cap on annual assessed value increases among residential properties under current law[10] may cause rates to rise. This may be demonstrated using an approach similar to the one above by ignoring the impact of new construction on the yield control formula and examining the resulting equation.

Let new construction $= 0$.

$$Rc = \frac{Bv\ x\ Rb\ x\ (1+I)}{Bv+Vm} = \frac{Rb\ x\ Bv\ x\ (1+I)}{Bv\left(1+\frac{Vm}{Bv}\right)} = Rb\ x\ \frac{(1+I)}{\left(1+\frac{Vm}{Bv}\right)}.$$

Jim's point is that if a small fraction of properties sells in a particular year while most other properties are reassessed at three percent over the previous year's value and the government cost index (I) is, for example, five percent, the term $\left(1 + \frac{Vm}{Bv}\right)$ will be less than (1+I) in the equation above. Yield control will then cause rates to rise.

DFA Yield Control Rate Calculations Illustrated

The New Mexico Department of Finance and Administration's (DFA) Local Government Division employs fairly standard spreadsheet procedures for calculating rates. Rates are based on data from a number of sources, including county assessor offices and the Taxation and Revenue Department. The rates are produced in spreadsheets by the end of September of each year. Areas of the spreadsheets in which the results of rate calculations are displayed are called "rate certificates". The 2009 Luna County rate certificate and yield control calculations associated with it are shown below.

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[10] Please see Section 7-36-21.1 NMSA 1978.

Illustration: Luna County Property Tax Rate Certificate

Calculation area

Local Government Entity LUNA COUNTY	Category	Correct Rate	Tax Computed Rate	Computed Rate	Applicable MYCR	Imposed Rate	Additional Rate	Base Year Value	Base Year Rate	Property Tax Effort	New Construction	Valuation Maintenance	Growth Factor G	1.050	Total New Taxable Value
Luna	County R	9.394	9.394	9.394	11.850	11.9	0.000	$201,901,892	0.009240	$1,865,573	$5,957,092	$6,532,021	1.0795	1.0795	$214,391,005
Luna	County NR	11.850	11.850	12.886	11.850	11.9	0.000	$250,516,247	0.011850	$2,968,618	$13,730,749	($9,730,175)	1.1048	1.1048	$254,516,821
Columbus	1A in R	3.984	3.984	3.984	7.650	7.65	0.000	$6,438,904	0.004359	$28,067	$72,959	$964,646	1.0613	1.0613	$7,476,509
Columbus	1A in NR	7.650	7.650	7.934	7.650	7.65	0.000	$4,280,974	0.007432	$31,816	($230,985)	$160,430	0.9960	1.0500	$4,210,419

CERTIFICATE OF PROPERTY TAX RATES IN MILLS
LUNA COUNTY   TAX YEAR 2009

Rate certificate area

NET TAXABLE VALUE:
$468,907,826

MUNICIPALITY:	Deming	Deming			Columbus	Columbus
TAXABLE VALUE:	116,204,579	67,620,146	90,709,917	182,686,256	7,476,509	4,210,419
CATEGORY:	1 IN R	1 IN NR	1 OUT R	1 OUT NR	1A IN R	1A IN NR
State Debt Service	1.150	1.150	1.150	1.150	1.150	1.150
Total State	1.150	1.150	1.150	1.150	1.150	1.150
County Operational	9.394	11.850	9.394	9.394	9.394	11.850
County Debt Service						
Total County	9.394	11.850	9.394	9.394	9.394	11.850
Municipal Operational	2.636	2.975			3.984	7.650
Municipal Debt Service						
Total Municipal	2.636	2.975	0.000	0.000	3.984	7.650
School District Operational	0.471	0.500	0.471	0.500	0.471	0.500
School District Debt Service	4.376	4.376	4.376	4.376	4.376	4.376
School Dist. Cap. Improvement	2.000	2.000	2.000	2.000	2.000	2.000
House Bill 33, School Building	0.000	0.000	0.000	0.000	0.000	0.000
School District Ed. Tech. Debt Svc	1.205	1.205	1.205	1.205	1.205	1.205
Total School District	8.052	8.081	8.052	8.081	8.052	8.081
Total State, County, Municipal, & School District	21.232	24.056	18.596	18.625	22.580	28.731
Other:						
Total Other	0.000	0.000	0.000	0.000	0.000	0.000
GRAND TOTAL	21.232	24.056	18.596	18.625	22.580	28.731

County Operating Rate Calculation Example – Residential Properties:

Calculation example

$$\text{Rc} = \frac{\text{Bv x Rb x} \left(1+\frac{Nc}{Bv}+I\right)}{\text{Bv}+\text{Nc}+\text{Vm}} = \frac{\$201,901,892 \text{ x } .009240 \text{ x} \left(1+\frac{\$5,957,092}{\$201,901,89}+.05\right)}{201,901,892+5,957,089+6,532,021} = .009394 \text{ or } 9.394/1,000$$

or:[11]

$$computed\ rate = \frac{property\ tax\ effort\ x\ growth\ control\ factor}{current\ year\ net\ taxable\ value} = \frac{\$1,865,573 \text{ x } 1.0795}{\$214,391,005} = .00934 \text{ or } 9.394/1,000.$$

Discussion: Rate Certificate Area

The columns indicate rates applicable to residential property (shaded) and nonresidential property (not shaded) within municipalities (IN) and school districts (indicated by a number).The designation "1 IN R" above therefore indicates residential property in the municipality of Deming and in the Deming School District. The taxable value figures at the top of columns list net taxable value of all properties within the category and sum to the county total shown at the top of the certificate -- $468,907,826. Rates in each column are cumulative, as required by law. Hence, for example, the 21.232 mill rate total shown in the Deming residential column is the sum of the (sub) totals above it. Rates in the certificate area are simply references to cells in the calculation area or an input area in another tab of the workbook. Hence, for example, the 9.394 county operating rate shown in the certificate area contains a reference to the 9.394 mill rate shown in the "correct rate" column of the calculation area above it.

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[11] Please see the formula at the top of page 4 of this report.

Calculation Area
The first two columns of the calculation area indicate the property tax recipient and property classification. For example Luna "County R" indicates Luna County residential property. The other fourteen rate calculation columns, beginning with "Correct Rate" are employed to generate rates. Their number substantially exceeds the number of variables in the yield control equation. The extensive number of columns employed serves primarily to impose conditions required by statute. The "tax rate" column, for example, checks to insure that the "computed rate" in the column next to it does not exceed the maximum rate allowed by law in the "applicable maximum yield control rate (MYCR) column". The "correct rate" entries then insure that the "tax rate" entries do not exceed the sum of the "computed rate and "additional rate" figures – which, in turn reflect portions of rates added by property tax recipients in a particular year.

Calculation Example
The .05 government cost index employed in the calculation example is shown as 1.05 at the top of the next to final column in the calculation area. The index in 2009 was 5.06 percent; hence the .05 maximum figure was employed in the calculations. The .009394 result for computed county residential operating is multiplied by 1,000 to generate the 9.394 mill "computed rates" in the calculation area, as well as in the calculation example. Multiplying by 1,000 was necessary in both cases because the "base year rate" figures were entered into the calculation areas as mills divided by 1,000. Expressing the .009240 base year rate as 9.24 mills would make multiplying by 1,000 in the computed rate columns and in the two examples shown below the rate certificate areas unnecessary.

Illustration: Yield Control and a Small Jurisdiction -- Results of Reassessment

It was demonstrated in a previous section of this report that if new construction and the government cost index variables in the yield control formula are set to zero, the yield control equation becomes:

$$\text{computed rate} = \frac{\text{base year rate x base year value}}{(\text{base year value} + \text{valuation maintenance})}.$$

This information can be employed to illustrate how the yield control formula generates tax equity as reassessment occurs.

Assume a jurisdiction consists of three identical properties, each worth $200,000 but one is assessed at 50 percent of market value, another is at 70 percent and the third is assessed at 90 percent of assessed value, i.e., $100,000, $140,000, and $180,000 respectively. Their net taxable values are 1/3rd of assessed value or $33,333, $46,666 and $60,000 respectively, assuming their owners claim no head of household or veterans exemptions.

Also assume the base year (i.e., current) rate is 20 mills, or $20/$1,000 in net taxable value. Tax bills associated with the three properties will be $666.67, $933.33 and $1,200 respectively and total $2,800. Further assume the new construction and the cost index variables in the formula are zero, and the yield control formula becomes the one shown above.

What happens to their obligations if all properties are reassessed to 100% of market value?

Base year value is $100,000 + $140,000 + $180,000 = $420,000.

Valuation maintenance required to bring everything to market value will be $180,000 or $600,000 - $420,000. Hence the new rate will become: Rate = $420,000 x 20 x 1/(370,000 + $180,000) = 14 mills.

Owners of the properties will all pay $933.33 in property taxes or $66,667 x 14/$1,000. Total tax obligations flowing to the district will remain at $2,800 or 933.33 x 3. The system is now perfectly equitable in the sense that all properties with identical net taxable values incur identical property tax obligations. Results are summarized below.

Illustration: Reassessment and Yield Control – Reassessment Reduces Rate From 20 Mills to 14 Mills			
Market Value:	$200,000	$200,000	$200,000
Assessed Value:	$100,000	$140,000	$180,000
Net Taxable Value:	$33,333	$46,667	$60,000
Tax at 20 mill rate:	$667	$933	$1,200
Net Taxable After Revaluation:	$66,667	$66,667	$66,667
Tax after Revaluation:	$933	$933	$933
Percent Change in Tax:	39.8	0	-22.3

Although useful for illustrating effects of yield control and reassessment, the example above may be misleading for several reasons. It assumes, for example, that all rates are subject to yield control and that rates imposed are able to adjust sufficiently to prevent revenue reductions. As shown below, these conditions often do not apply in New Mexico's property tax system.

Yield Control's Effectiveness

The yield control mechanism was enacted in 1979 and has therefore been in statute for approximately thirty years. It has been criticized on a number of bases, including: 1) yield control does not protect homeowners that purchase either new or existing homes during the year in which they are purchased; 2) the distinction between valuation maintenance and net new taxable value in statute is not clear, hence property is sometimes misclassified; 3) many rates are not subject to it and do not adjust downward in response to increases caused by reassessment; and 4) due to the three percent limit in net taxable value increases enacted in 2000, assessed values cannot increase by amounts that would cause rates to fall appreciably because the government cost index employed in the formula tends to exceed the ratio of valuation maintenance to base year value.

The first criticism listed above is largely correct. Yield control offers no significant tax relief for individuals who purchase either existing or new property. Under current law, the property is assessed at approximately 100 percent of market value while taxes applicable to other, similarly-valued existing properties are much lower due to the three percent limit on assessed value of existing properties. It should be noted, however, that legislation requiring reassessment when properties are sold became law approximately twenty years after the yield control legislation was enacted.[12]

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[12] The Bernalillo County court decisions hold that the three percent limitation applies even when properties are sold. The New Mexico Legislature did not act on the issue in 2010, but courts with statewide jurisdiction have not issued an opinion on the issue.

The second criticism above is also largely correct. Valuation maintenance is not defined in statute. Hence assessors often experience difficulty in distinguishing whether property should be classified as valuation maintenance or new value, despite significant efforts by representatives of the New Mexico Taxation and Revenue Department's Property Tax Division.[13] The third and fourth criticisms listed above can, to some extent, be evaluated by use of statistics.

Since its primary purpose is to reduce rates as values of existing properties grow, one way to assess yield control's effectiveness consists of comparing rates imposed with "actual" or post yield control rates. Another is to compare movements in property tax rates with changes in net taxable value.

New Mexico County Operating Rates in Mills --2009 Tax Year

County	Imposed Rate	Actual Rate		Imposed Less Actual	
		Residential	Nonresidential	Residential	Nonresidential
Bernalillo	10.750	6.340	10.650	4.410	0.100
Catron	11.850	11.222	9.477	0.628	2.373
Chaves	10.350	6.778	10.350	3.572	0.000
Cibola	11.850	8.919	11.579	2.931	0.271
Colfax	10.350	6.412	9.648	3.938	0.702
Curry	9.850	9.788	9.850	0.062	0.000
De Baca	11.850	11.850	11.590	0.000	0.260
Dona Ana	11.850	8.098	11.850	3.752	0.000
Eddy	7.500	6.842	7.500	0.658	0.000
Grant	11.850	6.391	11.850	5.459	0.000
Guadalupe	11.850	8.292	11.850	3.558	0.000
Harding	10.850	8.687	9.833	2.163	1.017
Hidalgo	11.850	11.850	11.850	0.000	0.000
Lea	10.600	8.141	10.600	2.459	0.000
Lincoln	11.600	4.855	8.011	6.745	3.589
Los Alamos	8.850	4.988	8.850	3.862	0.000
Luna	11.850	9.394	11.850	2.456	0.000
McKinley	11.850	5.434	11.850	6.416	0.000
Mora	11.850	7.152	9.000	4.698	2.850
Otero	11.850	7.514	11.850	4.336	0.000
Quay	11.850	5.344	10.350	6.506	1.500
Rio Arriba	11.850	4.361	11.291	7.489	0.559
Roosevelt	10.850	10.850	10.850	0.000	0.000
San Juan	8.500	5.812	8.000	2.688	0.500
San Miguel	11.850	5.644	11.104	6.206	0.746
Sandoval	10.350	5.136	6.567	5.214	3.783
Santa Fe	11.850	4.670	11.850	7.180	0.000
Sierra	11.850	9.393	11.166	2.457	0.684
Socorro	11.850	8.404	10.102	3.446	1.748
Taos	11.850	5.165	9.297	6.685	2.553
Torrance	11.850	11.409	11.057	0.441	0.793
Union	9.150	7.369	8.829	1.781	0.321
Valencia	11.850	6.501	11.850	5.349	0.000

Information source: compiled from DFA rate certificate files.

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[13] An example of the latter occurred years ago when the City of Angel Fire annexed a large tract of developed land. The Colfax County assessor misclassified the land as valuation maintenance rather than new taxable value, which caused the Angel Fire operating rate to fall precipitously due to yield control. The problem required years of litigation to correct.

Imposed and Actual Rates

Actual and imposed county operating rates for the 2009 tax year are shown above. The second column of the table lists operating rates imposed by counties over the past several decades.[14] The table's third and fourth columns display current actual rates that have resulted from yield control. The final two columns of the table display the differences between the rates imposed and actual rates and is a rough measure of the impact of yield control on county operating rates.

When rates are imposed, they apply equally to residential and nonresidential properties. Since the yield control formula is applied separately to residential and nonresidential properties, i.e., different sets of numbers are fed through the formula, differences in residential and nonresidential rates among properties in the same tax jurisdiction are attributable strictly to yield control. Hence, for example, the 10.350 mill operating rate imposed by Colfax county commissioners over the years has been decreased to 6.412 mills on residential properties and 9.648 mills on Colfax County nonresidential properties.

Yield control has had a much greater impact on residential than nonresidential property tax rates. Imposed and actual nonresidential rates are identical in fourteen counties, as shown by the zero entries in the table's final columns. Judging by the differences between imposed and actual nonresidential operating rates, yield control has reduced nonresidential rates by two or more mills only in Catron, Lincoln, Mora, Sandoval and Taos Counties in recent years.

In contrast to nonresidential properties, yield control's impact on residential property tax rates has been substantial if judged by differences between imposed and actual rates. Differences between imposed and actual residential rates exceed two mills in over three-quarters of the state's county operating rates. County operating rates have been reduced by over six mills – over 50 percent – in seven of the state's 33 counties.

These statements deserve qualification, however because narrow differences between actual and imposed rates do not necessarily suggest that yield control is ineffective. Decreases in property values often narrow the differences between assessed and imposed property values via yield control. Perhaps the most notable case of this in recent years is in Hidalgo County. Hidalgo experienced major reductions in market value of residential and non-residential property during the past decade due to a downturn in the copper extraction industry. Hence the zero figures for Hidalgo in the table reflect the fact that yield control maintained residential and nonresidential operating rates at their imposed levels and should not be regarded as an indication that yield control was ineffective in Hidalgo in recent years.

Yield control is sometimes ineffective in these types of situations for a different reason, however. As operating rate totals for De Baca and Hidalgo County shown above indicate, in some cases counties have imposed the maximum 11.85 mills allowed by law and actual rates equal or are slightly below the imposed and maximum rates due to stagnant local economies where property values declined. Hence a reduction in the tax base in these cases caused by additional declines in property values would not be

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[14] Counties and other governments are allowed to impose rates in an increment up to the maximum. Hence a county that has imposed no rate may impose a five mill rate in a particular year and any combination of rates, say two, three, and 1.85 mills in successive years, so long as the total does not exceed 11.85 mills.

offset by rate increases through yield control.

Residential Property Tax Rates in Albuquerque[1] -- 1999 through 2009 Tax Years

Tax Year:	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Net Taxable ($Millions)	4,466	4,624	4,997	5,264	5,481	5,856	6,271	6,863	7,607	8,201	8,543
State											
Debt Service	1.482	1.529	1.765	1.123	1.520	1.028	1.234	1.291	1.221	1.250	1.150
County											
Operational[2]	6.812	5.514	5.858	6.168	7.257	7.281	6.381	6.363	6.283	6.284	6.440
Open Space	0.500	0.500	0.250	0.250	0.250	0.250	0.250	0.250	0.100	0.100	0.100
Judgement	-	-	0.073	-	0.067	0.089	0.069	0.018	0.016	0.015	0.014
Debt Service	-	1.450	1.254	0.950	0.830	0.830	0.830	0.830	0.888	0.880	0.880
Municipal											
Operational	1.963	2.020	2.019	2.014	3.019	3.019	3.028	3.012	2.970	3.971	6.072
Debt Service	8.976	8.976	8.976	8.976	7.976	7.976	7.976	7.976	7.976	6.976	4.976
School District											
Operational	0.230	0.237	0.239	0.239	0.239	0.240	0.242	0.241	0.238	0.238	0.244
Debt Service	2.161	2.168	2.160	2.160	2.162	2.166	2.162	2.167	4.308	4.304	4.316
Capital Improvement	2.000	2.000	2.000	-	2.000	2.000	2.000	1.994	2.000	1.999	2.000
School Building	3.874	3.874	3.874	3.874	3.874	3.874	3.874	3.862	3.813	3.812	3.874
Other											
UNMH Operating[3]	3.371	3.467	6.500	6.500	6.500	6.500	6.500	6.482	6.400	6.401	6.400
Mental Health	0.392	0.403	-	-	-	-	-	-	-	-	-
CNM Operating[4]	2.372	2.439	2.458	2.458	2.461	2.469	2.488	2.477	2.442	2.440	2.496
CNM Debt Service[4]	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
Grand Total	34.183	34.627	37.726	35.012	38.455	38.022	37.334	37.263	39.105	39.120	39.412
Total Operating	15.640	14.580	17.324	17.629	19.726	19.759	18.889	18.825	18.433	19.434	21.752
Total Debt Service	19.043	20.547	20.579	17.633	18.912	18.424	18.626	18.670	20.756	19.771	17.746
% Operating	45.8	42.1	45.9	50.4	51.3	52.0	50.6	50.5	47.1	49.7	55.2
% Debt Service	55.7	59.3	54.5	50.4	49.2	48.5	49.9	50.1	53.1	50.5	45.0
Total Subject to YC	21.514	20.454	23.271	21.503	25.667	25.722	24.832	24.699	24.262	25.260	27.640
Total Not Subject to YC	12.669	14.173	14.455	13.509	12.788	12.300	12.502	12.564	14.843	13.860	11.772
% Subject To YC	62.9	59.1	61.7	61.4	66.7	67.7	66.5	66.3	62.0	64.6	70.1
% Not Subject to YC	37.1	40.9	38.3	38.6	33.3	32.3	33.5	33.7	38.0	35.4	29.9

[1] in mills. [2]Includes opern space levy. [3]BCMC in 1999 and 2000 tax year rate certificates. [4] Albuquerque TVI on rate certificates prior to 2006. Information sourceNew Mexico Department of Finance and Administration rate certificate files.

Movements in Property Tax Rates and Net Taxable Value

The table above displays rates applicable to Albuquerque residential properties from 1999 through 2009.[15] Residential net taxable value increased by 91 percent from $4.467 billion in 1999 to $8.543 billion during the era. The total rate applicable to Albuquerque properties increased by about 15 percent from 34.183 mills to 39.412 mills – contrary to what would be expected since yield control is intended to move rates in the opposite direction of net taxable value. As indicated by figures in the table's final

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[15] Albuquerque residential property owners paid approximately 41 percent of the state's total residential property taxes in the 2009 tax year.

row, approximately 36 percent of the rate total during the era was not subject to yield control.[16] The rates not subject to yield control, however, consisted primarily of voter-approved municipal and school district debt service rates.

Figures in the table also suggest Albuquerque rates displayed a remarkable degree of stability during the past decade. The most striking example of this consists of the .550 mill Central New Mexico Community College debt service rate that remained unchanged during the period. Other examples include the Bernalillo County debt-service rate that did not change between 2003 and 2006 or between 2008 and 2009, as well as the municipal debt service rate that did not change from 1999 to 2002, or from 2003 through 2007. The school district capital construction, debt-service and school building rates also displayed remarkable stability during the era, as did the University of New Mexico Health Center operating rate. Stability associated with some of the voter-approved rates, for example the school district capital construction rate, can be explained by the fact that they are subject to frequent voter approval. Continual frequent voter approval prevents rate reduction over time via yield control.

The Albuquerque numbers therefore suggest yield control has had relatively little impact on property tax rates or revenues during the past decade. As noted above, many operating rates did not change at all during substantial portions of the era despite the substantial base expansion that occurred during the past decade. This can be explained partially by valuation maintenance and government cost index numbers employed in calculating Bernalillo County residential operating rates during the era.

Valuation Maintenance Ratio* and Government Cost Index

Tax Year	Index	VM Ratio	Tax Year	Index	VM Ratio
1990	0.050	-0.015	2000	0.025	-0.004
1991	0.048	-0.006	2001	0.041	0.034
1992	0.031	0.017	2002	0.022	0.021
1993	0.020	-0.009	2003	0.012	0.011
1994	0.027	0.001	2004	0.031	0.027
1995	**0.026**	**0.193**	2005	0.034	0.025
1996	0.030	-0.008	**2006**	**0.050**	**0.053**
1997	0.030	0.009	**2007**	**0.049**	**0.063**
1998	0.024	0.001	2008	0.050	0.050
1999	**0.014**	**0.198**	2009	0.050	0.024

*Valuation Maintenance/Base Year Value.
Source: calculated from data in DFA rate certificate files.
Note: cases were the VM Rratio exceeds the Index are shown in bold print.

As shown in the above table, the ratio of valuation maintenance to base year value exceeded the government cost index only twice in the past decade – in 2006 and 2007, and by relatively small amounts in those instances. Hence stability of essentially all rates that are subject to yield control shown on the Bernalillo County rate certificate can, to a great extent, be explained by the similarity between the two ratios shown in the table beginning in tax year 2000 – the same year in which the three percent limit on assessed value increases was enacted. The relative stability of the Bernalillo County property tax

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[16] Figures in the table's final row average 35.54 percent.

base following enactment of the three percent valuation increase limit also probably stabilized debt-service rates during the same period.

Policy Implications

The three percent annual limitation on assessed value increases of residential property enacted by the 2000 New Mexico legislature appears to have substantially decreased the impact of yield control on residential property tax rates and revenues. This effect will increase if policy makers or the courts remove or negate provisions in paragraph D of Section 7-37-21.2 NMSA 1978 that require reassessment to market value when properties are sold – which appears likely. As long as the three percent cap is in place, impacts of yield control on residential property taxes will be minimal.[17] The yield control statute does not appear to have ever been particularly effective with respect to nonresidential property. Hence it may be time to consider repealing the yield control statute due to its limited effectiveness and the administrative costs associated it, although the administrative costs probably total less than $100,000 annually. Most policy analysts, however, would probably argue that the appropriate course of action would consist of eliminating the three percent cap, retaining yield control, reassessing all properties at market levels and enacting legislation that would limit the amount of property taxes that paid by low- income taxpayers and provide counties with computer systems that would facilitate these types of changes.

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[17] The government cost index variable in the yield control formula is likely to be close to zero in the near future and therefore increase impacts of the yield control formula. These effects will probably be minor and temporary, however.

Appendix: Text of New Mexico's Yield Control Statute[18]

7-37-7.1. Additional limitations on property tax rates.

A.   Except as provided in Subsections D and E of this section, *in setting the general property tax rates* for residential and nonresidential property authorized in Subsection B of Section 7-37-7 NMSA 1978, the other rates and impositions authorized in Paragraphs (2) and (3) of Subsection C of Section 7-37-7 NMSA 1978, except the portion of the rate authorized in Paragraph (1) of Subsection A of Section 4-48B-12 NMSA 1978 used to meet the requirements of Section 4 of the Statewide Health Care Act, and benefit assessments authorized by law to be levied upon net taxable value of property, assessed value or a similar term, *neither the department of finance and administration nor any other entity* authorized to set or impose a rate or assessment s*hall set a rate* or impose a tax or assessment *that will produce revenue* from residential and nonresidential property in a particular governmental unit *in excess of a dollar amount derived by multiplying the growth control factor by the revenue* due from the imposition on residential and nonresidential property *for the prior property tax year* in the governmental unit of the rate, imposition or assessment for the specified purpose. The calculation described in this subsection shall be separately applied to residential and nonresidential property. Except as provided in Subsections D and E of this section, no tax rate or benefit assessment that will produce revenue from either class of property in a particular governmental unit in excess of the dollar amount allowed by the calculation shall be set or imposed. The rates imposed pursuant to Sections 7-32-4 and 7-34-4 NMSA 1978 shall be the rates for nonresidential property that would have been imposed but for the limitations in this section. As used in this section, "growth control factor" is a percentage equal to the sum of "percent change I" plus V where:

$$(1)\qquad V = \frac{\text{(base year value + net new value)}}{\text{base year value}},$$

expressed as a percentage, but if the percentage calculated is less than one hundred percent, then V shall be set and used as one hundred percent.

(2)   "base year value" means the value for property taxation purposes of all residential and nonresidential property subject to valuation under the Property Tax Code in the governmental unit for the specified purpose in the prior property tax year;

(3)   "net new value" means the additional value of residential and nonresidential property for property taxation purposes placed on the property tax schedule in the current year resulting from the elements in Subparagraphs (a) through (d) of this paragraph reduced by the value of residential and nonresidential property removed from the property tax schedule in the current year and, if applicable, the reductions described in Subparagraph (e) of this paragraph:

(a)   residential and nonresidential property valued in the current year that was not valued at all in the prior year;

(b)   improvements to existing residential and nonresidential property;

(c)   additions to residential and nonresidential property or values that were omitted from previous years' property tax schedules even if part or all of the property was included on the schedule, but no additions of values attributable to valuation maintenance programs or reappraisal programs shall be included;

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[18] Italic print was added to portions of the text above to identify the basic inequality referenced in the previous section of this document. The text of Section 7-37-7.1 is otherwise unchanged, however.

(d)   additions due to increases in annual net production values of mineral property valued in accordance with Section 7-36-23 or 7-36-25 NMSA 1978 or due to increases in market value of mineral property valued in accordance with Section 7-36-24 NMSA 1978; and

(e)   reductions due to decreases in annual net production values of mineral property valued in accordance with Section 7-36-23 or 7-36-25 NMSA 1978 or due to decreases in market value of mineral property valued in accordance with Section 7-36-24 NMSA 1978; and

(4)   "percent change I" means a percent not in excess of five percent that is derived by dividing the annual implicit price deflator index for state and local government purchases of goods and services, as published in the United States department of commerce monthly publication entitled "survey of current business" or any successor publication, for the calendar year next preceding the prior calendar year into the difference between the prior year's comparable annual index and that next preceding year's annual index if that difference is an increase, and if the difference is a decrease, the "percent change I" is zero. In the event that the annual implicit price deflator index for state and local government purchases of goods and services is no longer prepared or published by the United States department of commerce, the department shall adopt by regulation the use of any comparable index prepared by any agency of the United States.

B.   If, as a result of the application of the limitation imposed under Subsection A of this section, a property tax rate for residential and nonresidential property authorized in Subsection B of Section 7-37-7 NMSA 1978 is reduced below the maximum rate authorized in that subsection, no governmental unit or entity authorized to impose a tax rate under Paragraph (2) of Subsection C of Section 7-37-7 NMSA 1978 shall impose any portion of the rate representing the difference between a maximum rate authorized under Subsection B of Section 7-37-7 NMSA 1978 and the reduced rate resulting from the application of the limitation imposed under Subsection A of this section.

C.   If the net new values necessary to make the computation required under Subsection A of this section are not available for any governmental unit at the time the calculation must be made, the department of finance and administration shall use a zero amount for net new values when making the computation for the governmental unit.

D.   Any part of the maximum tax rate authorized for each governmental unit for residential and nonresidential property by Subsection B of Section 7-37-7 NMSA 1978 that is not imposed for a governmental unit for any property tax year for reasons other than the limitation required under Subsection A of this section may be authorized by the department of finance and administration to be imposed for that governmental unit for residential and nonresidential property for the following tax year subject to the restriction of Subsection D of Section 7-38-33 NMSA 1978.

E.   If the base year value necessary to make the computation required under Subsection A of this section is not available for any governmental unit at the time the calculation must be made, the department of finance and administration shall set a rate for residential and nonresidential property that will produce in that governmental unit a dollar amount that is not in excess of the property tax revenue due for all property for the prior property tax year for the specified purpose of that rate in that governmental unit.

F.   For the purposes of this section, "nonresidential property" does not include any property upon which taxes are imposed pursuant to the Oil and Gas Ad Valorem Production Tax Act or the Oil and Gas Production Equipment Ad Valorem Tax Act or the Copper Production Ad Valorem Tax Act.

(Laws 1994, Chapter 111, Section 4)