



## 2016 Real Property Ratio Summary Statistics Report



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Each year the Department of Revenue Property Tax Division (DOR) gathers real property sales data from all 39 counties in the State of Washington. Sales, occurring from May 1, 2015, thru April 30, 2016, are determined to be either valid or invalid based on criteria set out in WAC 458-53-070 and WAC 458-53-080. The data from the valid sales is analyzed to determine the general level of assessment and the level of uniformity. Each county's results are broken down by property type and shown in this report. Other than requiring assessment at 100 percent of market value, Washington has not established appraisal performance standards in state law or by administrative rule. However, the International Association of Assessing Officers (IAAO) suggests performance standards for both the level and uniformity of assessments. This report focuses on three recognized IAAO standards, and two additional statistical measures of vertical equity. The standards promulgated by the IAAO include median ratio, coefficient of dispersion (COD), and price related differential (PRD). Other metrics that measure vertical equity are quintile mean ratios (QMR) and vertical equity index (VEI).

It should be noted this report includes all valid sales with no additional trimming of outliers. This report gives the results of each statistical analysis with no consideration given to the number of observations. For this report no binomial test or 'bootstrap' analysis was completed to determine the level of confidence in the results. In many cases, with the limited number of observations, it cannot be said with certainty that the standard was or was not met.

The median ratio is a measure of the level of assessment. A ratio is calculated for each sale by dividing the assessed value by the sales price. The median ratio is the middle ratio, meaning that half the properties have a ratio greater than the median ratio and half have ratios less than the median ratio. The IAAO standard suggests the median ratio for the jurisdiction being reviewed should be between .90 and 1.10 which on a percentage basis is between 90 and 110 percent.

COD is the most common measure of horizontal uniformity used in the assessment community. COD is referred to as a measure of horizontal uniformity because it measures uniformity across the data being reviewed without influences from the value of the properties. It measures, on average, how far each individual ratio is from the median ratio. A smaller COD indicates more uniform assessment. IAAO offers the following guidance for CODs by property types and or other neighborhood influences.

<b>General Property Class</b>	<b>Jurisdiction Size/Profile/Market Activity</b>	<b>COD Range</b>
Residential improved (single family dwelling , condominiums, manuf. Housing, 2-4 family units)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 10.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 15.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 20.0
Income-producing properties (commercial, industrial, apartments)	Very large jurisdictions/densely populated/newer properties/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/older & newer properties/less active markets	5.0 to 20.0
	Rural or small jurisdictions/older properties/depressed market areas	5.0 to 25.0
Residential vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 15.0
	Large to mid-sized jurisdictions/slow development/less active markets	5.0 to 20.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 25.0
Other (non-agriculture) vacant land	Very large jurisdictions/rapid development/active markets	5.0 to 20.0
	Large to mid-sized jurisdictions/slow development/less active markets	5.0 to 25.0
	Rural or small jurisdictions/little development/depressed markets	5.0 to 30.0

IAAO states that “CODs lower than five (5.0) may indicate sales chasing or non-representative samples.” The above chart and quote are from the April 2013 volume of IAAO Standards on Ratio Studies pages 33-37. Although the goal is to assess ‘all’ properties at 100 percent of market value, IAAO believes that due to the many factors of a real estate transaction, it is improbable that assessed values will be within the tight range of the sales price needed to achieve a COD of less than five. IAAO therefore, believes a COD of less than five could be a result of the selective reappraisal of sold properties.

The PRD is a measure of the vertical uniformity of the assessment of properties at different price levels. PRD is a statistic used to measure whether high-value properties and low-value properties are assessed at the same ratio to market value. The PRD is calculated by dividing the mean ratio by the weighted mean ratio. A PRD of 1.00 indicates uniform assessment between high and low value properties. A PRD greater than 1.00 indicates that higher valued properties are assessed at a lower ratio to market than lower valued properties. A PRD of less than 1.00 indicates that lower valued properties are assessed at a lower ratio to market than higher valued properties. IAAO suggests the PRD should fall between .98 and 1.03.

The sum of the sales price and a sum of the assessed value has been included in this report for informational purposes. The number of observations (number of sales) are shown in this report and should be considered when reviewing the statistical measure. The number of observations can help determine the reliability of the results, as the greater the number of observations the less influence a single outlier will have on the results.

On the pages that follow are each county’s results for the above mentioned measures. First are the overall county wide results including all property types. This is followed by each county’s results broken down by four general property types, and then each county’s results broken down by single family residential (residential) and all other property types (non-residential).

## Statistics by County

	Frequency	Adj Sale Price	Assessed	Ratio	Weighted Mean	Ratio		
County	N	SUM	SUM	MEAN	MEAN	Median	PRD	COD
Adams	228	\$34,928,861	\$33,939,600	96.55	97.17	95.70	0.99	14.60
Asotin	385	\$69,066,494	\$66,769,600	102.32	96.67	94.70	1.06	20.70
Benton	4068	\$1,003,677,979	\$892,139,880	89.72	88.89	88.93	1.01	10.78
Chelan	1774	\$527,396,575	\$457,792,497	88.19	86.80	90.04	1.02	13.55
Clallam	1501	\$334,475,044	\$304,662,834	94.62	91.09	93.01	1.04	14.18
Clark	8931	\$3,160,103,314	\$2,860,035,753	99.25	90.50	98.83	1.10	8.34
Columbia	85	\$14,374,975	\$14,494,140	101.29	100.83	100.21	1.00	6.27
Cowlitz	2080	\$411,881,393	\$365,897,450	92.92	88.84	90.37	1.05	17.25
Douglas	875	\$200,995,670	\$184,625,700	93.42	91.86	93.16	1.02	13.79
Ferry	181	\$17,918,516	\$17,347,700	103.06	96.81	100.28	1.06	21.67
Franklin	1445	\$318,114,068	\$288,452,300	91.89	90.68	91.30	1.01	8.45
Garfield	51	\$5,128,923	\$4,921,899	96.89	95.96	99.57	1.01	13.06
Grant	1287	\$255,018,474	\$221,898,655	91.76	87.01	91.96	1.05	12.71
Grays Harbor	1361	\$188,904,081	\$179,453,542	97.66	95.00	96.98	1.03	14.55
Island	2042	\$647,819,651	\$629,789,454	98.17	97.22	98.09	1.01	8.89
Jefferson	929	\$250,099,973	\$233,281,614	95.26	93.28	96.19	1.02	10.31
King	7501	\$8,086,257,423	\$7,053,872,230	93.77	87.23	93.66	1.07	11.86
Kitsap	4545	\$1,512,361,717	\$1,358,181,118	91.64	89.81	91.09	1.02	11.16
Kittitas	1280	\$337,186,376	\$276,348,830	85.34	81.96	83.79	1.04	16.52
Klickitat	439	\$76,219,998	\$69,503,160	93.56	91.19	93.85	1.03	9.22
Lewis	1173	\$213,708,802	\$203,862,200	98.79	95.39	97.67	1.04	15.90
Lincoln	291	\$32,382,659	\$27,447,260	87.61	84.76	86.48	1.03	21.60
Mason	1189	\$230,945,997	\$219,525,065	99.38	95.05	97.12	1.05	17.65
Okanogan	797	\$123,018,970	\$108,041,700	90.86	87.83	88.22	1.03	21.84
Pacific	681	\$102,833,488	\$95,545,100	94.88	92.91	94.32	1.02	13.53
Pend Oreille	365	\$50,013,794	\$46,210,875	97.49	92.40	96.52	1.06	16.77
Pierce	13191	\$4,180,131,395	\$3,874,265,800	93.96	92.68	93.29	1.01	8.80
San Juan	409	\$182,859,586	\$160,465,230	94.02	87.75	91.50	1.07	17.89
Skagit	2424	\$718,965,607	\$667,854,115	94.72	92.89	93.71	1.02	11.92
Skamania	224	\$55,242,697	\$48,613,800	94.27	88.00	92.57	1.07	16.96
Snohomish	13888	\$5,582,518,675	\$5,258,586,240	95.45	94.20	95.37	1.01	7.74
Spokane	7919	\$1,824,239,401	\$1,734,828,950	96.21	95.10	95.48	1.01	6.25
Stevens	717	\$115,877,651	\$108,275,264	96.03	93.44	95.37	1.03	14.67
Thurston	4362	\$1,221,547,804	\$1,171,722,800	96.38	95.92	95.83	1.00	9.69
Wahkiakum	92	\$16,719,324	\$16,338,500	97.47	97.72	98.89	1.00	17.32
Walla Walla	903	\$208,106,325	\$195,837,040	94.46	94.10	96.63	1.00	7.50
Whatcom	4587	\$1,401,878,878	\$1,197,074,536	86.81	85.39	85.85	1.02	12.02
Whitman	559	\$114,950,827	\$99,491,546	86.85	86.55	87.58	1.00	18.40
Yakima	2600	\$547,963,578	\$492,025,150	90.75	89.79	89.08	1.01	12.70
<b>Total</b>	<b>97359</b>	<b>\$34,375,834,963</b>	<b>\$31,239,419,127</b>	<b>94.25</b>	<b>91.57</b>	<b>94.13</b>		

## Statistics by County by Property Type

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Adams							
AG/Other	25	\$1,219,040	\$1,073,600	94.47	93.39	1.07	20.89
Comm/Mfg	5	\$465,300	\$283,100	88.34	93.74	1.45	31.02
MFR	2	\$2,103,750	\$3,037,500	130.19	130.19	0.90	12.36
SFR	196	\$31,140,771	\$29,545,400	96.68	95.70	1.02	13.21
	<b>228</b>	<b>\$34,928,861</b>	<b>\$33,939,600</b>	<b>96.55</b>	<b>95.70</b>		
County = Asotin							
AG/Other	44	\$3,436,340	\$3,674,900	128.12	95.18	1.20	51.39
Comm/Mfg	5	\$858,330	\$587,400	74.26	68.01	1.09	31.77
MFR	9	\$1,662,210	\$1,760,400	105.76	96.89	1.00	12.85
SFR	327	\$63,109,614	\$60,746,900	99.18	94.63	1.03	16.61
	<b>385</b>	<b>\$69,066,494</b>	<b>\$66,769,600</b>	<b>102.32</b>	<b>94.70</b>		
County = Benton							
Ag/Other	27	\$11,347,937	\$8,527,310	84.73	84.91	1.13	26.46
Comm/Mfg	103	\$93,196,861	\$83,473,440	91.10	90.53	1.02	20.32
Multi Family	98	\$38,215,834	\$36,620,860	91.88	91.13	0.96	11.34
SFR	3840	\$860,917,347	\$763,518,270	89.66	88.89	1.01	10.38
	<b>4068</b>	<b>\$1,003,677,979</b>	<b>\$892,139,880</b>	<b>89.72</b>	<b>88.93</b>		
County = Chelan							
Ag/Other	37	\$14,615,312	\$12,345,708	82.34	88.38	0.97	23.46
Comm/Mfg	54	\$31,178,286	\$22,980,465	76.95	76.35	1.04	24.52
Multi Family	18	\$10,938,777	\$8,311,310	84.25	86.23	1.11	11.52
SFR	1665	\$470,664,200	\$414,155,014	88.73	90.28	1.01	13.00
	<b>1774</b>	<b>\$527,396,575</b>	<b>\$457,792,497</b>	<b>88.19</b>	<b>90.04</b>		
County = Clallam							
Ag/Other	210	\$17,338,273	\$16,668,021	101.2	99.76	1.05	19.13
Comm/Mfg	35	\$18,367,161	\$13,627,372	91.21	90.51	1.23	23.16
Multi Family	25	\$5,875,750	\$5,462,076	95.95	97.98	1.03	13.22
SFR	1231	\$292,893,860	\$268,905,365	93.56	92.33	1.02	12.77
	<b>1501</b>	<b>\$334,475,044</b>	<b>\$304,662,834</b>	<b>94.62</b>	<b>93.01</b>		
County = Clark							
Ag/Other	294	\$79,524,672	\$65,139,657	94.74	94.02	1.16	21.25
Comm/Mfg	95	\$171,737,053	\$142,465,063	85.99	85.94	1.04	20.28
Multi Family	140	\$76,971,723	\$71,326,631	99.75	98.74	1.08	11.16
SFR	8402	\$2,831,869,866	\$2,581,104,402	99.55	98.95	1.09	7.70
	<b>8931</b>	<b>\$3,160,103,314</b>	<b>\$2,860,035,753</b>	<b>99.25</b>	<b>98.83</b>		
SFR = single family residential							

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Columbia							
Comm/Mfg	9	\$2,107,497	\$2,124,770	102.23	101.01	1.01	7.05
MFR	2	\$693,000	\$817,330	112.81	112.81	0.96	5.90
SFR	74	\$11,574,478	\$11,552,040	100.87	99.99	1.01	5.99
	<b>85</b>	<b>\$14,374,975</b>	<b>\$14,494,140</b>	<b>101.29</b>	<b>100.21</b>		
County = Cowlitz							
AG/Other	255	\$36,724,361	\$32,663,640	95.50	93.74	1.07	23.64
Comm/Mfg	107	\$52,941,982	\$43,114,370	86.59	83.69	1.06	21.54
SFR	1718	\$322,215,050	\$290,119,440	92.94	90.48	1.03	15.90
	<b>2080</b>	<b>\$411,881,393</b>	<b>\$365,897,450</b>	<b>92.92</b>	<b>90.37</b>		
County = Douglas							
Ag/Other	217	\$22,928,663	\$17,198,600	91.12	87.27	1.21	23.18
Comm/Mfg	12	\$6,001,380	\$5,403,900	88.96	87.79	0.99	16.91
Multi Family	12	\$6,439,851	\$6,197,700	97.17	92.25	1.01	11.87
SFR	634	\$165,625,776	\$155,825,500	94.23	94.03	1.00	10.77
	<b>875</b>	<b>\$200,995,670</b>	<b>\$184,625,700</b>	<b>93.42</b>	<b>93.16</b>		
County = Ferry							
Ag/Other	73	\$2,669,422	\$2,595,100	101.93	97.22	1.05	23.02
Comm/Mfg	6	\$2,124,540	\$1,368,800	77.05	78.48	1.20	29.01
SFR	102	\$13,124,554	\$13,383,800	105.39	103.55	1.03	20.06
	<b>181</b>	<b>\$17,918,516</b>	<b>\$17,347,700</b>	<b>103.06</b>	<b>100.28</b>		
County = Franklin							
Ag/Other	84	\$15,819,949	\$14,640,900	91.34	89.58	0.99	18.67
Comm/Mfg	28	\$18,312,748	\$13,996,000	88.63	87.54	1.16	28.95
Multi Family	16	\$4,026,415	\$3,695,500	94.47	91.10	1.03	14.60
SFR	1317	\$279,954,956	\$256,119,900	91.97	91.36	1.01	7.32
	<b>1445</b>	<b>\$318,114,068</b>	<b>\$288,452,300</b>	<b>91.89</b>	<b>91.30</b>		
County = Garfield							
Comm/Mfg	2	\$131,868	\$114,667	87.68	87.68	1.01	16.22
MFR	1	\$110,880	\$106,310	95.88	95.88	1.00	0.00
SFR	48	\$4,886,175	\$4,700,922	97.29	99.60	1.01	13.20
	<b>51</b>	<b>\$5,128,923</b>	<b>\$4,921,899</b>	<b>96.89</b>	<b>99.57</b>		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Grant							
Ag/Other	32	\$7,664,201	\$5,049,785	77.88	76.21	1.18	21.39
Comm/Mfg	74	\$39,495,476	\$27,831,745	87.33	84.18	1.24	26.08
Multi Family	22	\$5,074,751	\$5,483,245	105.75	97.14	0.98	19.77
SFR	1159	\$202,784,046	\$183,533,880	92.16	92.13	1.02	11.53
	<b>1287</b>	<b>\$255,018,474</b>	<b>\$221,898,655</b>	<b>91.76</b>	<b>91.96</b>		
County = Grays Harbor							
Ag/Other	309	\$13,587,179	\$12,897,657	99.85	98.99	1.05	23.00
Comm/Mfg	39	\$7,447,725	\$7,462,213	103.31	101.31	1.03	22.29
Multi Family	25	\$4,303,664	\$4,391,851	107.06	105.90	1.05	15.52
SFR	988	\$163,565,513	\$154,701,821	96.52	96.32	1.02	11.34
	<b>1361</b>	<b>\$188,904,081</b>	<b>\$179,453,542</b>	<b>97.66</b>	<b>96.98</b>		
County = Island							
Ag/Other	265	\$28,457,490	\$26,809,814	97.77	97.75	1.04	17.56
Comm/Mfg	26	\$13,211,451	\$12,117,487	95.33	93.36	1.04	20.63
Multi Family	37	\$21,683,336	\$19,110,480	93.76	92.79	1.06	8.05
SFR	1714	\$584,467,374	\$571,751,673	98.37	98.22	1.01	7.38
	<b>2042</b>	<b>\$647,819,651</b>	<b>\$629,789,454</b>	<b>98.17</b>	<b>98.09</b>		
County = Jefferson							
Ag/Other	170	\$17,645,790	\$16,041,957	98.25	96.77	1.08	14.67
Comm/Mfg	21	\$9,044,541	\$8,138,181	93.96	92.12	1.04	8.50
Multi Family	5	\$1,081,328	\$978,393	108.61	97.99	1.20	19.11
SFR	733	\$222,328,314	\$208,123,083	94.51	96.06	1.01	9.26
	<b>929</b>	<b>\$250,099,973</b>	<b>\$233,281,614</b>	<b>95.26</b>	<b>96.19</b>		
County = King							
Ag/Other	715	\$323,807,199	\$289,953,800	97.40	96.58	1.09	21.91
Comm/Mfg	516	\$2,658,503,797	\$2,239,003,595	86.95	89.52	1.03	16.74
Multi Fam	2938	\$3,418,375,577	\$2,947,683,826	93.41	93.28	1.08	10.31
SFR	3332	\$1,685,570,850	\$1,577,231,009	94.36	93.98	1.01	10.17
	<b>7501</b>	<b>\$8,086,257,423</b>	<b>\$7,053,872,230</b>	<b>93.77</b>	<b>93.66</b>		
County = Kitsap							
Ag/Other	263	\$37,541,000	\$30,909,100	92.09	90.21	1.12	21.57
Comm/Mfg	47	\$68,161,253	\$57,338,340	92.84	81.65	1.10	26.53
Multi Family	58	\$23,640,051	\$19,310,490	89.97	90.41	1.10	10.91
SFR	4177	\$1,383,019,413	\$1,250,623,188	91.62	91.17	1.01	10.35
	<b>4545</b>	<b>\$1,512,361,717</b>	<b>\$1,358,181,118</b>	<b>91.64</b>	<b>91.09</b>		



	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Kittitas							
Ag/Other	248	\$28,234,913	\$23,029,670	88.48	88.46	1.08	22.51
Comm/Mfg	32	\$19,576,993	\$16,907,400	87.64	89.14	1.01	17.21
Multi Family	8	\$3,840,705	\$3,122,840	88.01	92.14	1.08	7.42
SFR	992	\$285,533,765	\$233,288,920	84.45	83.04	1.03	14.66
	<b>1280</b>	<b>\$337,186,376</b>	<b>\$276,348,830</b>	<b>85.34</b>	<b>83.79</b>		
County = Klickitat							
Ag/Other	141	\$11,232,011	\$10,110,800	93.19	95.86	1.04	12.01
Comm/Mfg	10	\$2,172,060	\$2,129,220	101.91	93.07	1.04	12.91
Multi Family	4	\$716,463	\$667,560	95.13	95.79	1.02	4.00
SFR	284	\$62,099,464	\$56,595,580	93.42	93.39	1.03	7.63
	<b>439</b>	<b>\$76,219,998</b>	<b>\$69,503,160</b>	<b>93.56</b>	<b>93.85</b>		
County = Lewis							
Ag/Other	132	\$8,275,055	\$7,471,500	97.87	97.15	1.08	26.11
Comm/Mfg	39	\$14,118,970	\$14,431,700	105.86	101.01	1.04	14.48
Multi Family	14	\$4,964,682	\$5,047,100	109.48	101.24	1.08	17.77
SFR	988	\$186,350,095	\$176,911,900	98.48	97.47	1.04	14.53
	<b>1173</b>	<b>\$213,708,802</b>	<b>\$203,862,200</b>	<b>98.79</b>	<b>97.67</b>		
County = Lincoln							
Ag/Other	95	\$11,789,273	\$9,836,870	81.80	81.77	0.98	21.28
Comm/Mfg	18	\$1,331,388	\$1,230,860	98.04	92.66	1.06	32.22
Multi Family	2	\$296,685	\$397,200	112.20	112.20	0.84	32.12
SFR	176	\$18,965,313	\$15,982,330	89.40	87.76	1.06	20.25
	<b>291</b>	<b>\$32,382,659</b>	<b>\$27,447,260</b>	<b>87.61</b>	<b>86.48</b>		
County = Mason							
Ag/Other	207	\$13,808,626	\$14,163,870	108.55	104.42	1.06	24.45
Comm/Mfg	19	\$7,060,631	\$7,210,460	105.12	102.47	1.03	21.19
Multi Family	12	\$5,864,259	\$4,344,675	90.99	97.82	1.23	19.22
SFR	951	\$204,212,481	\$193,806,060	97.37	95.97	1.03	15.61
	<b>1189</b>	<b>\$230,945,997</b>	<b>\$219,525,065</b>	<b>99.38</b>	<b>97.12</b>		
County = Okanogan							
Ag/Other	242	\$21,362,443	\$18,691,600	91.34	89.14	1.04	26.86
Comm/Mfg	29	\$6,348,847	\$5,344,600	87.20	86.90	1.04	17.41
Multi Family	15	\$2,892,780	\$2,952,400	101.52	98.47	0.99	15.06
SFR	511	\$92,414,900	\$81,053,100	90.53	87.57	1.03	19.72
	<b>797</b>	<b>\$123,018,970</b>	<b>\$108,041,700</b>	<b>90.86</b>	<b>88.22</b>		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Pacific							
Ag/Other	120	\$6,864,116	\$6,253,000	97.25	95.88	1.07	17.86
Comm/Mfg	17	\$5,984,095	\$5,395,800	95.83	94.42	1.06	13.12
Multi Family	5	\$3,212,550	\$3,215,700	98.78	99.42	0.99	1.78
SFR	539	\$86,772,727	\$80,680,600	94.28	94.05	1.01	12.61
	<b>681</b>	<b>\$102,833,488</b>	<b>\$95,545,100</b>	<b>94.88</b>	<b>94.32</b>		
County = Pend Oreille							
Ag/Other	103	\$8,740,122	\$8,073,873	100.97	99.53	1.09	20.28
Comm/Mfg	11	\$1,604,592	\$1,413,750	93.35	94.80	1.06	20.52
Multi Family	2	\$663,242	\$651,108	98.52	98.52	1.00	0.68
SFR	249	\$39,005,838	\$36,072,144	96.23	95.82	1.04	15.00
	<b>365</b>	<b>\$50,013,794</b>	<b>\$46,210,875</b>	<b>97.49</b>	<b>96.52</b>		
County = Pierce							
Ag/Other	403	\$71,302,150	\$62,702,900	99.5	97.67	1.13	19.92
Comm/Mfg	170	\$200,483,919	\$171,870,800	92.62	94.54	1.08	16.42
Multi Family	319	\$246,903,347	\$225,335,300	93.56	93.39	1.03	9.79
SFR	12299	\$3,661,441,979	\$3,414,356,800	93.80	93.22	1.01	8.27
	<b>13191</b>	<b>\$4,180,131,395</b>	<b>\$3,874,265,800</b>	<b>93.96</b>	<b>93.29</b>		
County = San Juan							
Ag/Other	41	\$7,335,158	\$8,025,460	114.27	104.56	1.04	26.28
Comm/Mfg	8	\$4,737,150	\$4,278,700	95.62	99.04	1.06	13.71
Multi Family	4	\$3,663,198	\$3,022,680	93.46	90.18	1.13	20.79
SFR	356	\$167,124,080	\$145,138,390	91.65	90.16	1.06	16.15
	<b>409</b>	<b>\$182,859,586</b>	<b>\$160,465,230</b>	<b>94.02</b>	<b>91.50</b>		
County = Skagit							
Ag/Other	21	\$5,299,834	\$4,898,100	89.94	92.60	0.97	23.86
Comm/Mfg	99	\$43,605,678	\$40,818,300	94.70	93.95	1.01	12.31
Multi Fam	57	\$21,224,512	\$18,656,215	94.61	93.80	1.08	14.88
SFR	2247	\$648,835,583	\$603,481,500	94.77	93.71	1.02	11.72
	<b>2424</b>	<b>\$718,965,607</b>	<b>\$667,854,115</b>	<b>94.72</b>	<b>93.71</b>		
County = Skamania							
Ag/Other	40	\$6,607,159	\$5,282,900	95.13	91.83	1.19	21.80
Comm/Mfg	6	\$1,124,640	\$1,056,300	96.87	97.98	1.03	25.32
Multi Family	3	\$1,605,978	\$1,598,400	91.18	100.51	0.92	10.94
SFR	175	\$45,904,920	\$40,676,200	94.04	92.50	1.06	15.57
	<b>224</b>	<b>\$55,242,697</b>	<b>\$48,613,800</b>	<b>94.27</b>	<b>92.57</b>		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Snohomish							
Ag/Other	279	\$85,767,810	\$70,145,200	90.28	90.71	1.10	24.88
Comm/Mfg	169	\$366,292,114	\$320,939,600	94.92	95.43	1.08	14.40
Multi Family	236	\$220,011,627	\$198,898,300	94.58	95.55	1.05	9.47
SFR	13204	\$4,910,447,124	\$4,668,603,140	95.58	95.39	1.01	7.28
	<b>13888</b>	<b>\$5,582,518,675</b>	<b>\$5,258,586,240</b>	<b>95.45</b>	<b>95.37</b>		
County = Spokane							
Ag/Other	373	\$40,836,266	\$37,875,970	96.23	96.55	1.04	11.84
Comm/Mfg	200	\$161,156,315	\$146,575,900	93.06	93.52	1.02	8.98
Multi Family	258	\$73,215,546	\$69,342,140	97.48	96.87	1.03	7.87
SFR	7088	\$1,549,031,274	\$1,481,034,940	96.25	95.43	1.01	5.80
	<b>7919</b>	<b>\$1,824,239,401</b>	<b>\$1,734,828,950</b>	<b>96.21</b>	<b>95.48</b>		
County = Stevens							
Ag/Other	129	\$6,492,905	\$6,243,869	99.62	100.28	1.04	19.52
Comm/Mfg	16	\$3,263,040	\$3,253,197	100.24	98.94	1.01	18.47
Multi Family	4	\$435,452	\$534,415	122.01	122.17	0.99	7.55
SFR	568	\$105,686,254	\$98,243,783	94.92	94.67	1.02	13.02
	<b>717</b>	<b>\$115,877,651</b>	<b>\$108,275,264</b>	<b>96.03</b>	<b>95.37</b>		
County = Thurston							
Ag/Other	133	\$18,333,554	\$16,254,950	98.23	96.12	1.11	19.74
Comm/Mfg	53	\$47,280,065	\$44,870,150	100.04	101.80	1.05	14.23
Multi Family	54	\$27,099,155	\$24,556,350	94.64	95.99	1.04	8.15
SFR	4122	\$1,128,835,030	\$1,086,041,350	96.29	95.81	1.00	9.31
	<b>4362</b>	<b>\$1,221,547,804</b>	<b>\$1,171,722,800</b>	<b>96.38</b>	<b>95.83</b>		
County = Wahkiakum							
Ag/Other	17	\$1,141,866	\$984,300	93.51	98.65	1.08	16.56
Comm/Mfg	4	\$916,740	\$903,200	105.59	102.29	1.07	25.79
Multi Family	3	\$915,156	\$922,800	103.95	94.02	1.03	11.06
SFR	68	\$13,745,562	\$13,528,200	97.70	98.74	0.99	17.13
	<b>92</b>	<b>\$16,719,324</b>	<b>\$16,338,500</b>	<b>97.47</b>	<b>98.89</b>		
County = Walla Walla							
Ag/Other	57	\$8,859,016	\$7,114,760	78.14	78.41	0.97	21.95
Comm/Mfg	26	\$15,295,996	\$14,397,770	98.21	97.98	1.04	11.07
Multi Family	24	\$6,254,606	\$5,578,180	93.63	92.67	1.05	9.83
SFR	796	\$177,696,707	\$168,746,330	95.53	96.87	1.01	6.11
	<b>903</b>	<b>\$208,106,325</b>	<b>\$195,837,040</b>	<b>94.46</b>	<b>96.63</b>		

	Frequency	Adj. Sale Price	Assessed	Ratio	Ratio		
Property Type	N	SUM	SUM	MEAN	Median	PRD	COD
County = Whatcom							
Ag/Other	431	\$66,122,568	\$57,666,293	89.66	86.60	1.03	19.63
Comm/Mfg	133	\$90,269,812	\$70,889,410	87.04	83.92	1.11	14.72
Multi Family	86	\$51,418,769	\$44,044,184	87.58	86.88	1.02	9.62
SFR	3937	\$1,194,067,729	\$1,024,474,649	86.47	85.82	1.01	11.13
	<b>4587</b>	<b>\$1,401,878,878</b>	<b>\$1,197,074,536</b>	<b>86.81</b>	<b>85.85</b>		
County = Whitman							
Ag/Other	5	\$578,655	\$449,810	76.07	75.76	0.98	7.48
Comm/Mfg	19	\$6,286,216	\$6,482,051	89.91	84.19	0.87	36.79
Multi Family	28	\$6,082,611	\$5,995,182	104.09	97.49	1.06	14.84
SFR	507	\$102,003,345	\$86,564,503	85.89	87.13	1.01	17.73
	<b>559</b>	<b>\$114,950,827</b>	<b>\$99,491,546</b>	<b>86.85</b>	<b>87.58</b>		
County = Yakima							
Ag/Other	251	\$33,666,964	\$30,212,100	88.16	89.95	0.98	24.39
Comm/Mfg	121	\$75,979,870	\$68,906,500	92.52	91.08	1.02	19.50
Multi Family	84	\$23,518,541	\$19,330,500	88.65	89.05	1.08	14.24
SFR	2144	\$414,798,203	\$373,576,050	91.04	88.91	1.01	10.84
	<b>2600</b>	<b>\$547,963,578</b>	<b>\$492,025,150</b>	<b>90.75</b>	<b>89.08</b>		
<b>State Total</b>	<b>97359</b>	<b>\$34,375,834,963</b>	<b>\$31,239,419,127</b>	<b>94.25</b>			

## Statistics by County by Residential and Non-Residential

Property Class	Frequency (N)	Adj. Sale Price	Assessed	Weighted	Ratio	PRD	COD
		SUM	SUM	MEAN	Median		
<b>County = Adams</b>							
Non-Residential	32	\$3,788,090	\$4,394,200	116.00	95.00	0.83	23.24
Residential	196	\$31,140,771	\$29,545,400	94.88	95.70	1.02	13.21
	<b>228</b>	<b>\$34,928,861</b>	<b>\$33,939,600</b>	<b>97.84</b>	<b>95.70</b>		
<b>County = Asotin</b>							
Non-Residential	58	\$5,956,880	\$6,022,700	101.10	96.39	1.19	42.97
Residential	327	\$63,109,614	\$60,746,900	96.26	94.63	1.03	16.61
	<b>385</b>	<b>\$69,066,494</b>	<b>\$66,769,600</b>	<b>96.99</b>	<b>94.63</b>		
<b>County = Benton</b>							
Non-Residential	228	\$142,760,632	\$128,621,610	90.10	90.25	1.01	17.17
Residential	3840	\$860,917,347	\$763,518,270	88.69	88.89	1.01	10.38
	<b>4068</b>	<b>\$1,003,677,979</b>	<b>\$892,139,880</b>	<b>88.77</b>	<b>88.89</b>		
<b>County = Chelan</b>							
Non-Residential	109	\$56,732,375	\$43,637,483	76.92	84.17	1.04	21.98
Residential	1665	\$470,664,200	\$414,155,014	87.99	90.28	1.01	13.00
	<b>1774</b>	<b>\$527,396,575</b>	<b>\$457,792,497</b>	<b>87.31</b>	<b>90.28</b>		
<b>County = Clallam</b>							
Non-Residential	270	\$41,581,184	\$35,757,469	85.99	98.61	1.16	19.15
Residential	1231	\$292,893,860	\$268,905,365	91.81	92.33	1.02	12.77
	<b>1501</b>	<b>\$334,475,044</b>	<b>\$304,662,834</b>	<b>90.76</b>	<b>92.33</b>		
<b>County = Clark</b>							
Non-Residential	529	\$328,233,448	\$278,931,351	84.98	94.68	1.11	18.62
Residential	8402	\$2,831,869,866	\$2,581,104,402	91.14	98.95	1.09	7.70
	<b>8931</b>	<b>\$3,160,103,314</b>	<b>\$2,860,035,753</b>	<b>90.78</b>	<b>98.95</b>		
<b>County = Columbia</b>							
Non-Residential	11	\$2,800,497	\$2,942,100	105.06	104.12	0.99	7.39
Residential	74	\$11,574,478	\$11,552,040	99.81	99.99	1.01	5.99
	<b>85</b>	<b>\$14,374,975</b>	<b>\$14,494,140</b>	<b>100.49</b>	<b>99.99</b>		
<b>County = Cowlitz</b>							
Non-Residential	362	\$89,666,343	\$75,778,010	84.51	89.98	1.10	23.70
Residential	1718	\$322,215,050	\$290,119,440	90.04	90.48	1.03	15.90
	<b>2080</b>	<b>\$411,881,393</b>	<b>\$365,897,450</b>	<b>89.08</b>	<b>90.48</b>		
<b>County = Douglas</b>							
Non-Residential	241	\$35,369,894	\$28,800,200	81.43	87.73	1.12	22.27
Residential	634	\$165,625,776	\$155,825,500	94.08	94.03	1.00	10.77
	<b>875</b>	<b>\$200,995,670</b>	<b>\$184,625,700</b>	<b>90.60</b>	<b>94.03</b>		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
<b>County = Ferry</b>							
Non-Residential	79	\$4,793,962	\$3,963,900	82.69	97.19	1.21	23.17
Residential	102	\$13,124,554	\$13,383,800	101.98	103.55	1.03	20.06
	<b>181</b>	<b>\$17,918,516</b>	<b>\$17,347,700</b>	<b>93.56</b>	<b>103.55</b>		
<b>County = Franklin</b>							
Non-Residential	128	\$38,159,112	\$32,332,400	84.73	89.60	1.08	20.34
Residential	1317	\$279,954,956	\$256,119,900	91.49	91.36	1.01	7.32
	<b>1445</b>	<b>\$318,114,068</b>	<b>\$288,452,300</b>	<b>90.89</b>	<b>91.36</b>		
<b>County = Garfield</b>							
Non-Residential	3	\$242,748	\$220,977	91.03	95.88	0.99	9.89
Residential	48	\$4,886,175	\$4,700,922	96.21	99.60	1.01	13.20
	<b>51</b>	<b>\$5,128,923</b>	<b>\$4,921,899</b>	<b>95.90</b>	<b>99.60</b>		
<b>County = Grant</b>							
Non-Residential	128	\$52,234,428	\$38,364,775	73.45	87.70	1.20	24.16
Residential	1159	\$202,784,046	\$183,533,880	90.51	92.13	1.02	11.53
	<b>1287</b>	<b>\$255,018,474</b>	<b>\$221,898,655</b>	<b>88.81</b>	<b>92.13</b>		
<b>County = Grays Harbor</b>							
Non-Residential	373	\$25,338,568	\$24,751,721	97.68	99.92	1.03	22.42
Residential	988	\$163,565,513	\$154,701,821	94.58	96.32	1.02	11.34
	<b>1361</b>	<b>\$188,904,081</b>	<b>\$179,453,542</b>	<b>95.43</b>	<b>96.32</b>		
<b>County = Island</b>							
Non-Residential	328	\$63,352,277	\$58,037,781	91.61	96.68	1.06	16.93
Residential	1714	\$584,467,374	\$571,751,673	97.82	98.22	1.01	7.38
	<b>2042</b>	<b>\$647,819,651</b>	<b>\$629,789,454</b>	<b>96.83</b>	<b>98.22</b>		
<b>County = Jefferson</b>							
Non-Residential	196	\$27,771,659	\$25,158,531	90.59	96.53	1.08	14.23
Residential	733	\$222,328,314	\$208,123,083	93.61	96.06	1.01	9.26
	<b>929</b>	<b>\$250,099,973</b>	<b>\$233,281,614</b>	<b>92.97</b>	<b>96.06</b>		
<b>County = King</b>							
Non-Residential	4169	\$6,400,686,573	\$5,476,641,221	85.56	93.25	1.09	13.22
Residential	3332	\$1,685,570,850	\$1,577,231,009	93.57	93.98	1.01	10.17
	<b>7501</b>	<b>\$8,086,257,423</b>	<b>\$7,053,872,230</b>	<b>89.12</b>	<b>93.25</b>		
<b>County = Kitsap</b>							
Non-Residential	368	\$129,342,304	\$107,557,930	83.16	89.22	1.10	20.59
Residential	4177	\$1,383,019,413	\$1,250,623,188	90.43	91.17	1.01	10.35
	<b>4545</b>	<b>\$1,512,361,717</b>	<b>\$1,358,181,118</b>	<b>89.84</b>	<b>91.17</b>		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
<b>County = Kittitas</b>							
Non-Residential	288	\$51,652,611	\$43,059,910	83.36	88.87	1.06	21.45
Residential	992	\$285,533,765	\$233,288,920	81.70	83.04	1.03	14.66
	<b>1280</b>	<b>\$337,186,376</b>	<b>\$276,348,830</b>	<b>82.08</b>	<b>83.04</b>		
<b>County = Klickitat</b>							
Non-Residential	155	\$14,120,534	\$12,907,580	91.41	95.25	1.03	11.94
Residential	284	\$62,099,464	\$56,595,580	91.14	93.39	1.03	7.63
	<b>439</b>	<b>\$76,219,998</b>	<b>\$69,503,160</b>	<b>91.23</b>	<b>93.39</b>		
<b>County = Lewis</b>							
Non-Residential	185	\$27,358,707	\$26,950,300	98.51	100.34	1.02	22.59
Residential	988	\$186,350,095	\$176,911,900	94.94	97.47	1.04	14.53
	<b>1173</b>	<b>\$213,708,802</b>	<b>\$203,862,200</b>	<b>95.50</b>	<b>97.47</b>		
<b>County = Lincoln</b>							
Non-Residential	115	\$13,417,346	\$11,464,930	85.45	83.18	0.99	23.91
Residential	176	\$18,965,313	\$15,982,330	84.27	87.76	1.06	20.25
	<b>291</b>	<b>\$32,382,659</b>	<b>\$27,447,260</b>	<b>84.74</b>	<b>87.76</b>		
<b>County = Mason</b>							
Non-Residential	238	\$26,733,516	\$25,719,005	96.21	102.66	1.12	24.31
Residential	951	\$204,212,481	\$193,806,060	94.90	95.97	1.03	15.61
	<b>1189</b>	<b>\$230,945,997</b>	<b>\$219,525,065</b>	<b>95.16</b>	<b>95.97</b>		
<b>County = Okanogan</b>							
Non-Residential	286	\$30,604,070	\$26,988,600	88.19	90.19	1.04	25.24
Residential	511	\$92,414,900	\$81,053,100	87.71	87.57	1.03	19.72
	<b>797</b>	<b>\$123,018,970</b>	<b>\$108,041,700</b>	<b>87.88</b>	<b>87.57</b>		
<b>County = Pacific</b>							
Non-Residential	142	\$16,060,761	\$14,864,500	92.55	95.88	1.05	16.79
Residential	539	\$86,772,727	\$80,680,600	92.98	94.05	1.01	12.61
	<b>681</b>	<b>\$102,833,488</b>	<b>\$95,545,100</b>	<b>92.89</b>	<b>94.05</b>		
<b>County = Pend Oreille</b>							
Non-Residential	116	\$11,007,956	\$10,138,731	92.10	99.10	1.09	20.00
Residential	249	\$39,005,838	\$36,072,144	92.48	95.82	1.04	15.00
	<b>365</b>	<b>\$50,013,794</b>	<b>\$46,210,875</b>	<b>92.36</b>	<b>95.82</b>		
<b>County = Pierce</b>							
Non-Residential	892	\$518,689,416	\$459,909,000	88.67	94.47	1.08	16.00
Residential	12299	\$3,661,441,979	\$3,414,356,800	93.25	93.22	1.01	8.27
	<b>13191</b>	<b>\$4,180,131,395</b>	<b>\$3,874,265,800</b>	<b>92.94</b>	<b>93.22</b>		

		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
<b>County = San Juan</b>							
Non-Residential	53	\$15,735,506	\$15,326,840	97.40	103.23	1.13	24.23
Residential	356	\$167,124,080	\$145,138,390	86.84	90.16	1.06	16.15
	<b>409</b>	<b>\$182,859,586</b>	<b>\$160,465,230</b>	<b>88.21</b>	<b>90.16</b>		
<b>County = Skagit</b>							
Non-Residential	177	\$70,130,024	\$64,372,615	91.79	93.80	1.03	14.49
Residential	2247	\$648,835,583	\$603,481,500	93.01	93.71	1.02	11.72
	<b>2424</b>	<b>\$718,965,607</b>	<b>\$667,854,115</b>	<b>92.92</b>	<b>93.71</b>		
<b>County = Skamania</b>							
Non-Residential	49	\$9,337,777	\$7,937,600	85.01	94.95	1.12	21.37
Residential	175	\$45,904,920	\$40,676,200	88.61	92.50	1.06	15.57
	<b>224</b>	<b>\$55,242,697</b>	<b>\$48,613,800</b>	<b>87.82</b>	<b>92.50</b>		
<b>County = Snohomish</b>							
Non-Residential	684	\$672,071,551	\$589,983,100	87.79	94.38	1.06	16.80
Residential	13204	\$4,910,447,124	\$4,668,603,140	95.07	95.39	1.01	7.28
	<b>13888</b>	<b>\$5,582,518,675</b>	<b>\$5,258,586,240</b>	<b>94.72</b>	<b>95.39</b>		
<b>County = Spokane</b>							
Non-Residential	831	\$275,208,127	\$253,794,010	92.22	96.00	1.04	10.02
Residential	7088	\$1,549,031,274	\$1,481,034,940	95.61	95.43	1.01	5.80
	<b>7919</b>	<b>\$1,824,239,401</b>	<b>\$1,734,828,950</b>	<b>95.25</b>	<b>95.43</b>		
<b>County = Stevens</b>							
Non-Residential	149	\$10,191,397	\$10,031,481	98.43	100.30	1.02	19.45
Residential	568	\$105,686,254	\$98,243,783	92.96	94.67	1.02	13.02
	<b>717</b>	<b>\$115,877,651</b>	<b>\$108,275,264</b>	<b>94.10</b>	<b>94.67</b>		
<b>County = Thurston</b>							
Non-Residential	240	\$92,712,774	\$85,681,450	92.42	96.54	1.06	16.15
Residential	4122	\$1,128,835,030	\$1,086,041,350	96.21	95.81	1.00	9.31
	<b>4362</b>	<b>\$1,221,547,804</b>	<b>\$1,171,722,800</b>	<b>96.00</b>	<b>95.81</b>		
<b>County = Wahkiakum</b>							
Non-Residential	24	\$2,973,762	\$2,810,300	94.50	99.83	1.02	17.75
Residential	68	\$13,745,562	\$13,528,200	98.42	98.74	0.99	17.13
	<b>92</b>	<b>\$16,719,324</b>	<b>\$16,338,500</b>	<b>97.40</b>	<b>98.74</b>		
<b>County = Walla Walla</b>							
Non-Residential	107	\$30,409,618	\$27,090,710	89.09	88.83	0.97	17.76
Residential	796	\$177,696,707	\$168,746,330	94.96	96.87	1.01	6.11
	<b>903</b>	<b>\$208,106,325</b>	<b>\$195,837,040</b>	<b>94.27</b>	<b>96.87</b>		



		Adj. Sale Price	Assessed	Weighted	Ratio		
Property Class	Frequency (N)	SUM	SUM	MEAN	Median	PRD	COD
<b>County = Whatcom</b>							
Non-Residential	650	\$207,811,149	\$172,599,887	83.06	86.06	1.07	17.37
Residential	3937	\$1,194,067,729	\$1,024,474,649	85.80	85.82	1.01	11.13
	<b>4587</b>	<b>\$1,401,878,878</b>	<b>\$1,197,074,536</b>	<b>85.41</b>	<b>85.82</b>		
<b>County = Whitman</b>							
Non-Residential	52	\$12,947,482	\$12,927,043	99.84	94.23	0.96	22.76
Residential	507	\$102,003,345	\$86,564,503	84.86	87.13	1.01	17.73
	<b>559</b>	<b>\$114,950,827</b>	<b>\$99,491,546</b>	<b>86.26</b>	<b>87.13</b>		
<b>County = Yakima</b>							
Non-Residential	456	\$133,165,375	\$118,449,100	88.95	90.02	1.01	21.26
Residential	2144	\$414,798,203	\$373,576,050	90.06	88.91	1.01	10.84
	<b>2600</b>	<b>\$547,963,578</b>	<b>\$492,025,150</b>	<b>89.87</b>	<b>88.91</b>		
<b>Total</b>	<b>97359</b>	<b>\$34,375,834,963</b>	<b>\$31,239,419,127</b>	<b>91.89</b>	<b>93.98</b>		

Like the PRD; QMR and VEI are means of looking at vertical uniformity. QMR is calculated by first arraying the data in order (lowest to highest) by market value. Then the data is divided in to five equal groups (quintiles). Then, an average ratio is calculated for each quintile. Looking at the ratio for each quintile, you can visually see if there is a difference in the ratio of each value range. The closer these quintile ratios are, the better the vertical equity.

VEI is a method of scoring the QMR results. Noted assessment expert, J. Wayne Moore proposed computing a VEI using quintile ratios as Dr. Moore believes “VEI may be more sensitive to differences in vertical equity than the PRD.” The VEI is calculated by subtracting the lowest quintile ratio from the highest quintile ratio. Then, the results are divided by the average of all five quintile ratios and the results are multiplied by 100.

$$((\text{Maximum Quintile Ratio} - \text{Minimum Quintile Ratio}) / \text{Avg. Quintile Ratio}) * 100$$

As a guideline, VEI values above 14.0 indicate vertical inequity; values between 14.0 and 7.0 indicate acceptable vertical equity; values below 7.0 indicate good vertical equity, with those below 3.5 indicating excellent vertical equity<sup>1</sup>.

The following tables show the QMR and VEI for residential (single family dwelling) and non-residential (all other types) properties in each county.

<sup>1</sup> Property Tax Equity Implications of Assessment Capping and Homestead Exemptions for Owner-Occupied Single-Family Housing. Journal of Property tax Assessment & Administration, Volume 5, Issue 3

## *QMR and VEI for Residential and Non-Residential by County*

### 2016 Real Property Quintile Ratio and VEI

County=Adams Property Class=Residential	
Quintile	Mean
Quintile_1	106.09
Quintile_2	92.76
Quintile_3	96.20
Quintile_4	96.64
Quintile_5	91.83
<b>VEI (Vertical Equity Index)</b>	<b>14.75</b>

County=Adams Property Class=Non-Residential	
Quintile	Mean
Quintile_1	113.78
Quintile_2	94.82
Quintile_3	85.69
Quintile_4	92.20
Quintile_5	92.99
<b>VEI (Vertical Equity Index)</b>	<b>29.29</b>

County=Asotin Property Class=Residential	
Quintile	Mean
Quintile_1	116.01
Quintile_2	94.66
Quintile_3	93.93
Quintile_4	93.31
Quintile_5	98.08
<b>VEI (Vertical Equity Index)</b>	<b>22.88</b>

County=Asotin Property Class=Non-Residential	
Quintile	Mean
Quintile_1	202.19
Quintile_2	88.53
Quintile_3	117.61
Quintile_4	94.59
Quintile_5	92.19
<b>VEI (Vertical Equity Index)</b>	<b>95.49</b>

County=Benton Property Class=Residential	
Quintile	Mean
Quintile_1	94.12
Quintile_2	88.75
Quintile_3	88.01
Quintile_4	88.33
Quintile_5	89.10
<b>VEI (Vertical Equity Index)</b>	<b>6.81</b>

County=Benton Property Class=Non-Residential	
Quintile	Mean
Quintile_1	90.85
Quintile_2	91.66
Quintile_3	87.79
Quintile_4	91.05
Quintile_5	92.20
<b>VEI (Vertical Equity Index)</b>	<b>4.86</b>

## 2016 Real Property Quintile Ratio and VEI

County=Chelan Property Class=Residential		County=Chelan Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	93.12	Quintile_1	87.69
Quintile_2	85.90	Quintile_2	80.90
Quintile_3	86.91	Quintile_3	77.90
Quintile_4	89.62	Quintile_4	80.28
Quintile_5	88.10	Quintile_5	73.50
<b>VEI (Vertical Equity Index)</b>	<b>8.14</b>	<b>VEI (Vertical Equity Index)</b>	<b>17.73</b>

County=Clallam Property Class=Residential		County=Clallam Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	100.52	Quintile_1	112.92
Quintile_2	92.71	Quintile_2	103.17
Quintile_3	92.82	Quintile_3	102.74
Quintile_4	92.34	Quintile_4	88.95
Quintile_5	89.42	Quintile_5	89.36
<b>VEI (Vertical Equity Index)</b>	<b>11.86</b>	<b>VEI (Vertical Equity Index)</b>	<b>24.11</b>

County=Clark Property Class=Residential		County=Clark Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	100.36	Quintile_1	105.78
Quintile_2	98.84	Quintile_2	96.30
Quintile_3	99.66	Quintile_3	94.86
Quintile_4	99.33	Quintile_4	93.61
Quintile_5	99.56	Quintile_5	81.83
<b>VEI (Vertical Equity Index)</b>	<b>1.53</b>	<b>VEI (Vertical Equity Index)</b>	<b>25.35</b>

County=Columbia Property Class=Residential		County=Columbia Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	101.05	Quintile_1	106.06
Quintile_2	105.35	Quintile_2	109.29
Quintile_3	101.65	Quintile_3	98.14
Quintile_4	99.09	Quintile_4	93.59
Quintile_5	97.22	Quintile_5	116.70
<b>VEI (Vertical Equity Index)</b>	<b>8.06</b>	<b>VEI (Vertical Equity Index)</b>	<b>22.06</b>

## 2016 Real Property Quintile Ratio and VEI

County=Cowlitz Property Class=Residential		County=Cowlitz Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	105.01	Quintile_1	114.46
Quintile_2	93.76	Quintile_2	101.07
Quintile_3	89.47	Quintile_3	83.85
Quintile_4	90.22	Quintile_4	84.34
Quintile_5	86.25	Quintile_5	80.42
<b>VEI (Vertical Equity Index)</b>	<b>20.18</b>	<b>VEI (Vertical Equity Index)</b>	<b>36.67</b>

County=Douglas Property Class=Residential		County=Douglas Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	94.78	Quintile_1	102.17
Quintile_2	93.51	Quintile_2	83.05
Quintile_3	94.02	Quintile_3	94.99
Quintile_4	94.27	Quintile_4	90.75
Quintile_5	94.57	Quintile_5	85.90
<b>VEI (Vertical Equity Index)</b>	<b>1.35</b>	<b>VEI (Vertical Equity Index)</b>	<b>20.93</b>

County=Ferry Property Class=Residential		County=Ferry Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	109.10	Quintile_1	117.56
Quintile_2	113.64	Quintile_2	108.51
Quintile_3	107.89	Quintile_3	91.90
Quintile_4	98.44	Quintile_4	90.24
Quintile_5	97.87	Quintile_5	92.30
<b>VEI (Vertical Equity Index)</b>	<b>14.96</b>	<b>VEI (Vertical Equity Index)</b>	<b>27.29</b>

County=Franklin Property Class=Residential		County=Franklin Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	93.12	Quintile_1	94.07
Quintile_2	91.88	Quintile_2	90.23
Quintile_3	92.86	Quintile_3	94.98
Quintile_4	91.93	Quintile_4	92.47
Quintile_5	90.07	Quintile_5	84.13
<b>VEI (Vertical Equity Index)</b>	<b>3.32</b>	<b>VEI (Vertical Equity Index)</b>	<b>11.90</b>

## 2016 Real Property Quintile Ratio and VEI

County=Garfield Property Class=Residential		County=Garfield Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	102.06	Quintile_1	0
Quintile_2	100.30	Quintile_2	101.9
Quintile_3	97.09	Quintile_3	73.46
Quintile_4	92.05	Quintile_4	95.88
Quintile_5	95.60	Quintile_5	0
<b>VEI (Vertical Equity Index)</b>	<b>10.28</b>	<b>VEI (Vertical Equity Index)</b>	<b>31.46</b>

County=Grant Property Class=Residential		County=Grant Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	97.01	Quintile_1	89.30
Quintile_2	90.71	Quintile_2	90.93
Quintile_3	91.38	Quintile_3	93.23
Quintile_4	91.77	Quintile_4	89.95
Quintile_5	89.96	Quintile_5	76.95
<b>VEI (Vertical Equity Index)</b>	<b>7.65</b>	<b>VEI (Vertical Equity Index)</b>	<b>18.48</b>

County=Grays Harbor Property Class=Residential		County=Grays Harbor Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	106.58	Quintile_1	113.30
Quintile_2	93.88	Quintile_2	97.83
Quintile_3	92.83	Quintile_3	100.17
Quintile_4	96.39	Quintile_4	93.93
Quintile_5	93.02	Quintile_5	98.12
<b>VEI (Vertical Equity Index)</b>	<b>14.24</b>	<b>VEI (Vertical Equity Index)</b>	<b>19.24</b>

County=Island Property Class=Residential		County=Island Property Class=Non-Residential	
Quintile	Mean	Quintile	Mean
Quintile_1	102.44	Quintile_1	98.34
Quintile_2	97.61	Quintile_2	105.79
Quintile_3	96.59	Quintile_3	101.42
Quintile_4	97.41	Quintile_4	88.19
Quintile_5	97.81	Quintile_5	92.07
<b>VEI (Vertical Equity Index)</b>	<b>5.95</b>	<b>VEI (Vertical Equity Index)</b>	<b>18.11</b>

## 2016 Real Property Quintile Ratio and VEI

County=Jefferson Property Class=Residential	
Quintile	Mean
Quintile_1	97.43
Quintile_2	91.50
Quintile_3	95.10
Quintile_4	95.60
Quintile_5	92.99
<b>VEI (Vertical Equity Index)</b>	<b>6.27</b>

County=Jefferson Property Class=Non-Residential	
Quintile	Mean
Quintile_1	108.94
Quintile_2	104.91
Quintile_3	96.15
Quintile_4	93.85
Quintile_5	86.39
<b>VEI (Vertical Equity Index)</b>	<b>23.00</b>

County=King Property Class=Residential	
Quintile	Mean
Quintile_1	98.41
Quintile_2	93.88
Quintile_3	93.49
Quintile_4	93.04
Quintile_5	93.02
<b>VEI (Vertical Equity Index)</b>	<b>5.71</b>

County=King Property Class=Non-Residential	
Quintile	Mean
Quintile_1	101.97
Quintile_2	94.88
Quintile_3	93.95
Quintile_4	92.50
Quintile_5	83.17
<b>VEI (Vertical Equity Index)</b>	<b>20.15</b>

County=Kitsap Property Class=Residential	
Quintile	Mean
Quintile_1	94.43
Quintile_2	90.84
Quintile_3	91.59
Quintile_4	91.35
Quintile_5	89.90
<b>VEI (Vertical Equity Index)</b>	<b>4.94</b>

County=Kitsap Property Class=Non-Residential	
Quintile	Mean
Quintile_1	106.93
Quintile_2	98.14
Quintile_3	85.48
Quintile_4	85.48
Quintile_5	83.67
<b>VEI (Vertical Equity Index)</b>	<b>25.30</b>

County=Kittitas Property Class=Residential	
Quintile	Mean
Quintile_1	96.04
Quintile_2	84.00
Quintile_3	80.75
Quintile_4	82.46
Quintile_5	78.98
<b>VEI (Vertical Equity Index)</b>	<b>20.20</b>

County=Kittitas Property Class=Non-Residential	
Quintile	Mean
Quintile_1	98.70
Quintile_2	97.98
Quintile_3	89.19
Quintile_4	81.04
Quintile_5	74.75
<b>VEI (Vertical Equity Index)</b>	<b>27.11</b>

## 2016 Real Property Quintile Ratio and VEI

County=Klickitat Property Class=Residential	
Quintile	Mean
Quintile_1	98.06
Quintile_2	93.70
Quintile_3	90.40
Quintile_4	93.54
Quintile_5	91.55
<b>VEI (Vertical Equity Index)</b>	<b>8.20</b>

County=Klickitat Property Class=Non-Residential	
Quintile	Mean
Quintile_1	102.60
Quintile_2	95.46
Quintile_3	88.91
Quintile_4	91.14
Quintile_5	91.33
<b>VEI (Vertical Equity Index)</b>	<b>14.58</b>

County=Lewis Property Class=Residential	
Quintile	Mean
Quintile_1	110.99
Quintile_2	99.48
Quintile_3	94.60
Quintile_4	94.21
Quintile_5	93.12
<b>VEI (Vertical Equity Index)</b>	<b>18.15</b>

County=Lewis Property Class=Non-Residential	
Quintile	Mean
Quintile_1	106.21
Quintile_2	113.14
Quintile_3	86.06
Quintile_4	93.51
Quintile_5	104.28
<b>VEI (Vertical Equity Index)</b>	<b>26.91</b>

County=Lincoln Property Class=Residential	
Quintile	Mean
Quintile_1	109.44
Quintile_2	89.31
Quintile_3	86.67
Quintile_4	80.31
Quintile_5	82.57
<b>VEI (Vertical Equity Index)</b>	<b>32.49</b>

County=Lincoln Property Class=Non-Residential	
Quintile	Mean
Quintile_1	92.50
Quintile_2	87.23
Quintile_3	74.02
Quintile_4	82.28
Quintile_5	88.87
<b>VEI (Vertical Equity Index)</b>	<b>21.75</b>

County=Mason Property Class=Residential	
Quintile	Mean
Quintile_1	107.66
Quintile_2	94.63
Quintile_3	97.12
Quintile_4	94.46
Quintile_5	93.08
<b>VEI (Vertical Equity Index)</b>	<b>14.97</b>

County=Mason Property Class=Non-Residential	
Quintile	Mean
Quintile_1	110.72
Quintile_2	118.50
Quintile_3	108.90
Quintile_4	100.67
Quintile_5	97.64
<b>VEI (Vertical Equity Index)</b>	<b>19.44</b>

## 2016 Real Property Quintile Ratio and VEI

County=Okanogan Property Class=Residential	
Quintile	Mean
Quintile_1	101.90
Quintile_2	89.40
Quintile_3	87.08
Quintile_4	88.40
Quintile_5	85.95
<b>VEI (Vertical Equity Index)</b>	<b>17.62</b>

County=Okanogan Property Class=Non-Residential	
Quintile	Mean
Quintile_1	103.18
Quintile_2	93.85
Quintile_3	86.48
Quintile_4	86.77
Quintile_5	86.90
<b>VEI (Vertical Equity Index)</b>	<b>18.26</b>

County=Pacific Property Class=Residential	
Quintile	Mean
Quintile_1	101.59
Quintile_2	95.73
Quintile_3	89.68
Quintile_4	92.17
Quintile_5	92.26
<b>VEI (Vertical Equity Index)</b>	<b>12.63</b>

County=Pacific Property Class=Non-Residential	
Quintile	Mean
Quintile_1	103.11
Quintile_2	101.9
Quintile_3	93.53
Quintile_4	94.64
Quintile_5	92.25
<b>VEI (Vertical Equity Index)</b>	<b>11.19</b>

County=Pend Oreille Property Class=Residential	
Quintile	Mean
Quintile_1	111.78
Quintile_2	91.23
Quintile_3	94.69
Quintile_4	93.20
Quintile_5	90.55
<b>VEI (Vertical Equity Index)</b>	<b>22.05</b>

County=Pend Oreille Property Class=Non-Residential	
Quintile	Mean
Quintile_1	115.06
Quintile_2	106.12
Quintile_3	95.71
Quintile_4	96.03
Quintile_5	88.29
<b>VEI (Vertical Equity Index)</b>	<b>26.71</b>

County=Pierce Property Class=Residential	
Quintile	Mean
Quintile_1	95.99
Quintile_2	92.95
Quintile_3	93.64
Quintile_4	93.34
Quintile_5	93.13
<b>VEI (Vertical Equity Index)</b>	<b>3.24</b>

County=Pierce Property Class=Non-Residential	
Quintile	Mean
Quintile_1	110.43
Quintile_2	95.89
Quintile_3	93.69
Quintile_4	91.95
Quintile_5	88.47
<b>VEI (Vertical Equity Index)</b>	<b>22.85</b>



## 2016 Real Property Quintile Ratio and VEI

County=San Juan Property Class=Residential	
Quintile	Mean
Quintile_1	103.89
Quintile_2	90.57
Quintile_3	85.31
Quintile_4	89.72
Quintile_5	88.68
<b>VEI (Vertical Equity Index)</b>	<b>20.28</b>

County=San Juan Property Class=Non-Residential	
Quintile	Mean
Quintile_1	129.63
Quintile_2	121.23
Quintile_3	104.72
Quintile_4	101.76
Quintile_5	91.46
<b>VEI (Vertical Equity Index)</b>	<b>34.78</b>

County=Skagit Property Class=Residential	
Quintile	Mean
Quintile_1	102.4
Quintile_2	92.94
Quintile_3	92.02
Quintile_4	92.43
Quintile_5	94.14
<b>VEI (Vertical Equity Index)</b>	<b>10.95</b>

County=Skagit Property Class=Non-Residential	
Quintile	Mean
Quintile_1	96.16
Quintile_2	99.86
Quintile_3	95.10
Quintile_4	87.74
Quintile_5	91.58
<b>VEI (Vertical Equity Index)</b>	<b>12.88</b>

County=Skamania Property Class=Residential	
Quintile	Mean
Quintile_1	113.34
Quintile_2	96.27
Quintile_3	92.41
Quintile_4	87.35
Quintile_5	80.79
<b>VEI (Vertical Equity Index)</b>	<b>34.62</b>

County=Skamania Property Class=Non-Residential	
Quintile	Mean
Quintile_1	111.43
Quintile_2	110.50
Quintile_3	87.94
Quintile_4	89.49
Quintile_5	77.77
<b>VEI (Vertical Equity Index)</b>	<b>35.27</b>

County=Snohomish Property Class=Residential	
Quintile	Mean
Quintile_1	97.54
Quintile_2	95.51
Quintile_3	95.05
Quintile_4	95.18
Quintile_5	94.62
<b>VEI (Vertical Equity Index)</b>	<b>3.06</b>

County=Snohomish Property Class=Non-Residential	
Quintile	Mean
Quintile_1	99.85
Quintile_2	89.95
Quintile_3	93.41
Quintile_4	91.35
Quintile_5	90.00
<b>VEI (Vertical Equity Index)</b>	<b>10.66</b>

## 2016 Real Property Quintile Ratio and VEI

County=Spokane Property Class=Residential	
Quintile	Mean
Quintile_1	99.85
Quintile_2	95.57
Quintile_3	95.11
Quintile_4	95.25
Quintile_5	95.41
<b>VEI (Vertical Equity Index)</b>	<b>4.93</b>

County=Spokane Property Class=Non-Residential	
Quintile	Mean
Quintile_1	100.18
Quintile_2	96.77
Quintile_3	95.38
Quintile_4	95.81
Quintile_5	91.08
<b>VEI (Vertical Equity Index)</b>	<b>9.49</b>

County=Stevens Property Class=Residential	
Quintile	Mean
Quintile_1	106.3
Quintile_2	92.64
Quintile_3	91.95
Quintile_4	91.19
Quintile_5	92.69
<b>VEI (Vertical Equity Index)</b>	<b>15.91</b>

County=Stevens Property Class=Non-Residential	
Quintile	Mean
Quintile_1	104.72
Quintile_2	105.29
Quintile_3	94.12
Quintile_4	100.08
Quintile_5	97.38
<b>VEI (Vertical Equity Index)</b>	<b>11.13</b>

County=Thurston Property Class=Residential	
Quintile	Mean
Quintile_1	97.69
Quintile_2	94.09
Quintile_3	95.90
Quintile_4	96.66
Quintile_5	97.14
<b>VEI (Vertical Equity Index)</b>	<b>3.74</b>

County=Thurston Property Class=Non-Residential	
Quintile	Mean
Quintile_1	112.35
Quintile_2	94.22
Quintile_3	93.98
Quintile_4	94.50
Quintile_5	94.05
<b>VEI (Vertical Equity Index)</b>	<b>18.78</b>

County=Wahkiakum Property Class=Residential	
Quintile	Mean
Quintile_1	95.36
Quintile_2	89.11
Quintile_3	108.00
Quintile_4	93.64
Quintile_5	102.56
<b>VEI (Vertical Equity Index)</b>	<b>19.33</b>

County=Wahkiakum Property Class=Non-Residential	
Quintile	Mean
Quintile_1	108.65
Quintile_2	102.74
Quintile_3	82.37
Quintile_4	98.68
Quintile_5	94.05
<b>VEI (Vertical Equity Index)</b>	<b>27.01</b>

## 2016 Real Property Quintile Ratio and VEI

County=Walla Walla Property Class=Residential	
Quintile	Mean
Quintile_1	97.54
Quintile_2	95.84
Quintile_3	94.95
Quintile_4	94.95
Quintile_5	94.32
<b>VEI (Vertical Equity Index)</b>	<b>3.37</b>

County=Walla Walla Property Class=Non-Residential	
Quintile	Mean
Quintile_1	81.99
Quintile_2	86.24
Quintile_3	90.85
Quintile_4	81.46
Quintile_5	91.94
<b>VEI (Vertical Equity Index)</b>	<b>12.12</b>

County=Whatcom Property Class=Residential	
Quintile	Mean
Quintile_1	90.32
Quintile_2	85.68
Quintile_3	85.66
Quintile_4	84.93
Quintile_5	85.76
<b>VEI (Vertical Equity Index)</b>	<b>6.23</b>

County=Whatcom Property Class=Non-Residential	
Quintile	Mean
Quintile_1	97.37
Quintile_2	90.96
Quintile_3	84.85
Quintile_4	85.79
Quintile_5	85.14
<b>VEI (Vertical Equity Index)</b>	<b>14.10</b>

County=Whitman Property Class=Residential	
Quintile	Mean
Quintile_1	92.91
Quintile_2	84.37
Quintile_3	84.70
Quintile_4	83.26
Quintile_5	84.23
<b>VEI (Vertical Equity Index)</b>	<b>11.23</b>

County=Whitman Property Class=Non-Residential	
Quintile	Mean
Quintile_1	97.26
Quintile_2	107.62
Quintile_3	96.48
Quintile_4	89.41
Quintile_5	89.83
<b>VEI (Vertical Equity Index)</b>	<b>18.95</b>

County=Yakima Property Class=Residential	
Quintile	Mean
Quintile_1	98.68
Quintile_2	89.72
Quintile_3	87.81
Quintile_4	88.50
Quintile_5	90.52
<b>VEI (Vertical Equity Index)</b>	<b>11.94</b>

County=Yakima Property Class=Non-Residential	
Quintile	Mean
Quintile_1	96.62
Quintile_2	88.78
Quintile_3	85.78
Quintile_4	87.85
Quintile_5	88.08
<b>VEI (Vertical Equity Index)</b>	<b>12.12</b>

The following tables show the mean ratio, standard deviation, number of observations (N), and median ratio for each property type statewide.

### *Statewide by Property Type*

Property Type=Ag/Other			
Mean	Std Dev	N	Median
95.34	28.39	6488	94.28

Property Type=Comm/Mfg			
Mean	Std Dev	N	Median
90.91	22.26	2382	91.82

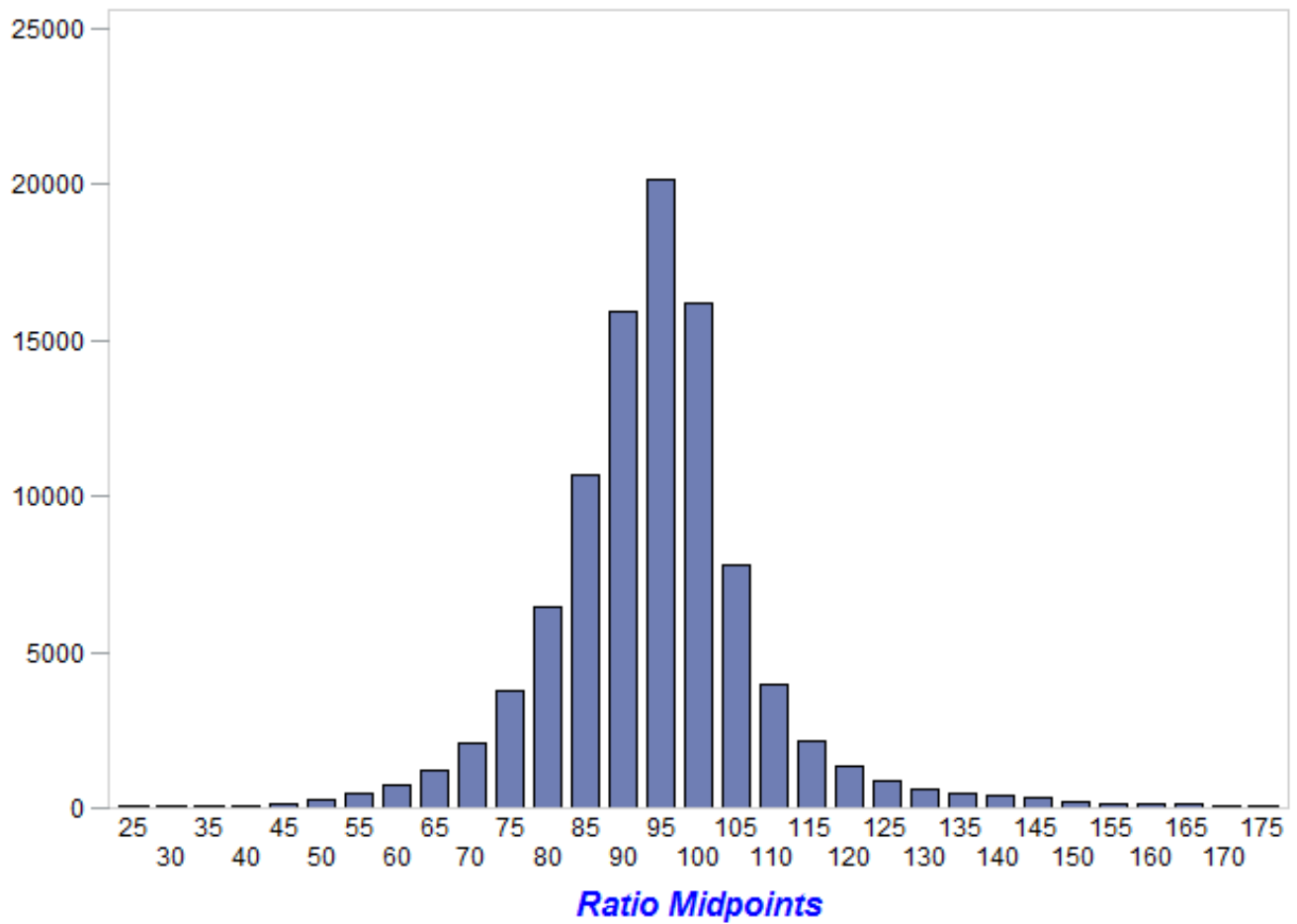
Property Type=Multi Family			
Mean	Std Dev	N	Median
94.02	13.99	4630	93.77

Property Type=SFR			
Mean	Std Dev	N	Median
94.27	13.66	83858	94.19

Another visual indication of horizontal uniformity is a histogram. On a histogram each ratio contributes to the length of a bar representing the range in which the ratio falls. Good uniformity is indicated when the highest bars are near the median (approximately the same number of observations on each side) with the bars decreasing in length the farther they are from the median (forming the shape of a bell). A histogram indicates a good level of assessment when the top of the bell is at or near 100. The following histogram is for all valid real property sales statewide. The graph shows that the top of the bell is in the range of 95, which is consistent with the 94.13 statewide median ratio shown in the table on page 3. The graph, with the tallest bar in the middle, also shows that statewide the level of assessment is uniform horizontally. Horizontal uniformity means uniformity across the data being reviewed without influences from the value of the properties. Vertical uniformity, a measure of uniformity in the level of assessment of properties at different value levels cannot be illustrated on a histogram.

## Statewide Ratio Distribution

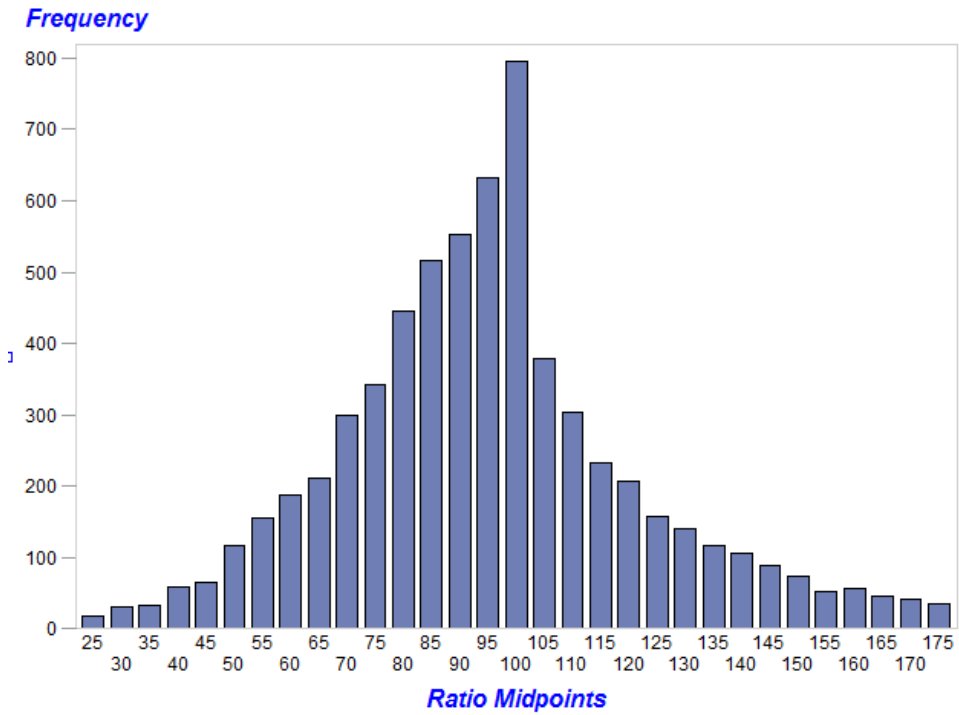
**Frequency**



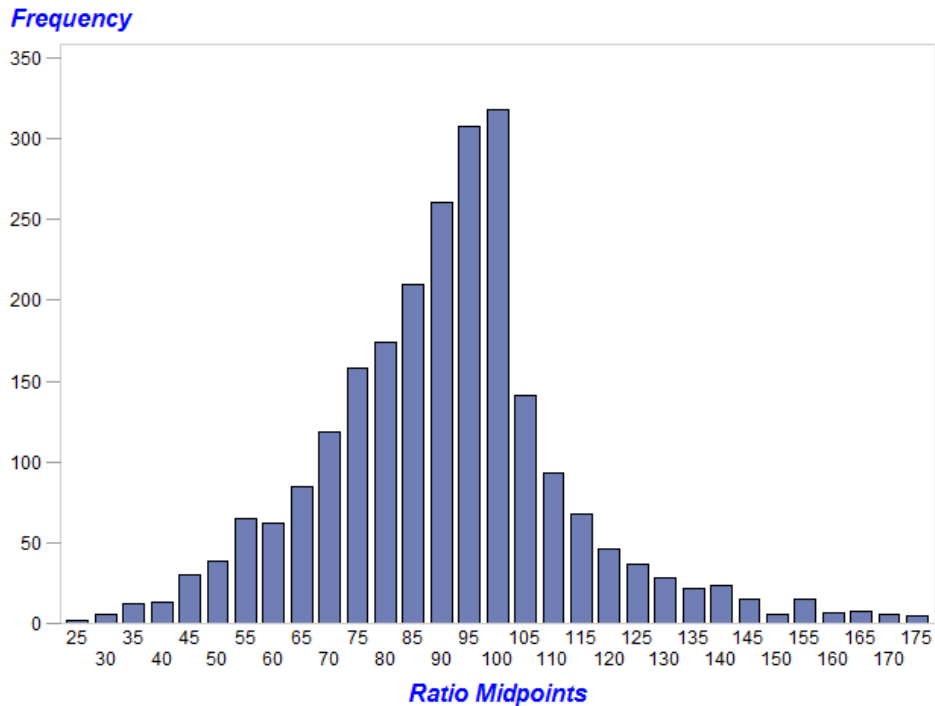
The following four histograms are for each of the four major property types on a statewide basis. They are followed by a histogram for each county including all property types.

# Statewide Ratio Distribution by Property Type

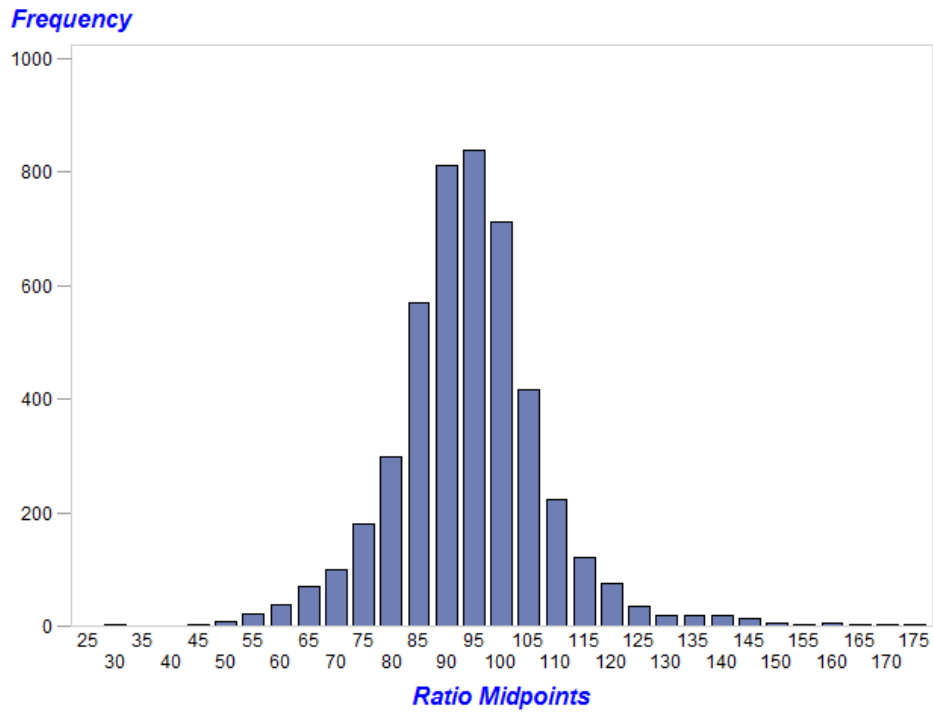
## Agricultural/Other



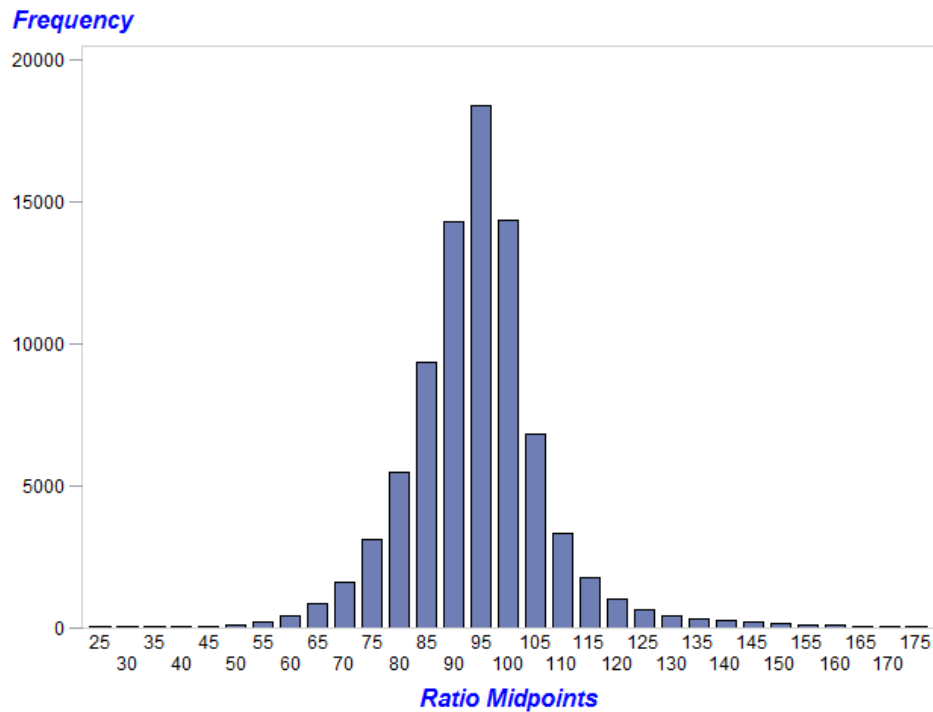
## Commercial/Manufacturing



## Multi-Family Residential

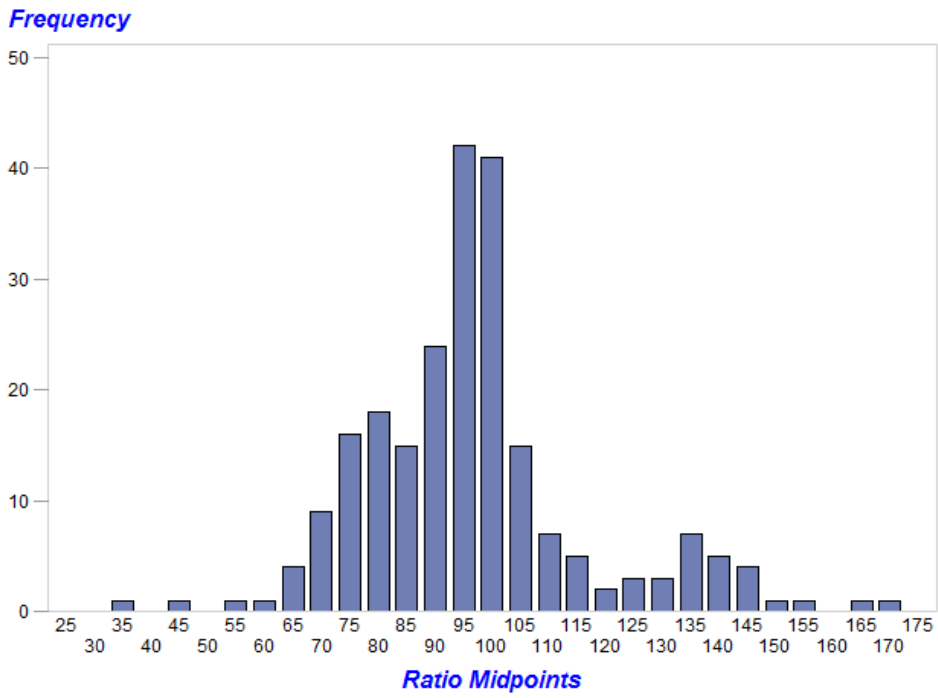


## Single-Family Residential

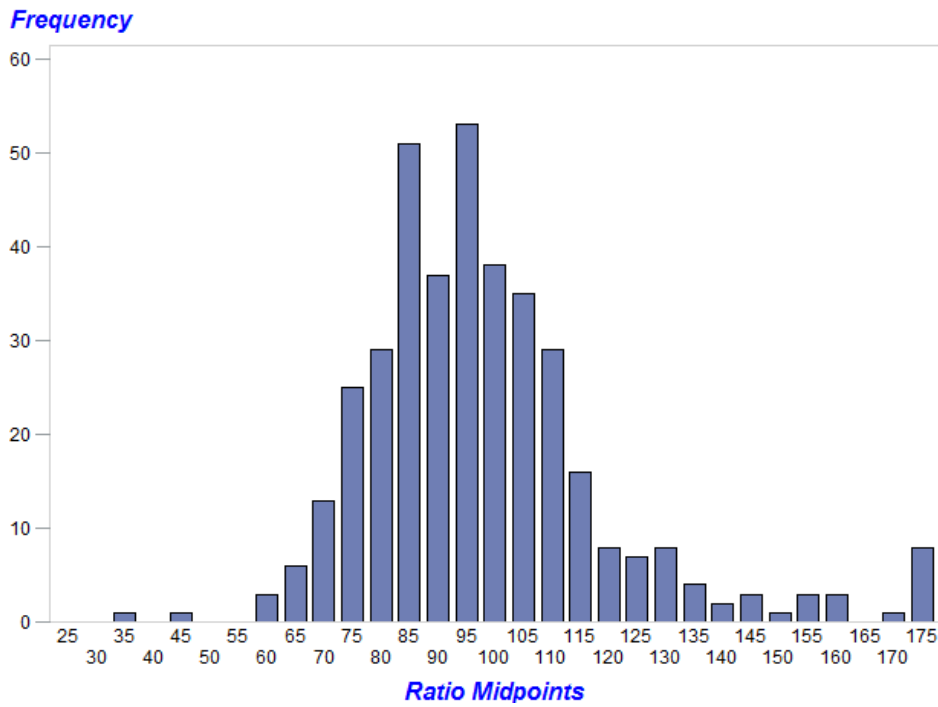


# Ratio Distribution by County

## Adams



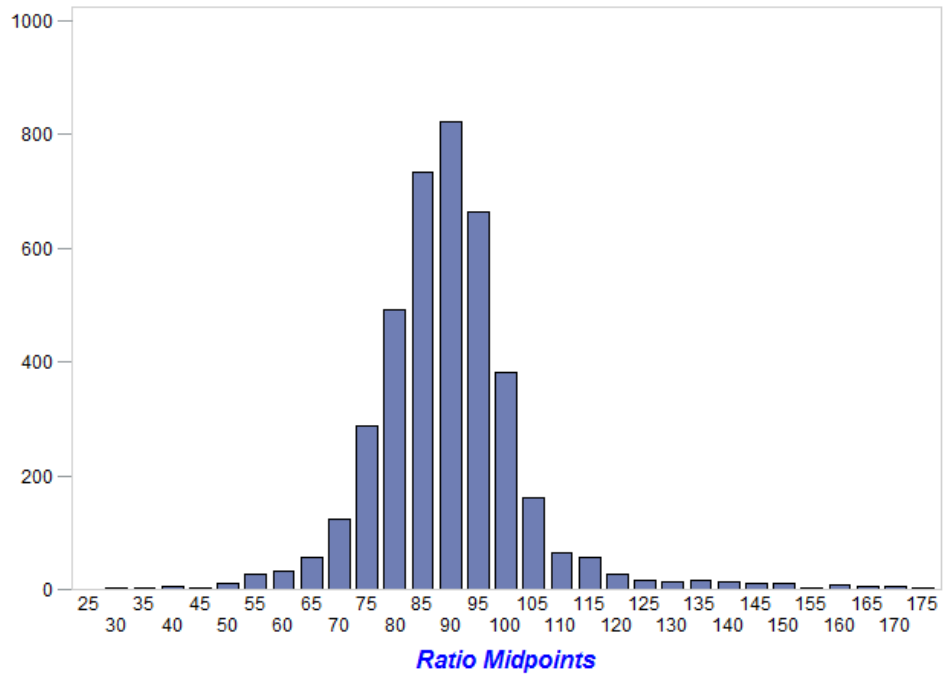
## Asotin





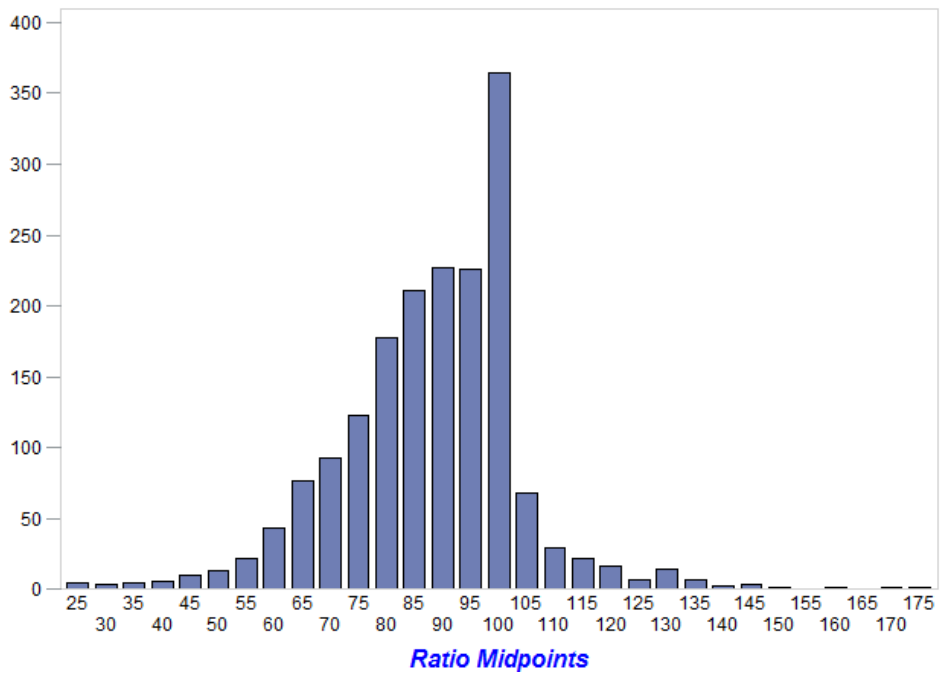
## Benton

Frequency



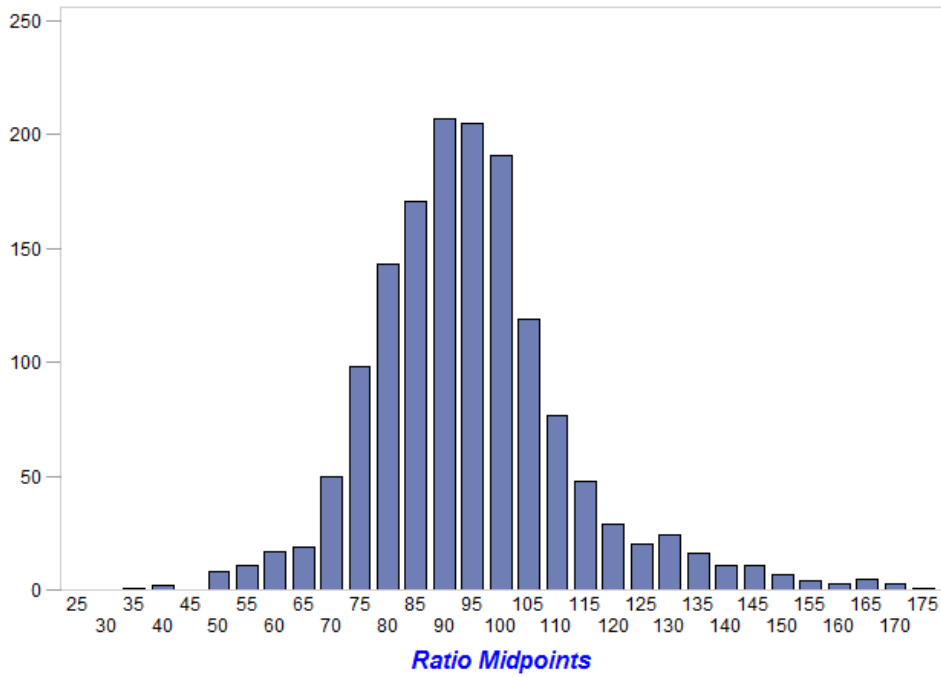
## Chelan

Frequency



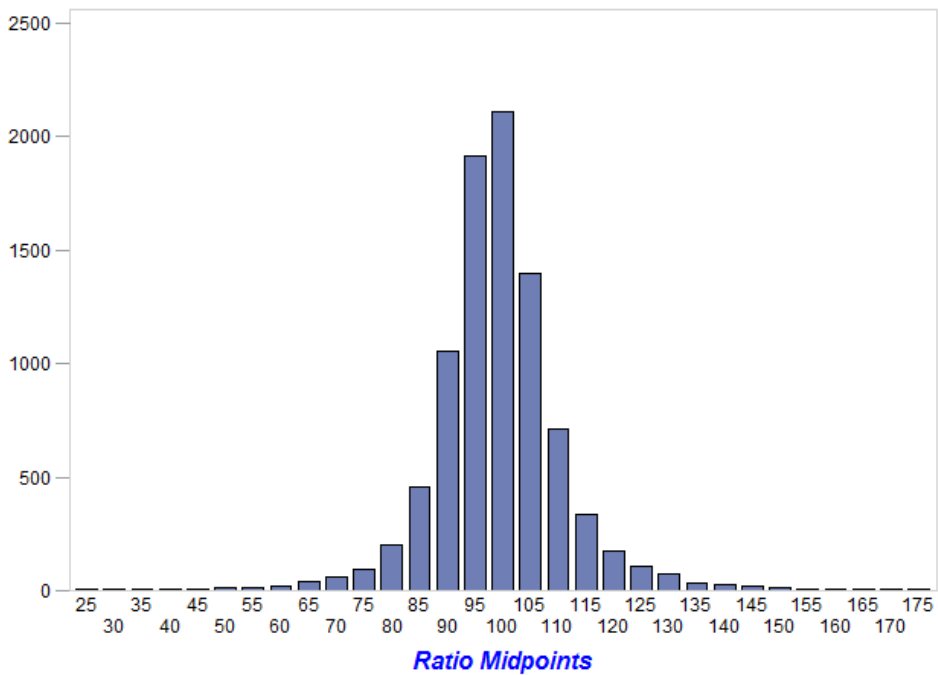
## Clallam

Frequency



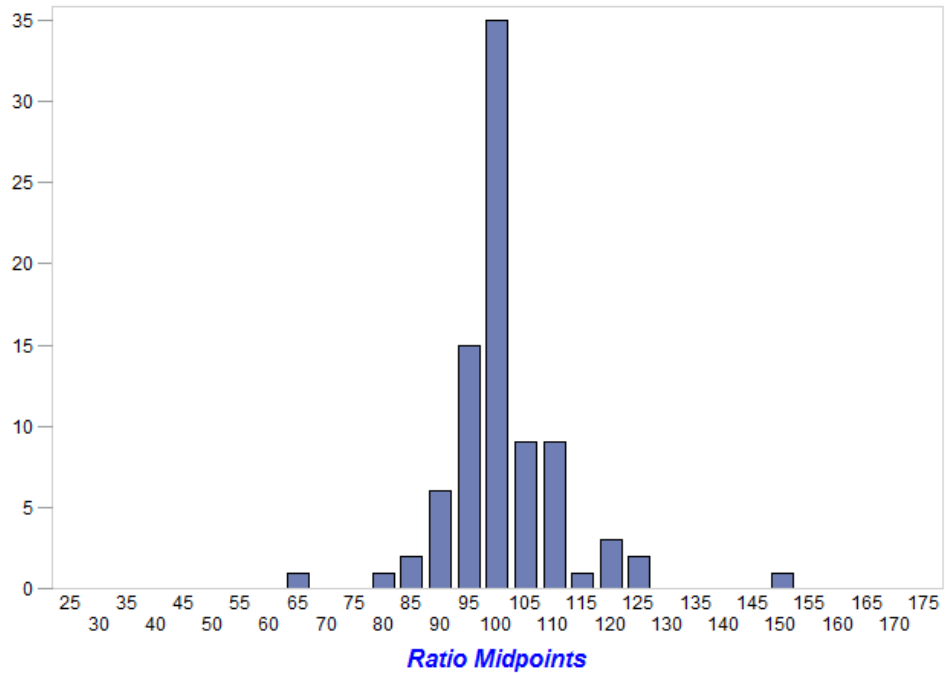
## Clark

Frequency



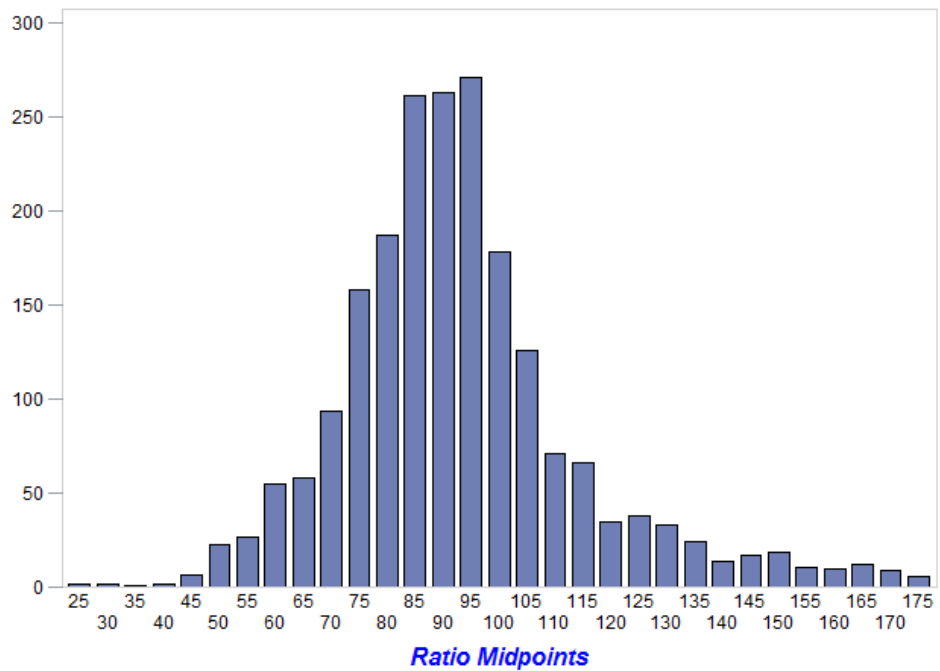
## Columbia

Frequency



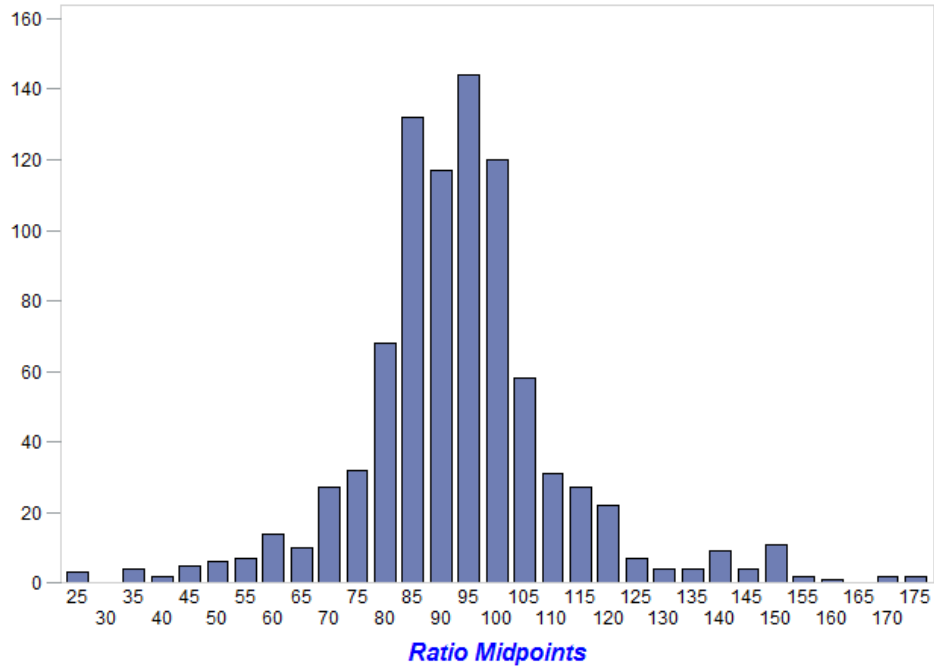
## Cowlitz

Frequency



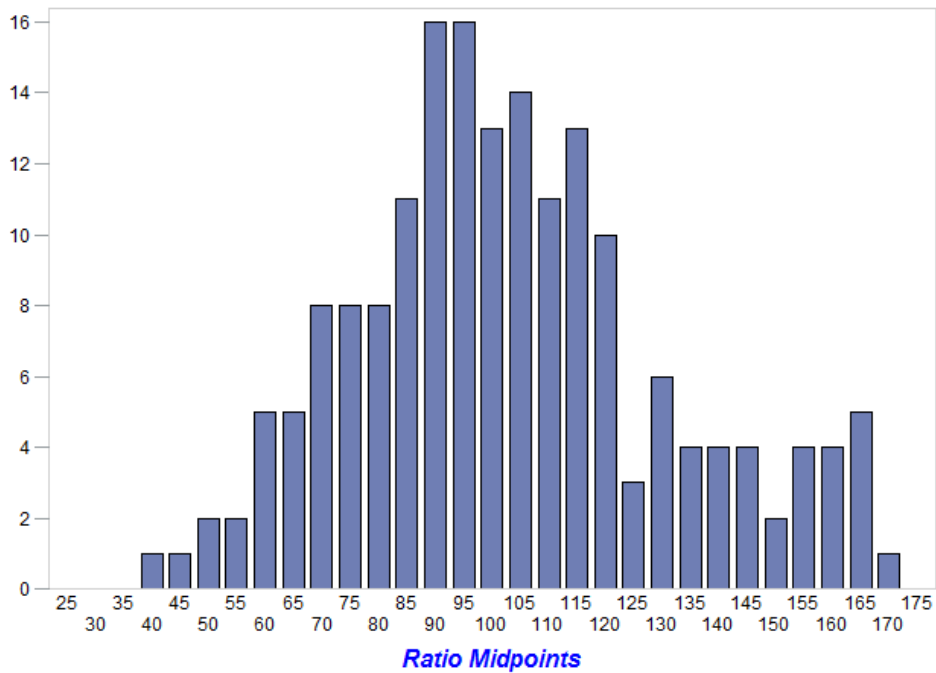
## Douglas

Frequency



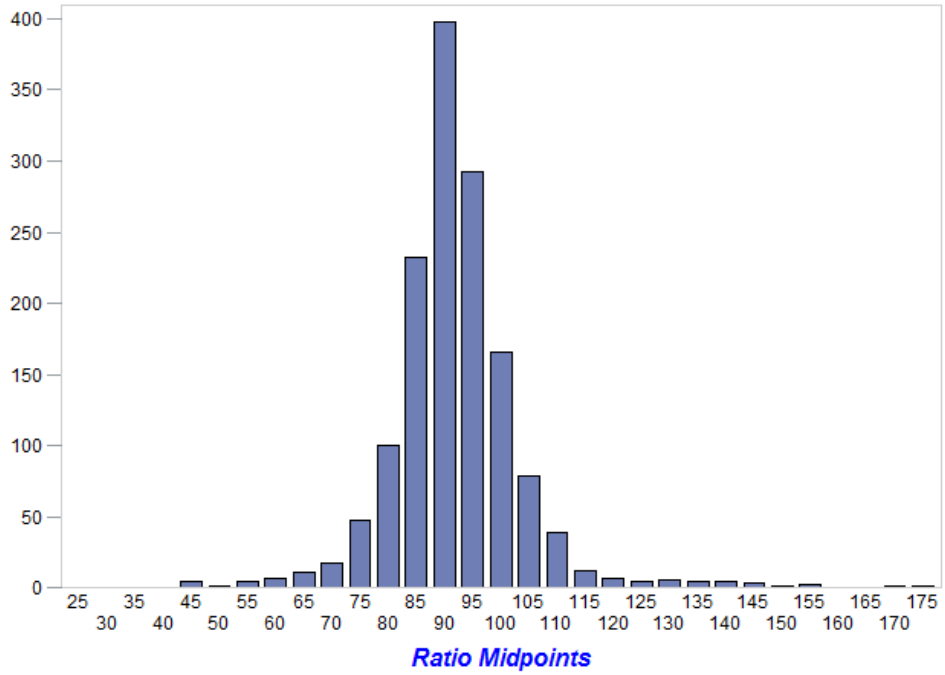
## Ferry

Frequency



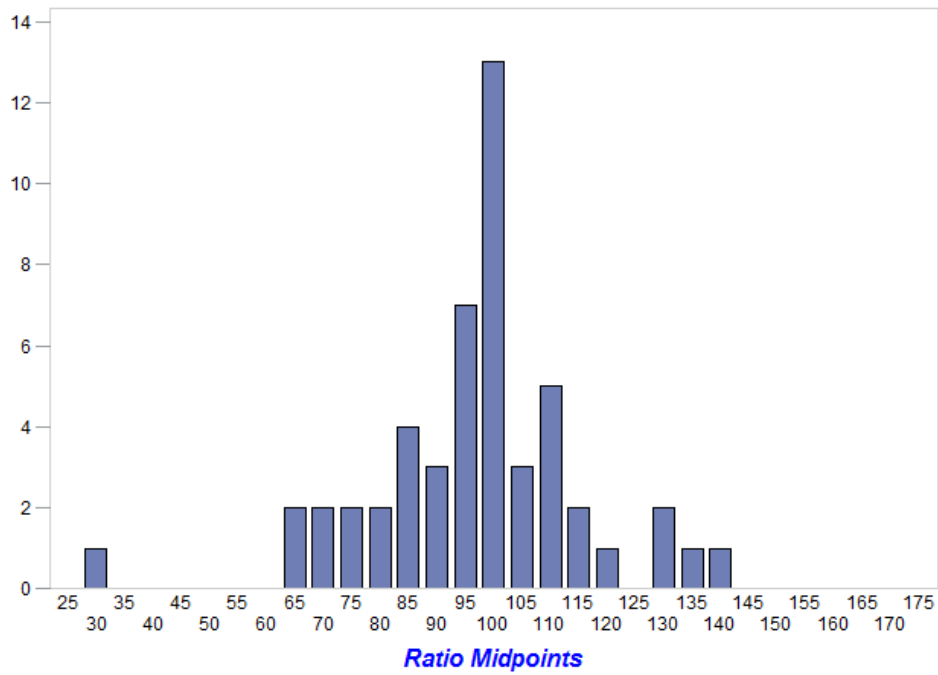
## Franklin

Frequency



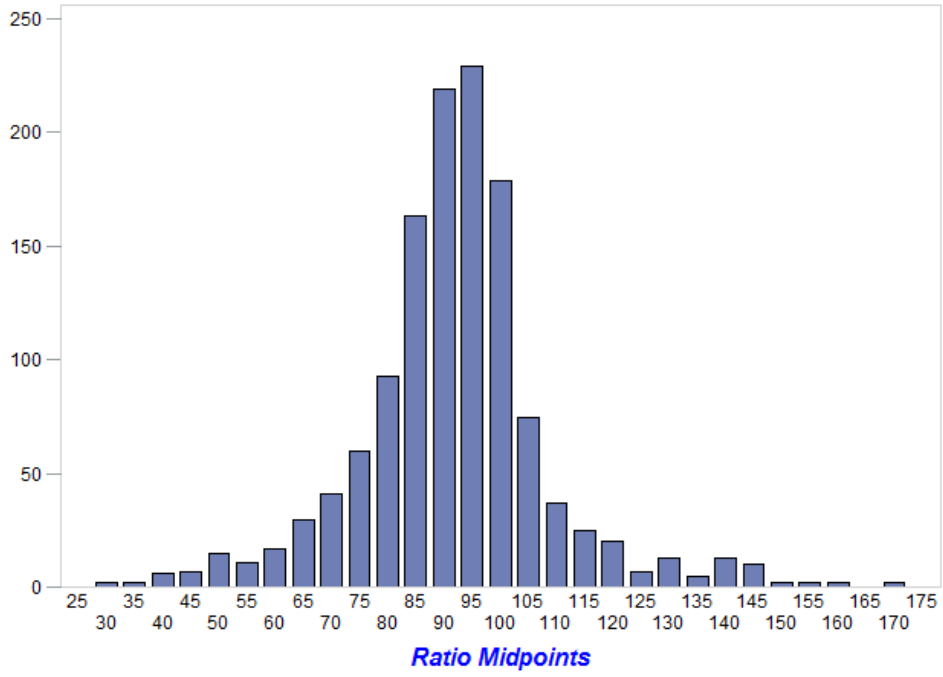
## Garfield

Frequency



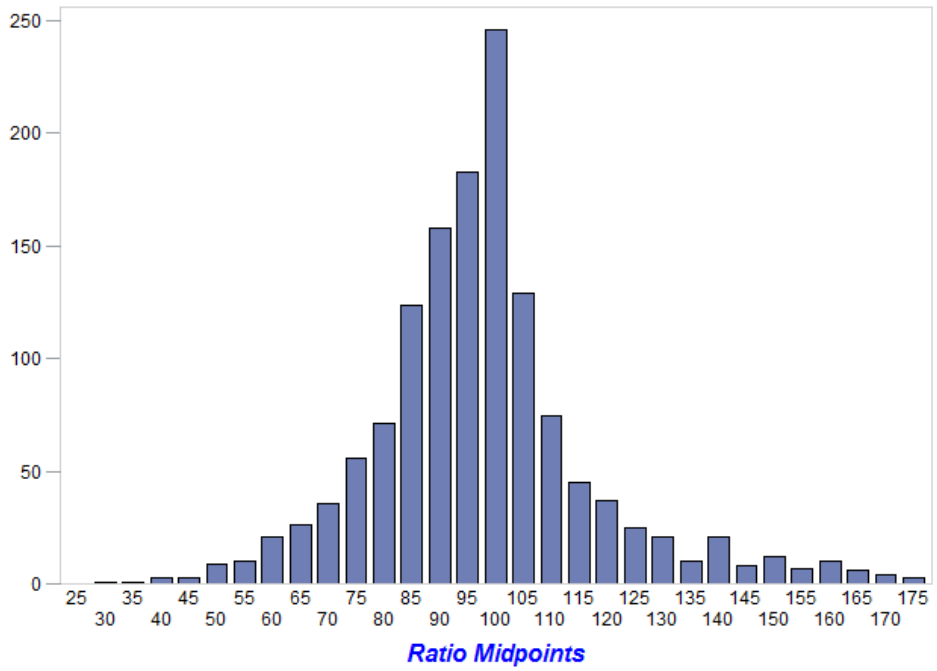
## Grant

Frequency



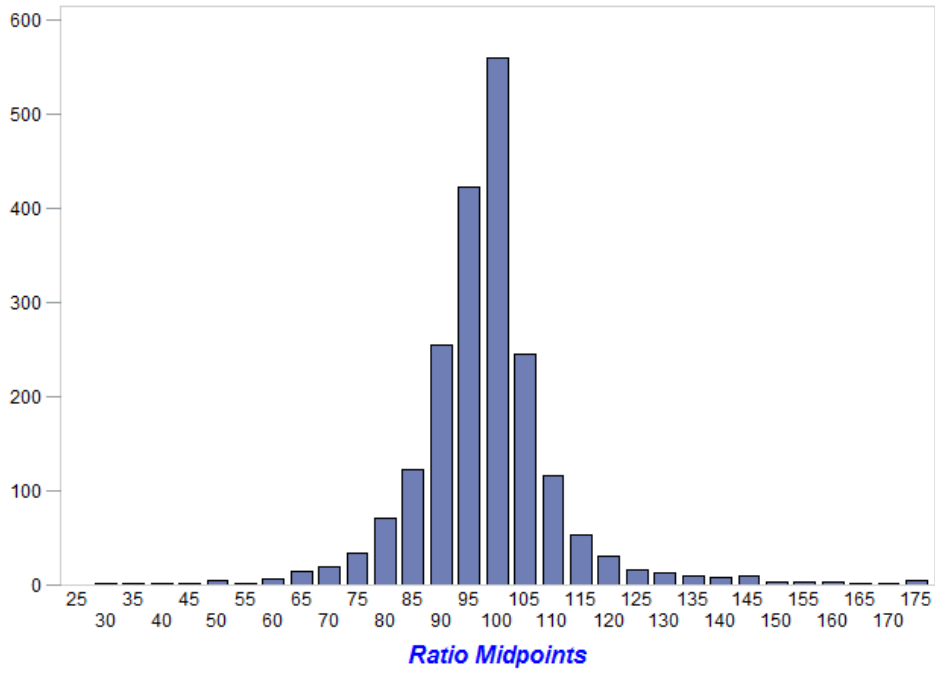
## Grays Harbor

Frequency



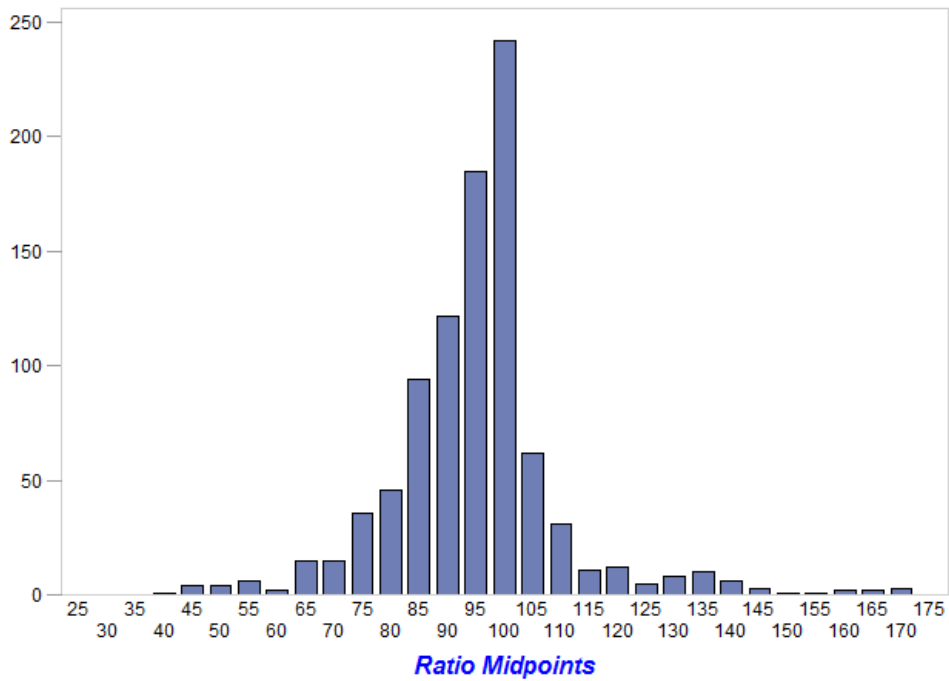
## Island

Frequency



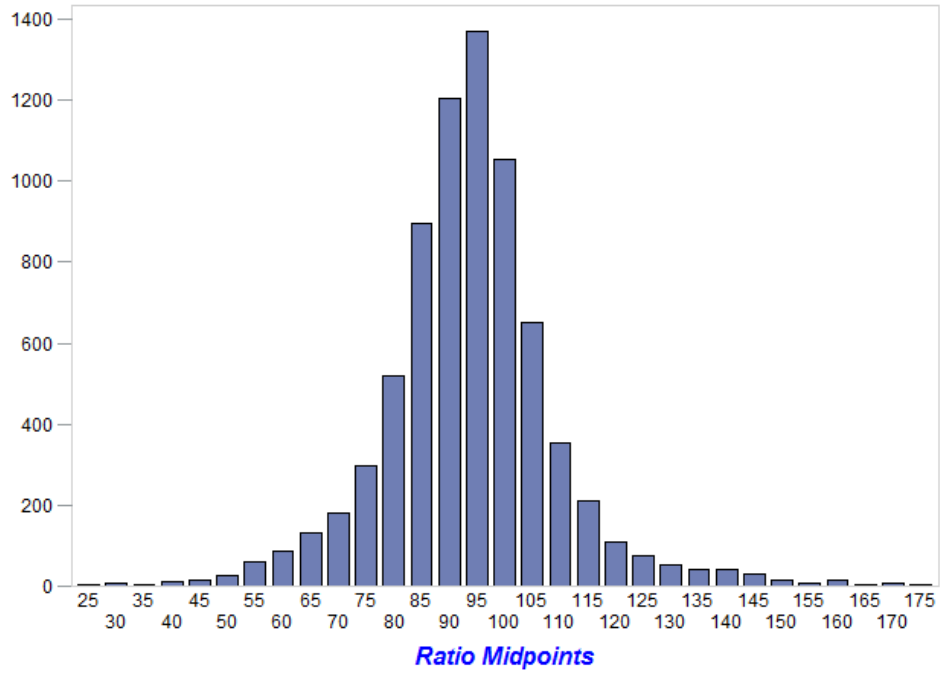
## Jefferson

Frequency



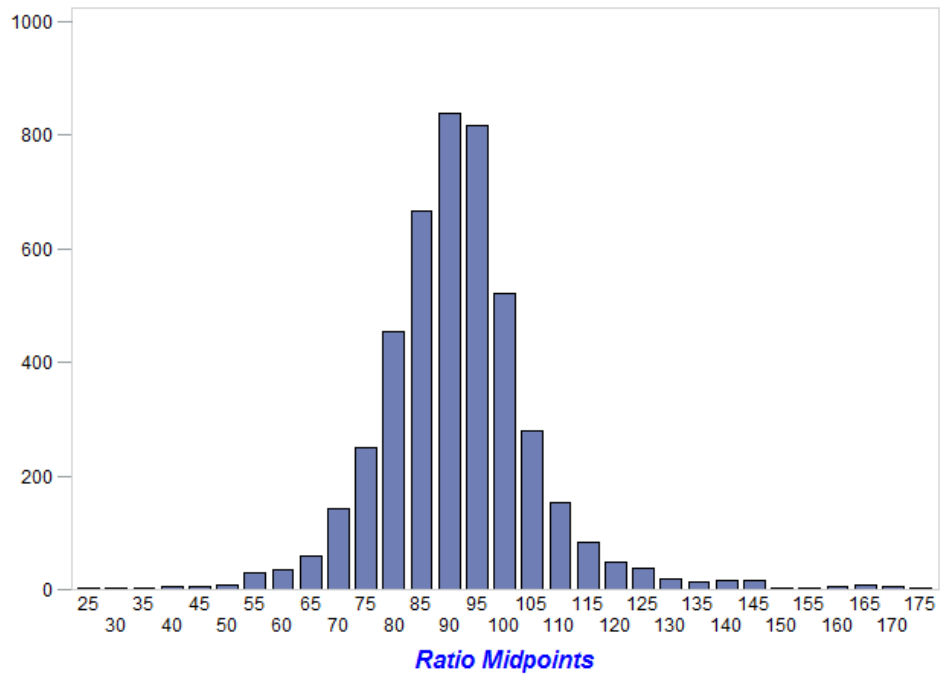
## King

Frequency



## Kitsap

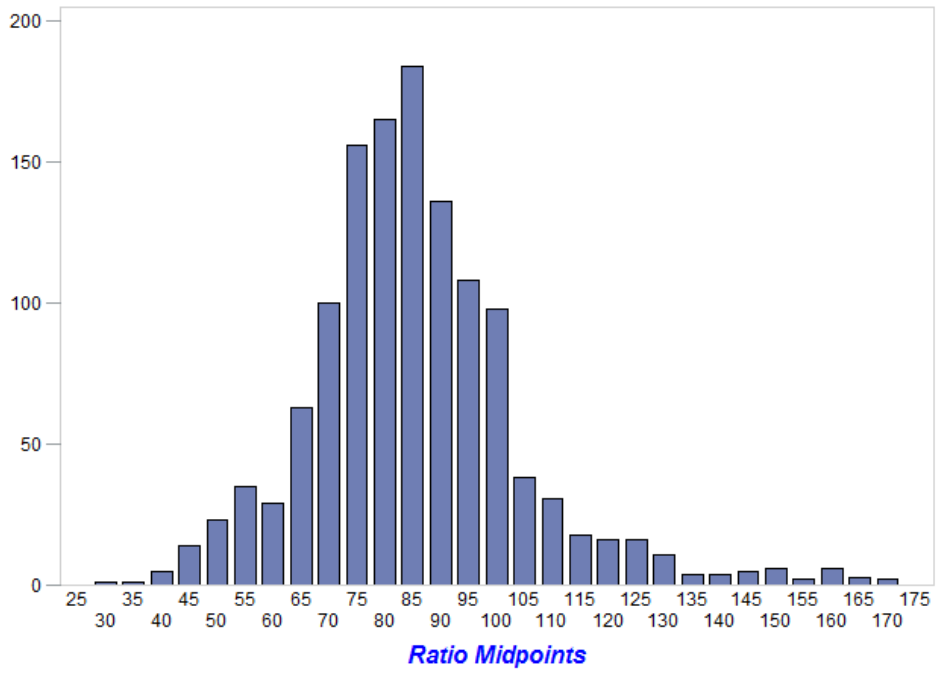
Frequency





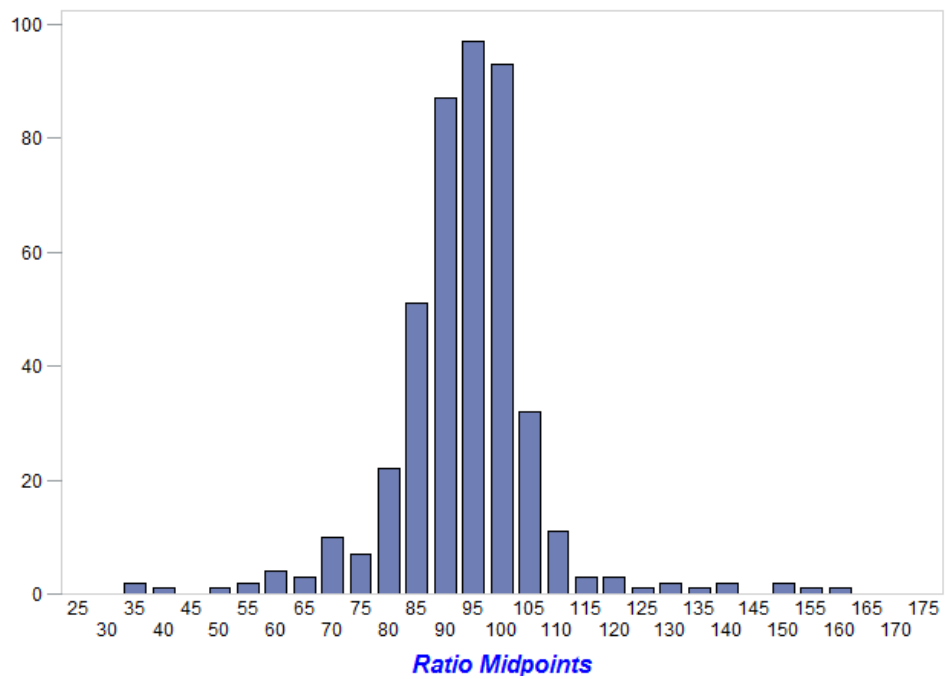
## *Kittitas*

*Frequency*



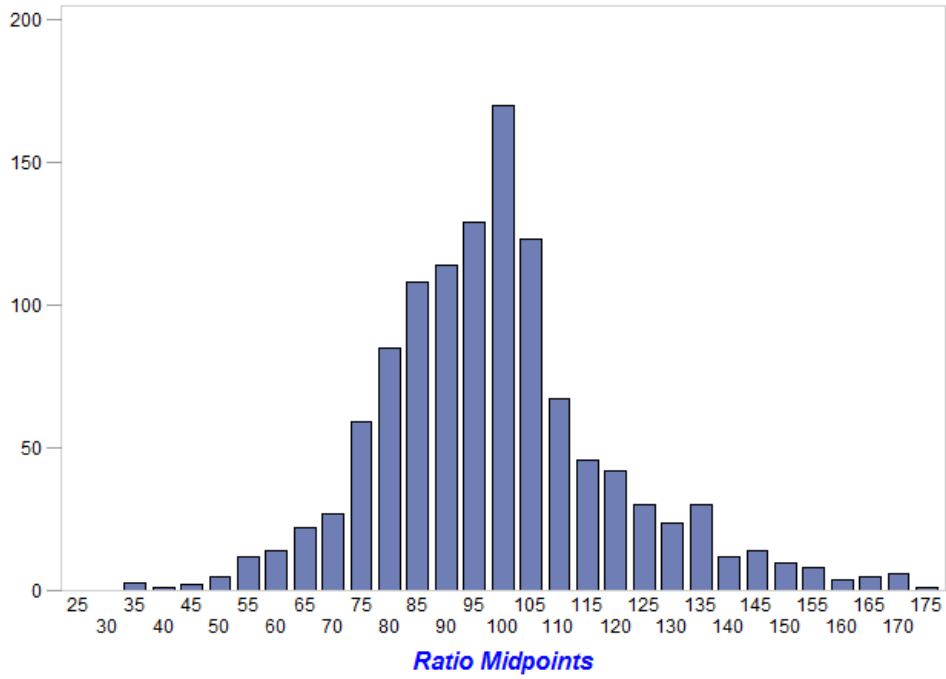
## *Klickitat*

*Frequency*



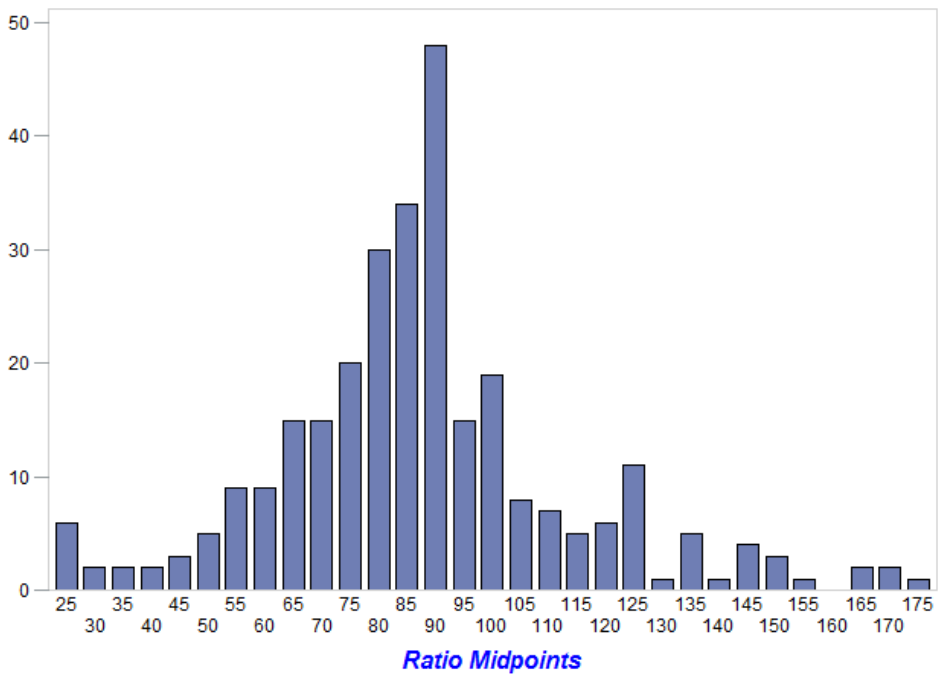
## Lewis

Frequency



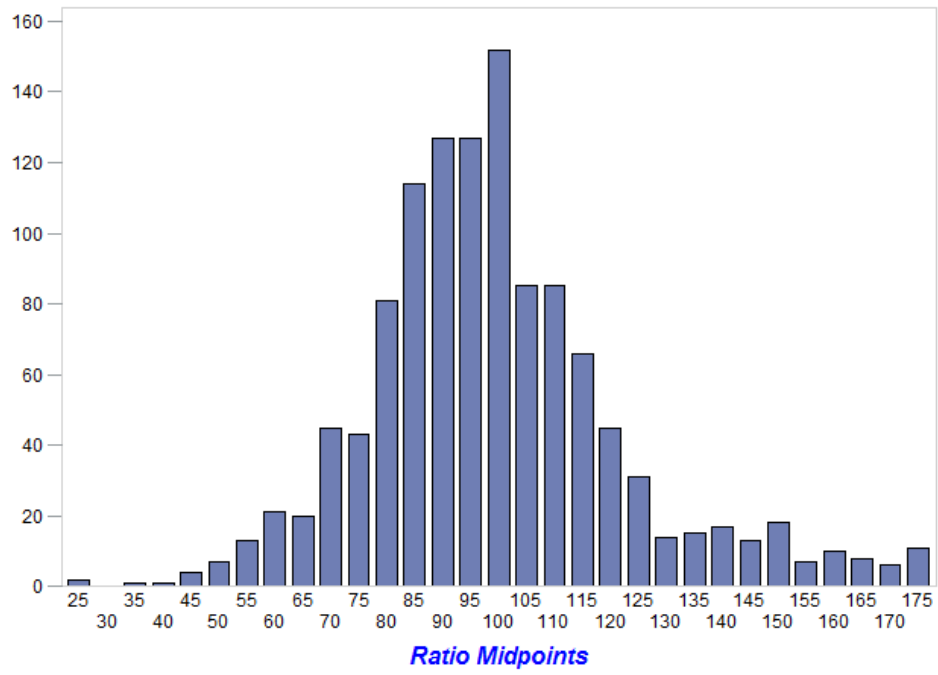
## Lincoln

Frequency



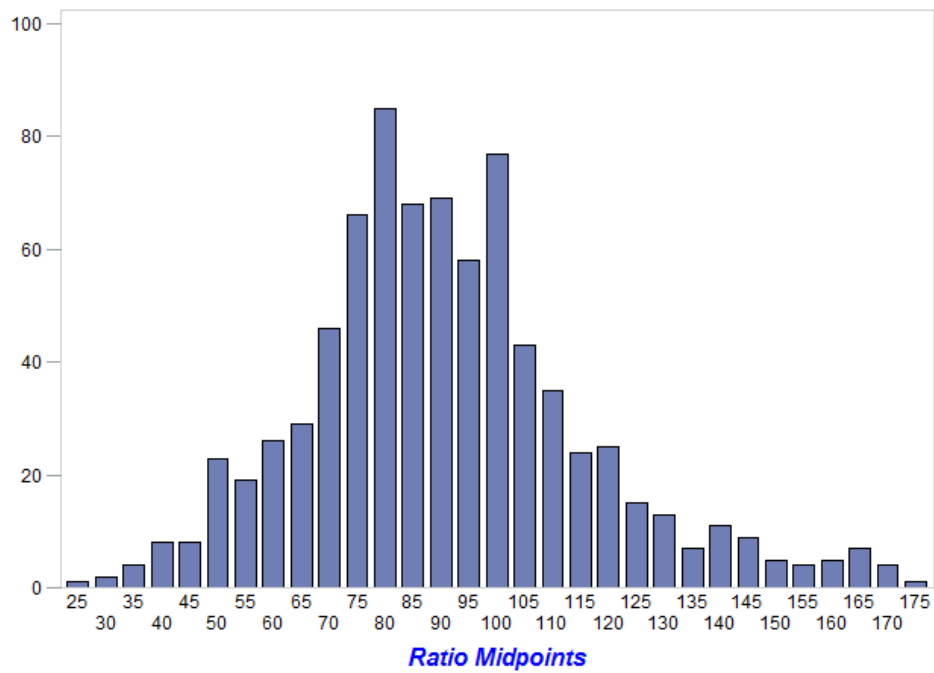
## Mason

Frequency



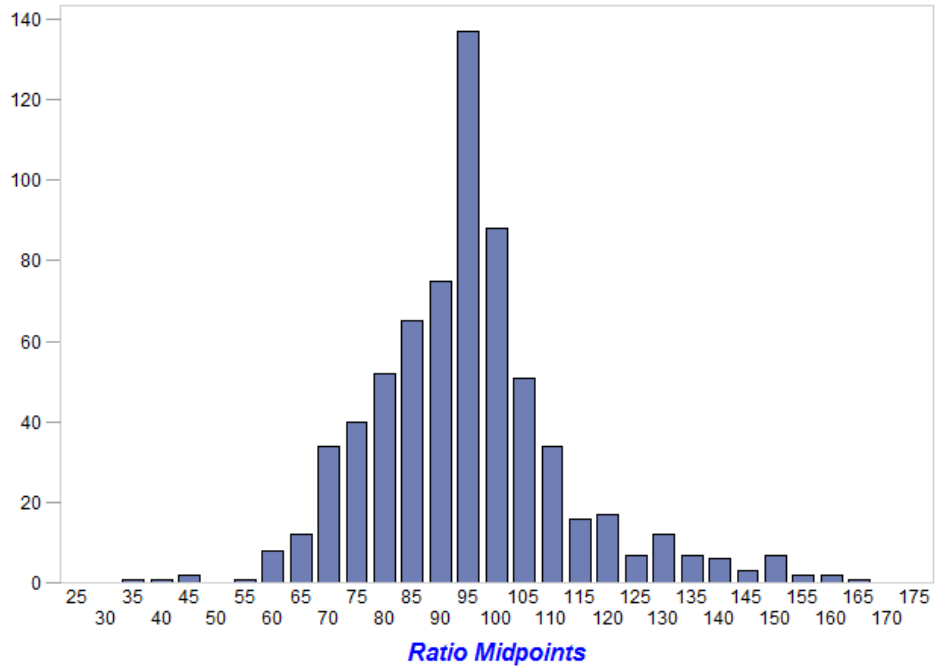
## Okanogan

Frequency



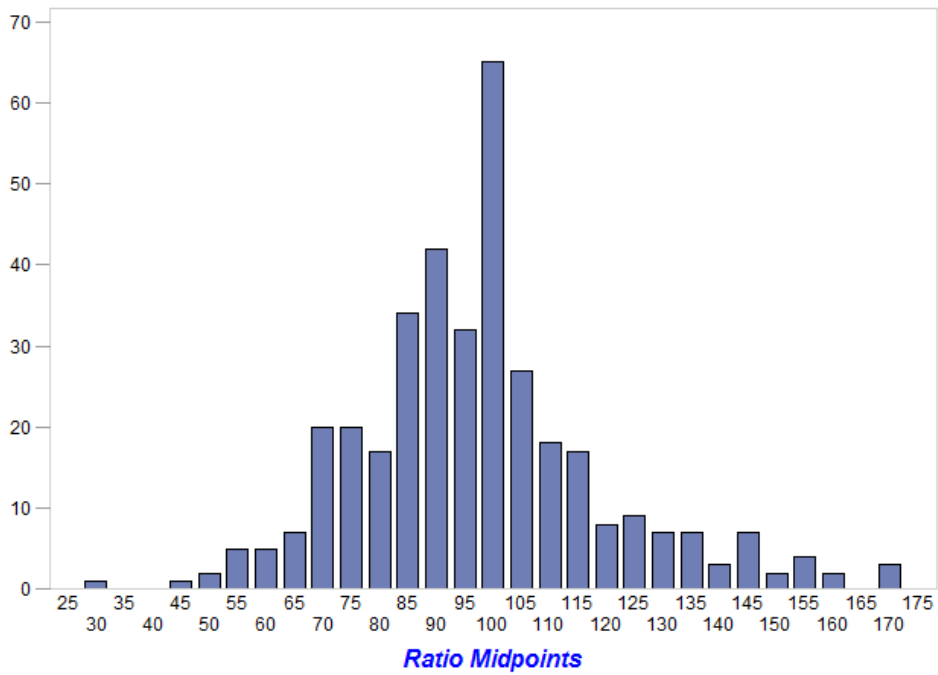
## Pacific

Frequency



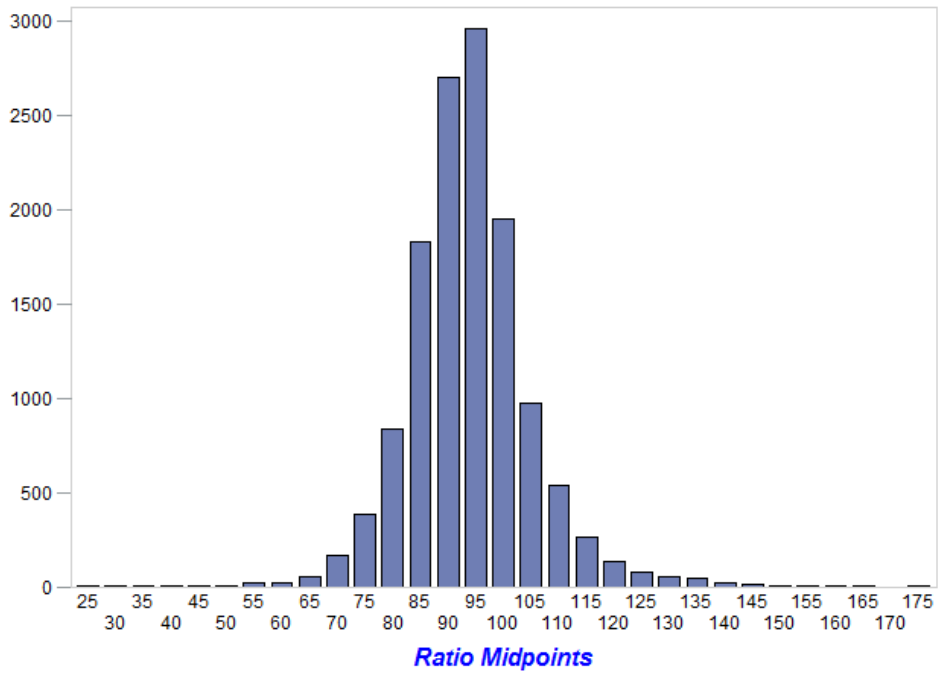
## Pend Oreille

Frequency



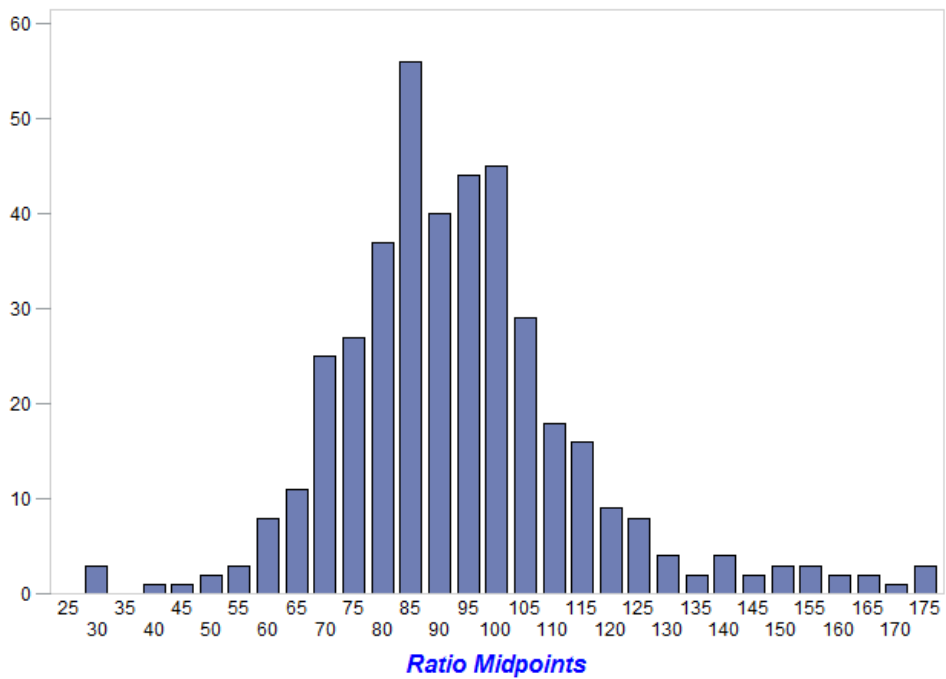
## Pierce

Frequency

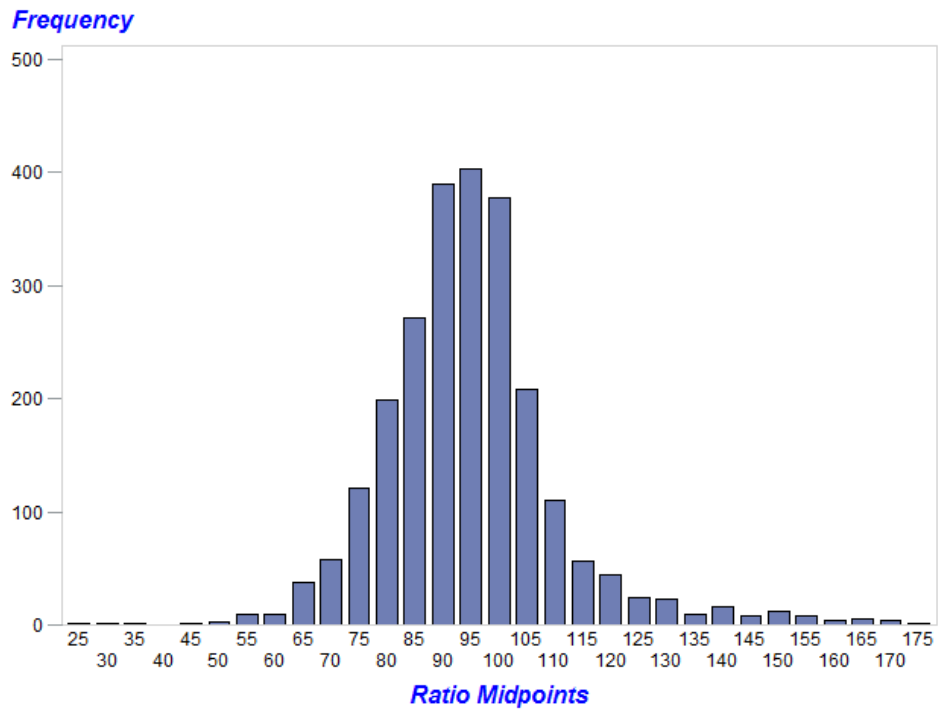


## San Juan

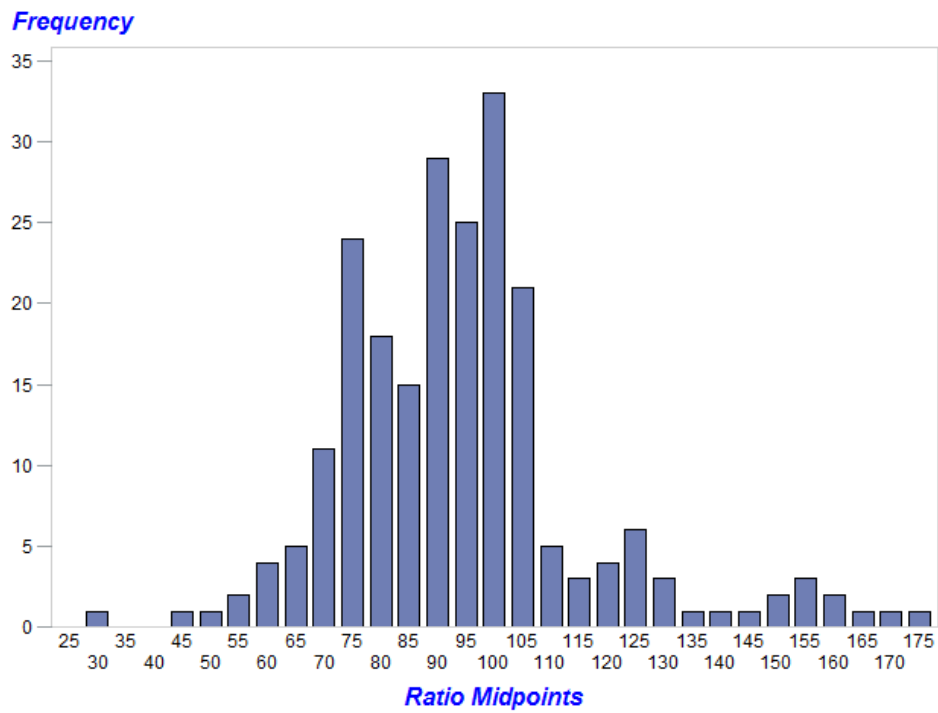
Frequency



## Skagit

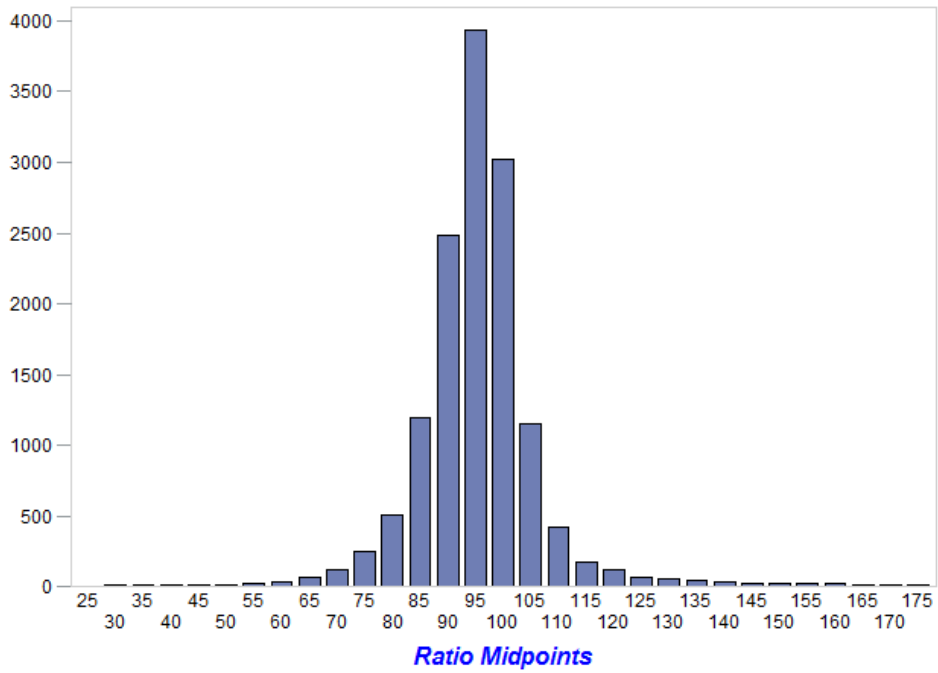


## Skamania



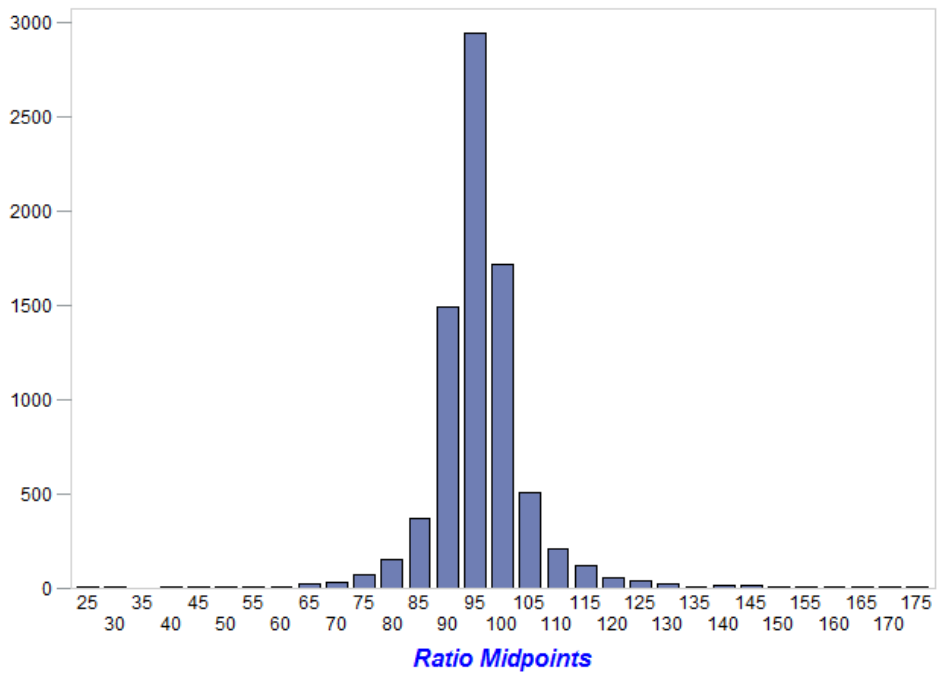
## Snohomish

Frequency



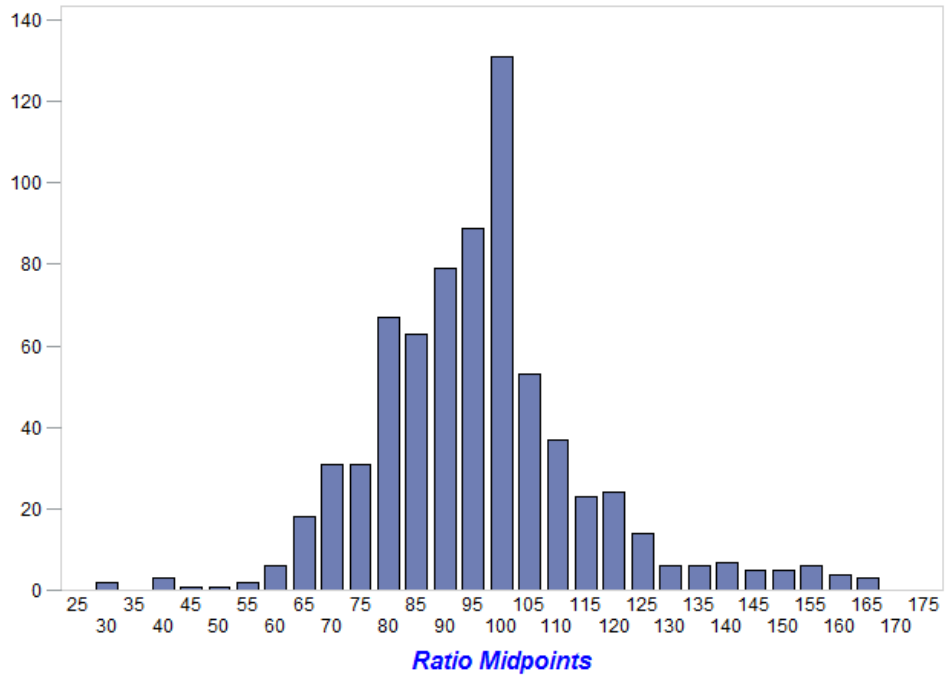
## Spokane

Frequency



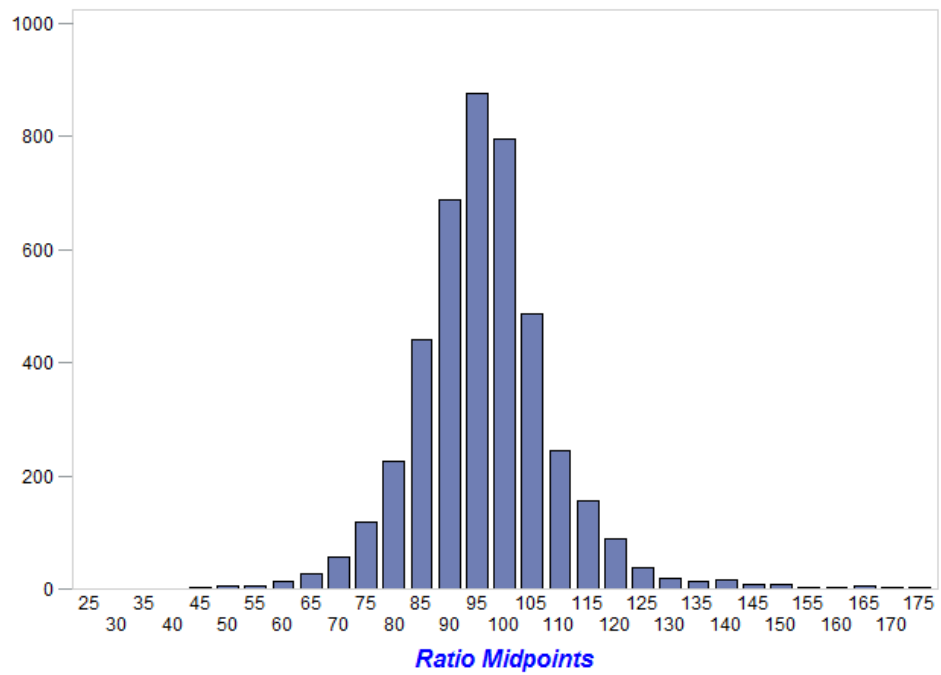
## Stevens

Frequency



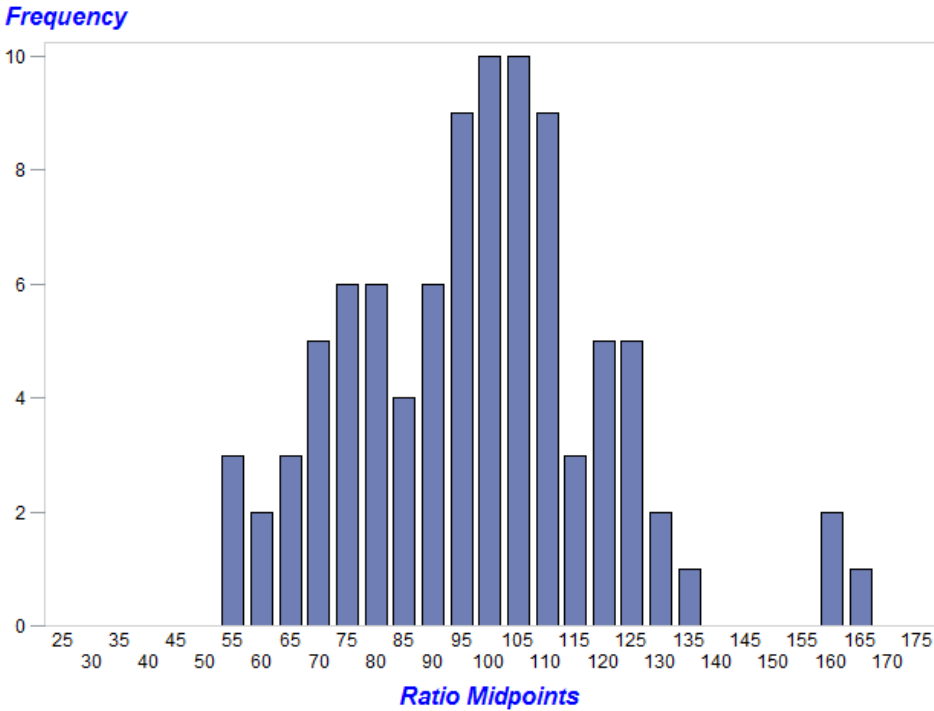
## Thurston

Frequency

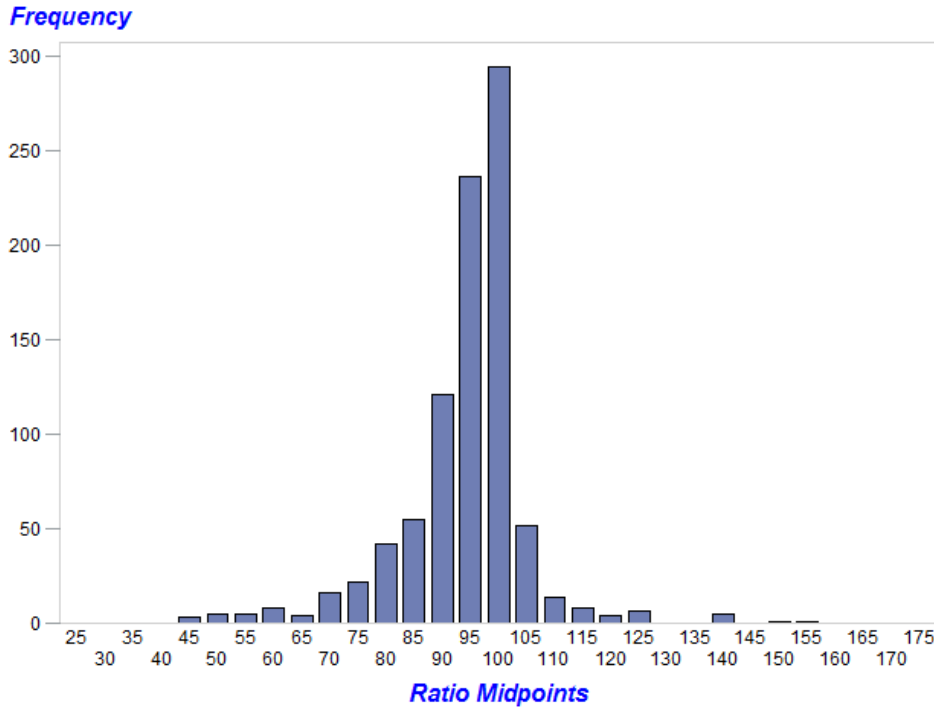




# Wahkiakum

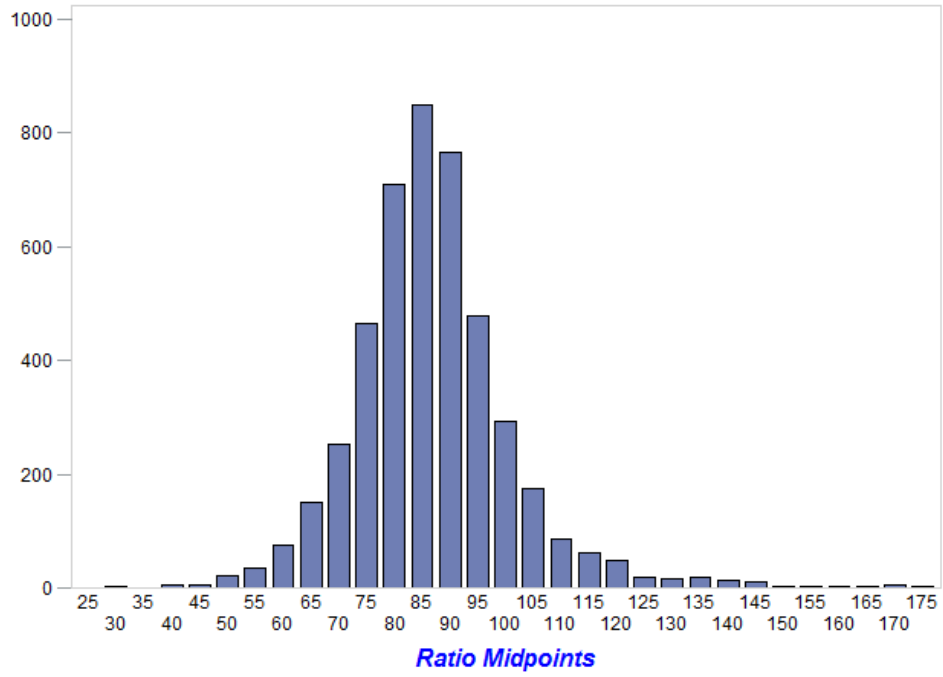


# Walla Walla



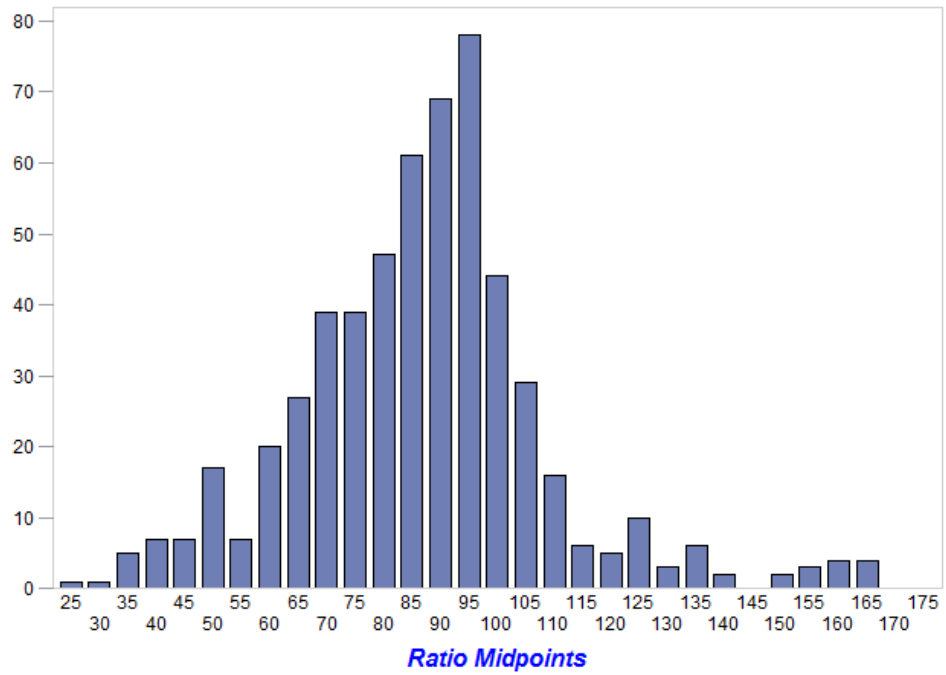
## Whatcom

Frequency



## Whitman

Frequency



# Yakima

