

OREGON'S EXPERIMENT IN STATEWIDE CODE UNIFORMITY

By Harry L. Baker

We are saddened to hear that this fine and courageous gentleman, Harry L. Baker, passed away on December 3. He will be greatly missed by his many ICBO friends and colleagues.—Editor



Harry L. Baker has recently retired from the position of Administrator of the Building Codes Division, Oregon Department of Commerce. This division regulates amusement rides, boiler and pressure vessels, mobile homes and recreational vehicles, electrical, elevator, plumbing, structural and mechanical installations.

Mr. Baker is the Western Regional Chairman of the National Conference of States on Building Codes and Standards, and is on the executive committee. He is a member of a special NCSBCS committee to the Federal Government on Codes.

A member of the National Fire Protection Association, Mr. Baker also belongs to Mobile Homes and Recreational Vehicles, Electrical Section of the National Fire Protection Association, Code Panel 19 for the National Electrical Code, Technical Standards Committee of the International Association of Plumbing and Mechanical Officials, and the Underwriters Laboratories Electrical Council.

Prior to becoming codes administrator, Mr. Baker served as Director of the Safety Division, Department of Commerce; he spent 21 years with the State Bureau of Labor in the Electrical, Elevator, Mobile Homes and Apprentice Divisions. He has been a vocational instructor in electricity and codes in Oregon.

At the recent meeting of NCSBCS in Monterey, California, Mr. Baker was honored by being given a life membership in that organization.

KEY CONCEPTS OF OREGON BUILDING REGULATION SYSTEM

Concept	Remarks
Unity of Supervision	All codes related to building construction under one agency Establish basic goals Unit policy Remove conflicts
Uniform Model Codes Statewide Minimum-Maximum	Local government may not raise or lower standards without cause
State regulation	
Local Administration City First option County Second option	Retained Including unregulated cities within its boundaries
State regulates what is left, i.e., unregulated counties and unregulated cities within those counties	
Education Program Percent surcharge on Permits	For training, development and coordination. Goal is uniformity of interpretation and the protection of the public
Certification	Building officials, inspectors, and plans examiners by July 1, 1977
Appeals process to the State level	
Statistical Reporting System	To collect building information
Energy Conservation	Thermal insulation now only for residential occupancies

FIGURE 1

Oregon has been recognized for its leadership and performance in a number of areas including: environmental protection, the Bottle Bill, fire reporting system, interstate highway system, land use planning, and (most recently) energy policy. While these issues were in the spotlight, a quieter revolution was underway in building regulation.

History

Prior to 1971 the State of Oregon had electrical, boiler, elevator and mobile home codes, with inspection and permit systems. There was also a state plumbing code with a small staff which assisted local government, but with no permit or inspection service. The State Fire Marshal had adopted portions of the Uniform Building Code as the Fire and Life Safety Code and was reviewing plans under these regulations.

Most large cities had codes for construction, and a few had adopted mechanical codes. At the state level, several of the system codes, which we now call specialty codes, were enforced by different arms of state government: plumbing by the Health Department; electrical, boiler and elevator by the Bureau of Labor; fire and exiting requirements by the State Fire Marshal. Some local governments regulated the structural and mechanical systems. Through this piecemeal approach, some duplication occurred; goals were different, and there was no continuity of policy. The state codes were minimum, and local government was allowed to increase standards at will. Since there were no state structural or mechanical codes, cities and counties usually adopted the Uniform Building Code, but amended it either up or down at their discretion. Except for the largest cities, there was little regulation of mechanical systems. Fifty-three different variations of the Uniform Building Code were alleged in the Portland metropolitan area, and sixteen counties and many small cities had no codes.

Legislation was introduced in 1971 proposing a unified code program. The bill was not adopted, but existing state code-enforcing bodies were brought together in the Department of Commerce in two divisions, the Fire Marshal's office and the Safety Division. The Safety Division included the electrical, plumbing, boiler and elevator functions.

In the 1973 legislature the effort for a statewide building code was renewed and subsequently passed by a vote of 84 to 6. Key concepts included in this legislation are a statewide uniformity; adoption of model codes; state building code composed of specialty codes, i.e. structural, mechanical, electrical, plumbing, boiler, elevator; local enforcement, entire state covered by a crazy-

**ABRIDGED ORGANIZATION CHARTS SHOWING
UNIFICATION OF BUILDING REGULATION IN THE STATE OF OREGON**

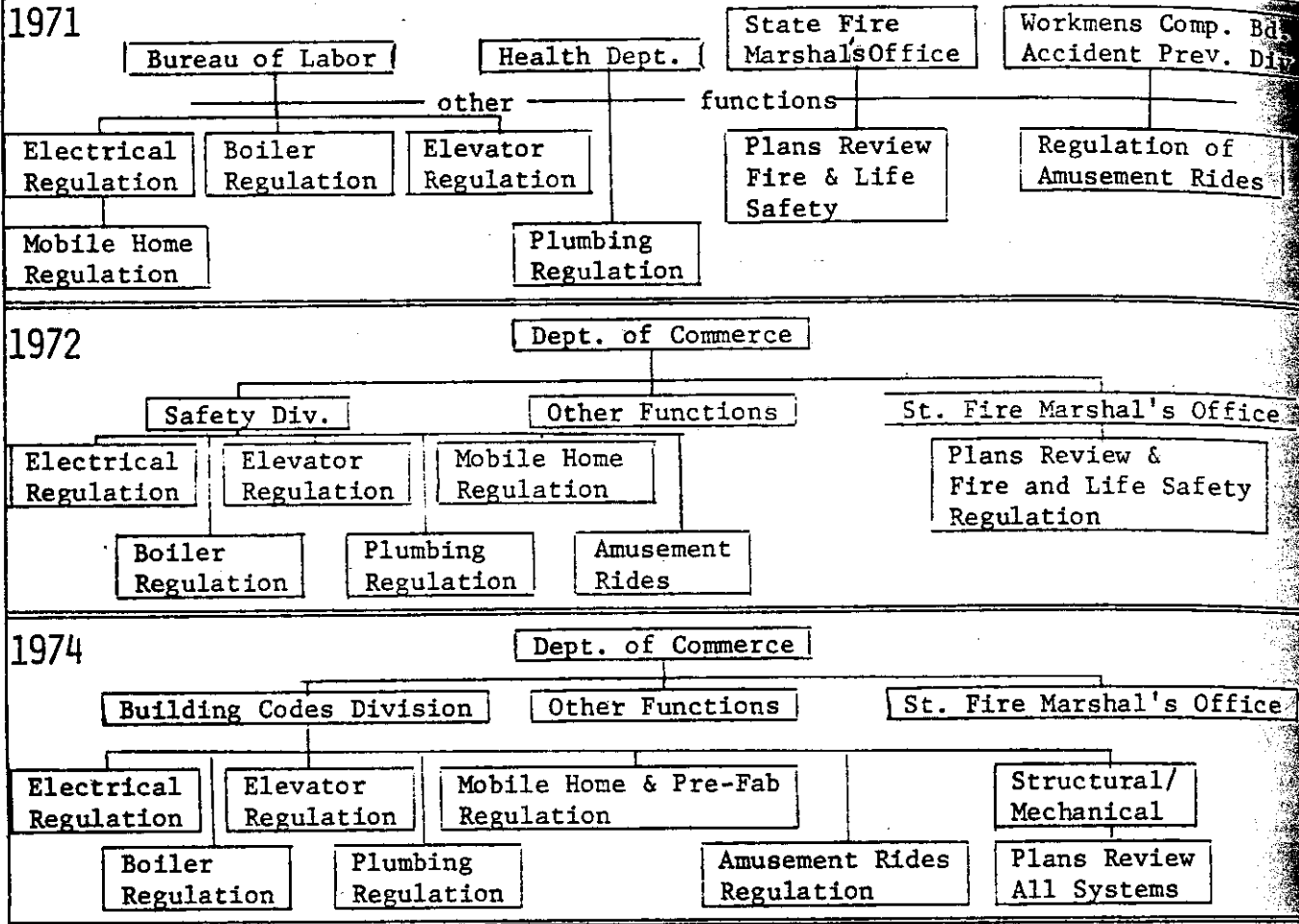


FIGURE 2

AUTHORIZED STAFFING LEVEL		
Section	Auth. Staff	Staff Empl'd.
Administrative	4	4
Electrical	37	33
Plumbing	23	14
Struc/Mech	65	23
Mobile Homes	13	13
Boiler	17	15
Elevator	6	6
Amusement Rides		
Totals	165	108

*Electrical staff administers this program.

FIGURE 3

MODEL CODES ADOPTED WITH AMENDMENTS	
Specialty Code	Model Code
Boiler	ASME & Pressure Vessel Code 1974
Electrical	NEC 1971
Elevator	ANSI A 17-1 1971
Mechanical	UMC 1973
Plumbing	UPC 1973
Structural & Fire & Life Safety*	UBC 1973
Mobile Homes	ANSI A 119.1

*State Fire Marshal adopts portions.

FIGURE 5

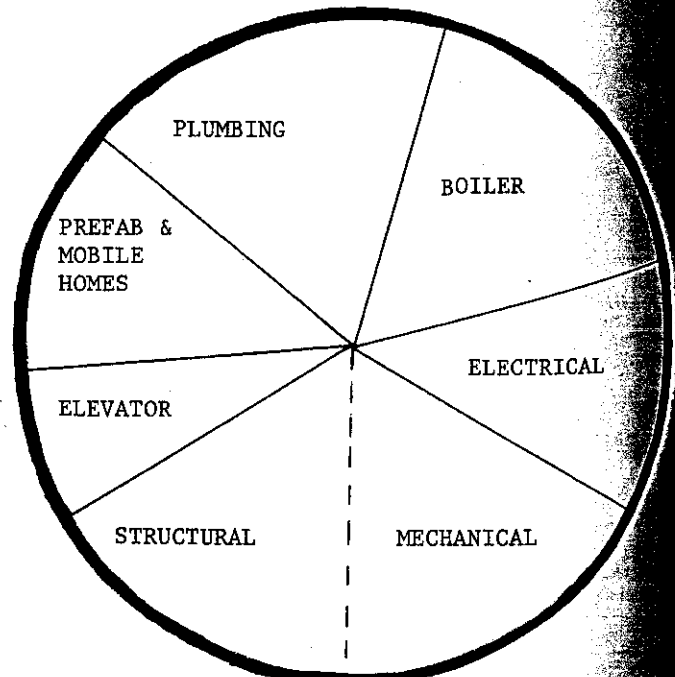
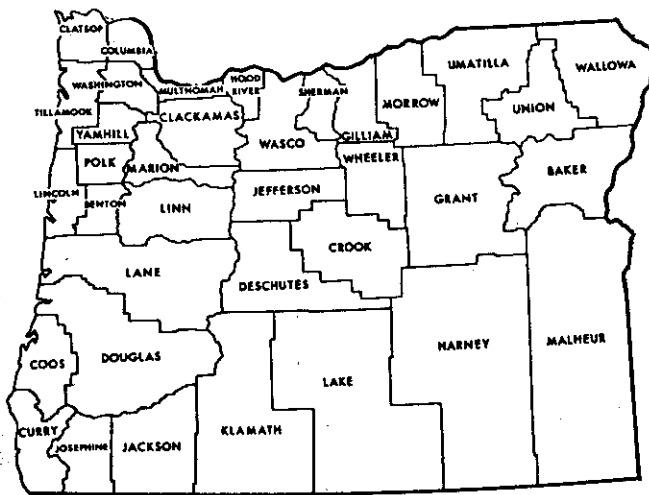
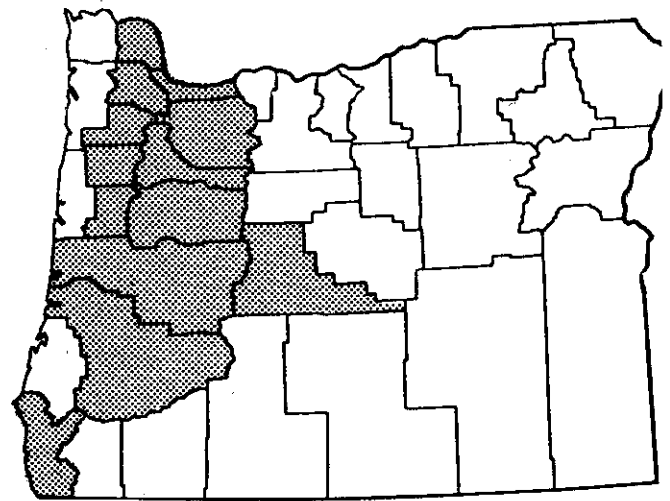


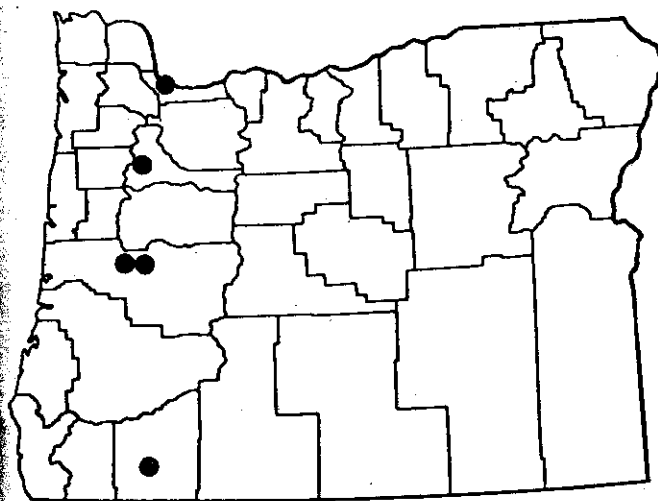
FIGURE 4



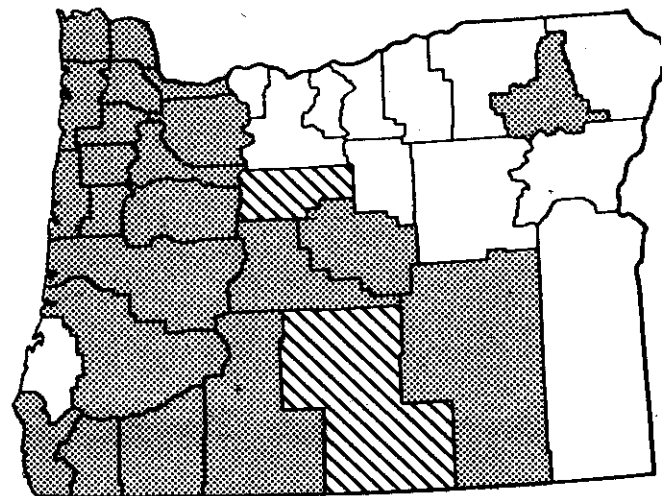
County Names



Plumbing Code



Electrical Code*



Structural/Mechanical Codes

Electrical Code is a state program except in Portland, Salem, Eugene, Springfield, and Medford.

Legend:




-  Local Administration
-  State Administration
-  Mixed Local and State Administration

FIGURE 6

Code Uniformity

The Oregon State building code is composed of the combined specialty codes as shown in Figure 4.

Figure 5 shows the status of this effort. Note all codes are based on the nationally recognized model codes. Latest adopted is the 1973 Uniform Plumbing Code. The looseleaf edition of the Uniform Building Code was used, and the Uniform Mechanical Code and Uniform Plumbing Codes were made looseleaf by shearing the back binding and punching holes for placement in ring binders.

Amended pages to the UBC, UPC, and UMC were printed on yellow paper and cut and punched to fit the looseleaf model codes. Yellow pages were used to alert anyone using the document that "some" deviation

built fabric of enforcement; certification of building inspectors and officials by July 1, 1977; a training program financed by a 1 percent surcharge on all building permits; structural and mechanical codes enabled, including an ambitious time schedule to implement them; study program for identifying and resolving conflicts with existing statutes and administrative rules and statistical records systems. Another bill provided for a plumbing permit fee and inspection system. Comparisons of organization charts of 1971, 1972 and 1973 are shown in Figure 2. Figure 3 shows budget and manpower.

With this background, we will now explore:

1. The concept of code uniformity
2. Local administration
3. Certification and training

existed on that page from model codes. The goal is to eliminate yellow pages over the coming years by submitting the code amendments to ICBO and IAPMO, or by reevaluations of amendments.

Amendments to the Uniform Building Code deal with statutes, administration, definitions, deletions of Chapter 70 and chapters on elevator and boiler regulation covered by existing law, inclusion of fire and life safety provisions, addition of a chapter on energy conservation, and expansion of Chapter 50, regulating prefabricated construction. Another 13 pages are snowload graphs for each Oregon county. The result was 100 yellow pages of changes in the 700 pages in the Uniform Building Code. Many of these pages are pure UBC with the exception of one or two sentences.

The Oregon State building code has been referred to as a minimum-maximum code. In other words, not only does the code establish minimum standards for local government, it also establishes the maximum limits local government may impose. There is a provision that a city or county with a unique condition may request State sanction of a local amendment. Several of these amendments have been proposed to the structural code, and the ten-man policy board which reviews them has sent most of these requests back to the communities for justification. The statute also allows such amendments to be effective statewide. Proposals pending are FHA truss standards in lieu of those found in the Uniform Building Code Standards; a section on historic buildings; a chapter on security to make new structures less vulnerable to burglary; and refined insulation requirements.

Local Administration

All of the State is under the state building code; however, the code may be administered by city, county or state. Under this system a city may administer the state building code. If it elects not to do so, and a surrounding county has elected to enforce the code, the county enforces within the nonparticipating cities. If both the city and county elect not to enforce the code, the State assumes the obligation.

By May 1 of each year, each city and county must report its option on enforcing the state codes to become effective the next July 1. Theoretically, under this system the responsibility could shift each year, but practically it will stabilize after a few years.

As of this writing, 22 counties (61 percent) of 36 in the State were going to administer the Structural and Mechanical Specialty Codes. Two counties are having the state do the larger structures, and they are inspecting one- and two-family dwellings; and 12 counties (33 percent) are leaving enforcement to the state. Of 231 incorporated cities in the State, 123 (53 percent) have their own programs; 63 (27 percent) are administered by another city or county. The remaining 45 cities (20 percent) are enforced by the state without a contract. Figure 9 shows distribution of enforcement option by city size. Figure 6 shows Oregon county names and geographic distribution of who is enforcing the specialty code in each county.

The bar graph in Figure 7 shows that most of the State's population is regulated under the structural/mechanical code by local government, while a significant portion of the area of the State is controlled by the State Building Codes Division.

STRUCTURAL SPECIALTY CODE & MECHANICAL SPECIALTY CODE

Control by Geographical Area

Local	Mixed	State
56%	10%	34%

Control by Population

Local	St.
95.5%	4.5%

FIGURE 7

OREGON COUNTIES RANKED IN DESCENDING ORDER

Rank	County	Popula.**	County	Pop/Sq. Mi.
1.	Multnomah	560,000	Multnomah	1225.4
2.	Lane	227,200	Washington	249.0
3.	Clackamas	178,400	Marion	133.8
4.	Washington	178,300	Clackamas	94.2
5.	Marion	147,200	Benton	89.5
6.	Jackson	100,100	Yamhill	59.1
7.	Linn	75,450	Polk	52.3
8.	Douglas	73,950	Lane	49.2
9.	Benton	59,800	Columbia	46.5
10.	*Coos	57,300	Jackson	35.6
11.	Klamath	51,940	*Coos	35.2
12.	Umatilla	45,450	Clatsop	34.2
13.	Yamhill	42,190	Linn	32.9
14.	Josephine	38,500	Lincoln	26.2
15.	Polk	37,060	*Hood River	25.3
16.	Deschutes	33,800	Josephine	23.7
17.	Columbia	30,070	Tillamook	16.5
18.	Clatsop	28,800	Douglas	14.5
19.	Lincoln	26,100	*Umatilla	14.0
20.	*Malheur	23,380	Deschutes	13.0
21.	Union	20,660	Union	10.2
22.	*Wasco	20,520	*Wasco	8.0
23.	Tillamook	18,400	Klamath	5.1
24.	*Baker	15,200	Curry	3.0
25.	*Hood River	13,540	†Jefferson	5.0
26.	Curry	13,300	*Baker	4.9
27.	Crook	10,610	Crook	3.9
28.	†Jefferson	8,980	*Sherman	2.5
29.	*Grant	6,910	*Malheur	2.4
30.	Harney	6,900	*Morrow	2.1
31.	†Lake	6,740	*Wallowa	2.0
32.	*Wallowa	6,210	*Gilliam	1.8
33.	*Morrow	4,320	*Grant	1.5
34.	*Sherman	2,100	*Wheeler	1.1
35.	*Gilliam	1,980	†Lake	0.8
36.	*Wheeler	1,820	Harney	0.7

See Figure 6 for county locations.

*Structural and Mechanical Code administered by the State of Oregon.

†State has responsibility for Structural and Mechanical Codes except 1- and 2-family dwellings.

**Oregon Blue Book 1972 population estimates.

FIGURE 8

Figure 8 shows the counties ranked by total population and population per square mile in descending order. Counties administered by the State are indicated by an asterisk. Those counties with shared local and State responsibility are shown with a dagger (†) sign. Note that counties served by the State are those with small total population and persons per square mile. Sparsely populated areas have chosen state regulation rather than establishing their own programs. Due to the small population and large travel distance, code administration in the Eastern Oregon counties is much more expensive than more populated western counties. This situation will test the mettle of State staff to provide effective inspection service at a reasonable cost.

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Certification and Training

The statute requires certification of all Building Officials by July 1, 1977. A method of certification has not yet been determined. The three ICBO chapters in the State of Oregon have recommended the adoption of ICBO certification examinations.

Many Oregon inspectors are participating in the ICBO certification examination, anyway. Latest figures show Oregon inspectors have a 58.5 percent passing rate, compared to 43.8 percent for the rest of the participants, excluding the Oregonians. We suspect this 15 percent higher passing rate shows intense motivation due to pending Oregon certification.

Related to certification is a 1 percent surcharge on all structural, mechanical, electrical and plumbing permits issued in the State of Oregon. In other words, a \$10 permit would actually cost \$10.10. The additional 1 percent fee is remitted to the State by local governments and placed in a fund to support development of training programs. As soon as the criteria for certification are established, classes will be arranged through the state's community colleges to train building inspectors and building officials. Due to certification, we believe many small communities will discontinue their single-man or part-time building inspector and contract with or turn inspections over to larger agencies.

In the short time the state building code has been in effect, there has been an increase in the salaries paid to building inspectors. It is not clear whether this is a supply-and-demand phenomenon caused by counties and the state bidding for employees, or whether this is recognition by local governments of the value of their trained employees.

Future

Due to economics and certification standards, we foresee that the number of jurisdictions administering building codes will decrease in Oregon. The remaining entities will be financially stronger. There will be fewer building department personnel, but better qualified, full-time employees in western Oregon. Most cities over 5000 population will continue code programs. The county becomes key code agency for small cities in the western third of the State. The State of Oregon will be the prime administrator of codes in the sparsely populated eastern two-thirds of the State.

DISTRIBUTION OF OREGON CITIES BY POPULATION AND LEVEL OF GOVERNMENT PROVIDING BUILDING AND MECHANICAL INSPECTION SERVICE

Population Range (modified log scale)	No. Oregon Cities	No. of Cities Served By Jurisdiction Class		
		City*	County/Contr.	State
0-4.9	1	1	—	—
5-9.9	1	—	—	1
10-49.9	1	—	—	1
50-99.9	4	—	1	3
100-499.9	61	12	24	25
500-999.9	45	19	17	9
1,000-4,999.9	78	53	20	5
5,000-9,999.9	18	16	1	1
10,000-49,999.9	19	19	—	—
50,000-99,999.9	2	2	—	—
100,000-499,999.9	1	1	—	—
	231	123	63	45
		53%	27%	20%

*Includes all cities indicating they have a building official.

FIGURE 9

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