The Building Code Effectiveness Grading Schedule (BCEGS®)

Program Usage and Application

June 2, 2022

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Manager – Community Hazard Mitigation
Underwriting Solutions

Thank you for the invitation today.

- Who are we? What do we do?
- The Building Code Effectiveness Grading Schedule (BCEGS)
- National and State BCEGS Classifications
- Use and Application of BCEGS Classifications and BCEGS Data
- Future development of Building Codes and BCEGS in hazard mitigation programs.

What is Verisk

Verisk is licensed rating organization and a leading supplier of:

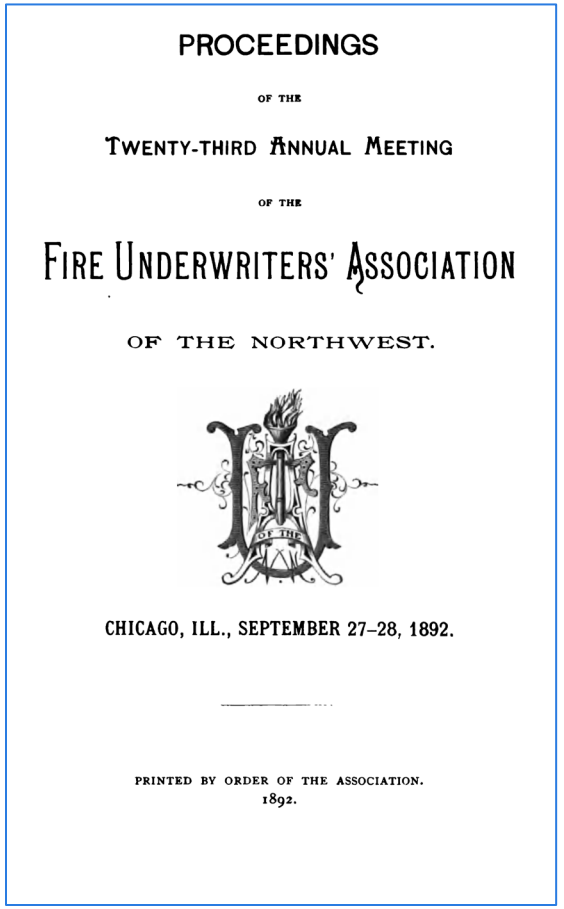
- Statistical data
- Actuarial data
- Underwriting information
- Standardized coverage forms
- Class & rating programs
- Advisory services

ISO is owned by Verisk and their programs are filed in the ISO name.

Who do the ISO Programs Exist?

ISO programs are a result of the consolidation of state rating bureaus – 1970.

- Increase efficiency for insurers
- Reduce development costs for insurance products
- Leverage economies of scale
- Benefit from historical aggregate database
- Enhance competition in the insurance marketplace
  - Reduce barriers to entry
    - new markets
    - new lines of business
    - new classes of risk
- Provide benchmarks for comparison



PROCEEDINGS

OF THE

TWENTY-THIRD ANNUAL MEETING

OF THE

FIRE UNDERWRITERS' ASSOCIATION

OF THE NORTHWEST.

CHICAGO, ILL., SEPTEMBER 27–28, 1892.

PRINTED BY ORDER OF THE ASSOCIATION.
1892.

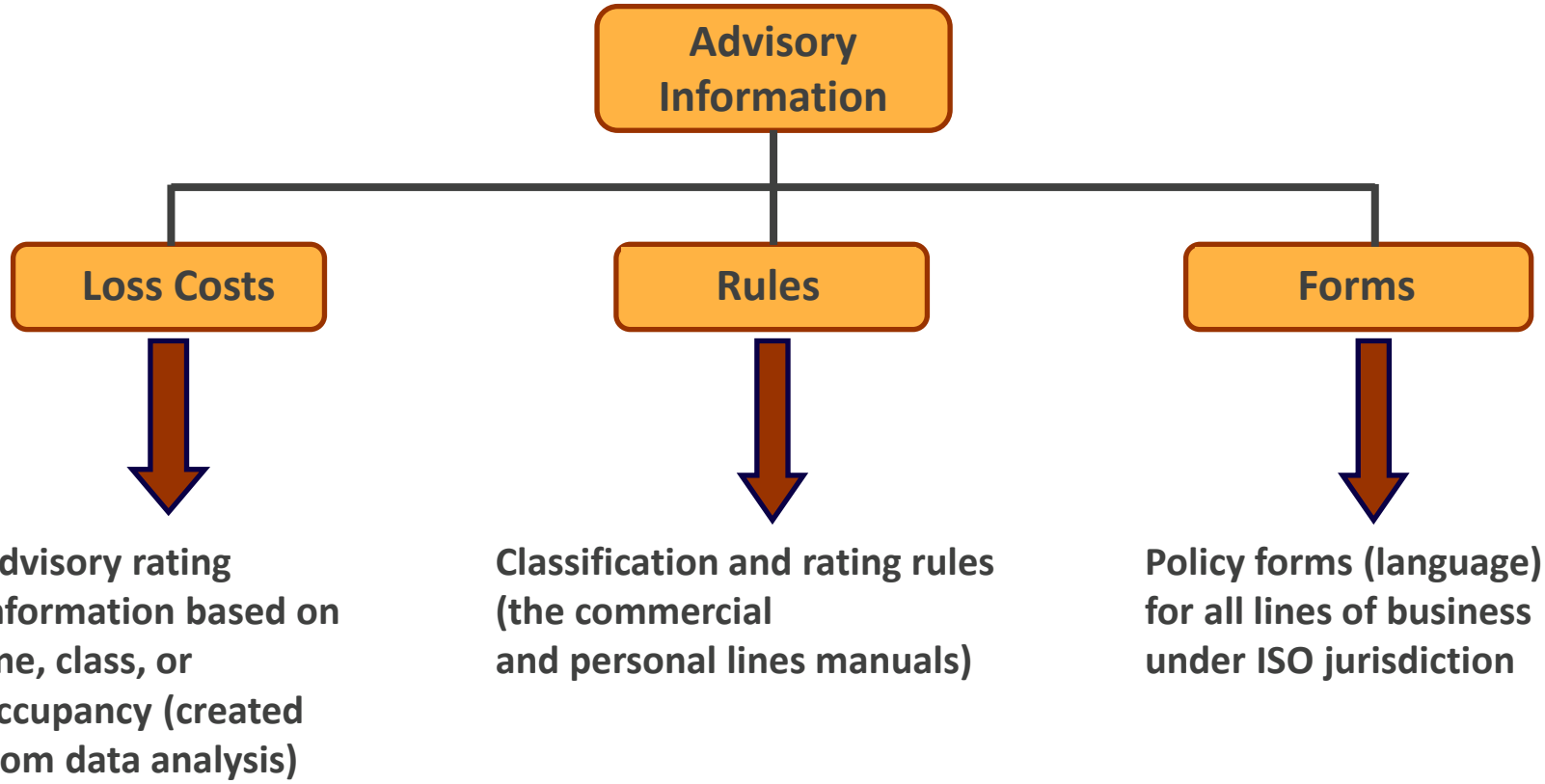
Overview of ISO Programs – Industry Need

Unique nature of insurance pricing

Insurance industry vs. other industries

- True cost of product not known at time product is sold
- Claims may not be submitted for months, years, decades after the policy term has expired
- Need to project future costs based on past data and actuarial projections

Overview of ISO Advisory Programs



Verisk – ISO Community Mitigation Programs

Fire Suppression Rating Schedule (FSRS)

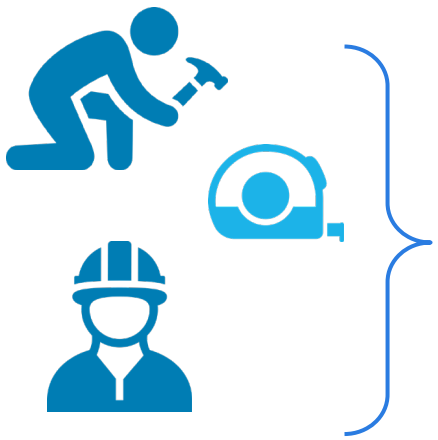
- Public Protection Classification (PPC ®) Program

Building Code Effectiveness Grading Schedule (BCEGS®)

*FEMA/NFIP Community Rating System (CRS)

* Administrator of program

Building Code Effectiveness Grading Schedule (BCEGS®)



- Insurance Industry Program focused on Natural Hazard Mitigation
- Started in 1996
- Assigned at the community level based on building code enforcement service delivery.
  - County Departments
  - Third-Party Agencies

- Aggregated into classifications of 1–10 for both Personal and Commercial Lines
- Class 99 Jurisdictions
- 5 Year Cyclical Update
- Countrywide Coverage

BCEGS is designed to measures resources and support made available to the enforcement of building codes and the utilization of those resources at the community level.

BCEGS is an Indicator of Community Vulnerability to Losses from Natural Hazards

Modern Building Code

Effective Code Enforcement

Weakened or No Building Code

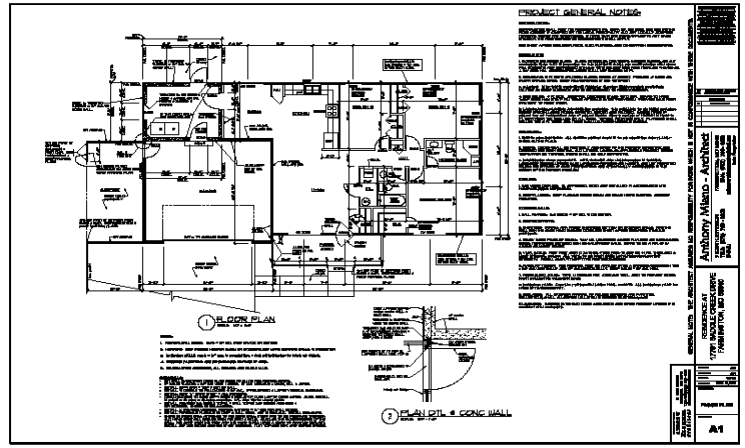
Poor or No Code Enforcement

BCEGS Filed Grading Schedule – Section I – Code Administration

SECTION	ITEM	POINTS POSSIBLE
105	Adopted Codes	8.00
108	Additional Code Adoptions	4.00
110	Modification to Adopted Codes	4.00
112	Method of Code Adoption	1.00
115	Training	13.00
120	Certification	12.00
125	Building Official – Qualifications / Experience / Education	4.00
130	Selection Procedures for Building Official	.50
135	Design Professionals	2.0
140	Zoning Provisions	1.0
145	Contractor / Builder Licensing and Bonding	1.0
155	Public Awareness Programs	2.50
160	Participation in Code Development Activities	.50
165	Administrative Policies and Procedures	.50
TOTAL POINTS IN SECTION I		**54.00**

BCEGS Filed Grading Schedule – Section II – Plan Review

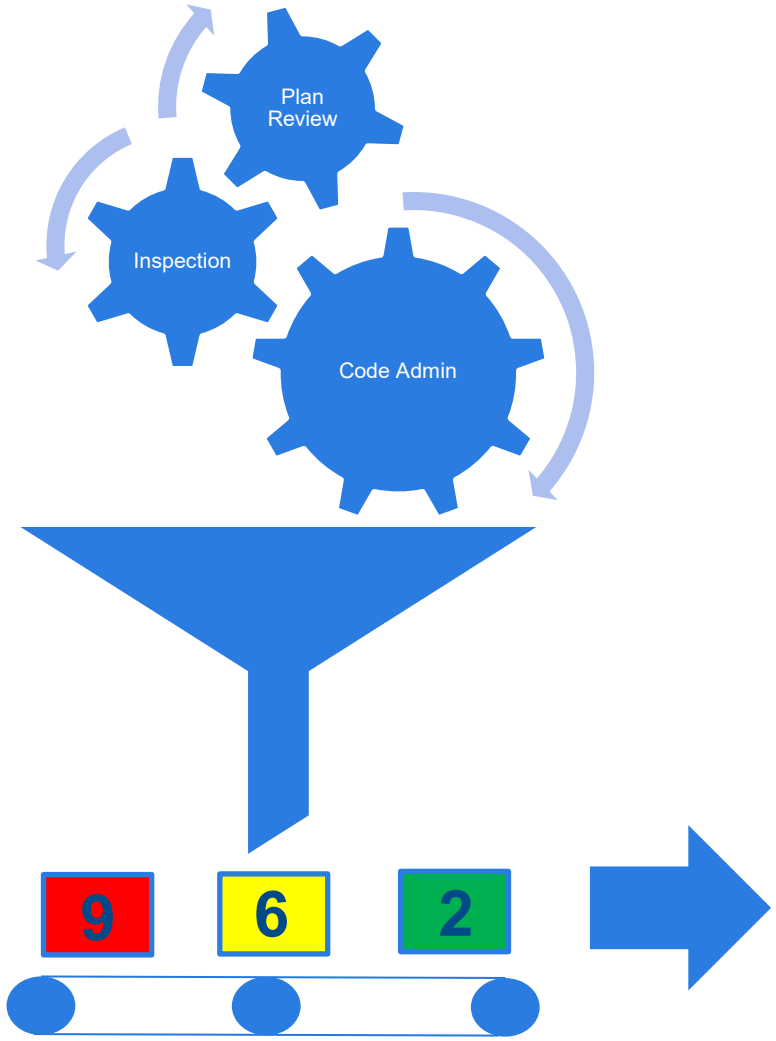
SECTION	ITEM	POINTS POSSIBLE
205	Existing Plan Review Staffing	9.00
210	Experience of Personnel	1.50
215	Detail of Plan Review	11.50
220	Performance Evaluations for Quality Assurance	1.0
TOTAL POINTS IN SECTION II		**23.00**



BCEGS Filed Grading Schedule – Section III – Field Inspection

SECTION	ITEM	POINTS POSSIBLE
305	Existing Inspection Staffing	9.00
310	Experience of Personnel	3.0
315	Managing Inspection and Re-inspection Activity	1.0
320	Inspection Checklists	2.0
325	Special Inspections	1.0
330	Inspections for Natural Hazard Mitigation	1.50
335	Final Inspections	2.50
340	Certificate of Occupancy Programs	2.0
345	Performance Evaluations for Quality Assurance	1.0
TOTAL POINTS IN SECTION III		**23.00**

Classification Results



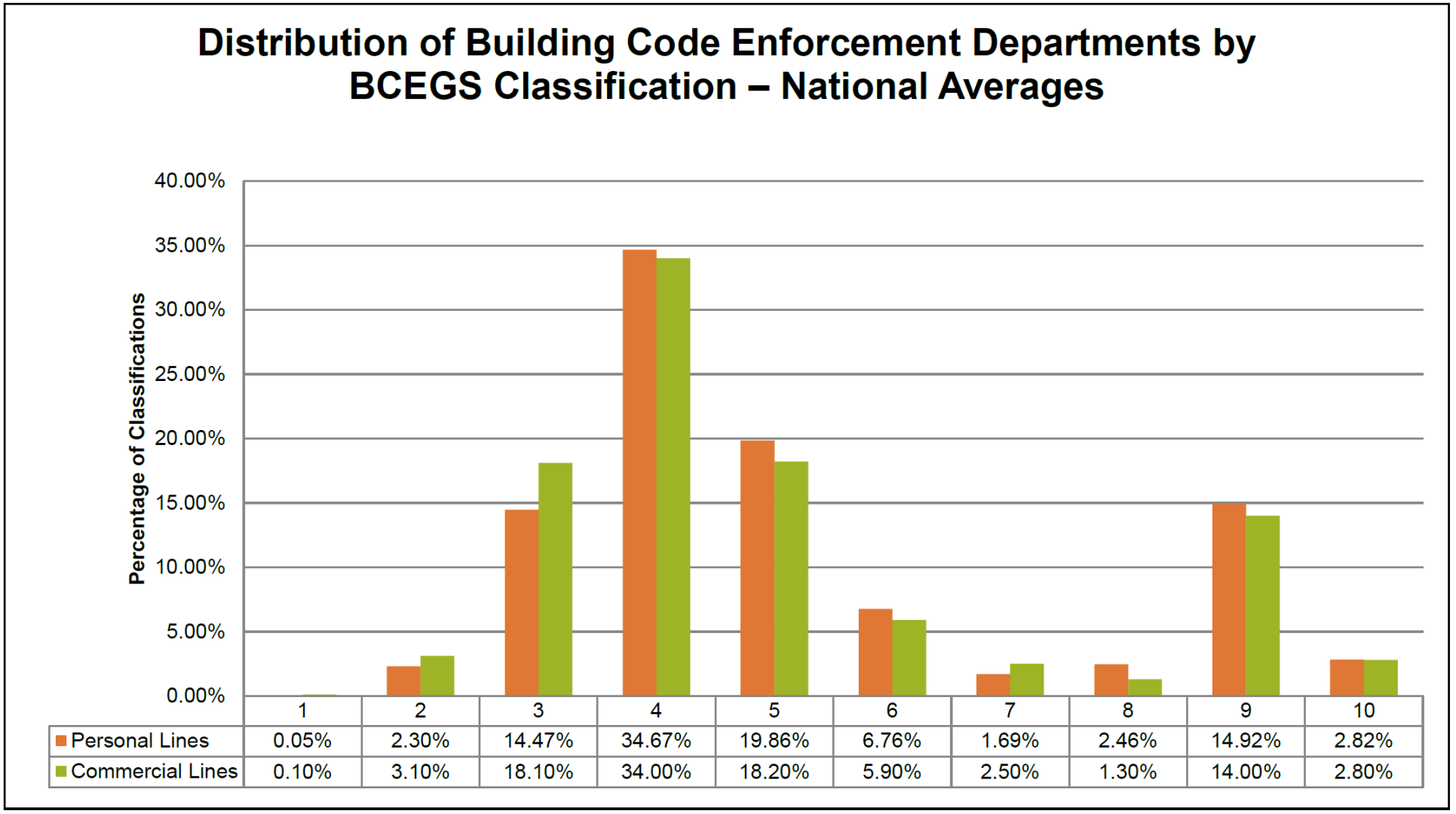
CLASSIFICATION TABLE

CLASSIFICATION	POINT SPREADS
1	93.00 - 100.00
2	85.00 - 92.99
3	77.00 - 84.99
4	65.00 - 76.99
5	56.00 - 64.99
6	48.00 - 55.99
7	39.00 - 47.99
8	25.00 - 38.99
9	10.00 - 24.99
10	0.00 - 9.99

BCEGS 1-10 Classifications for PL and CL

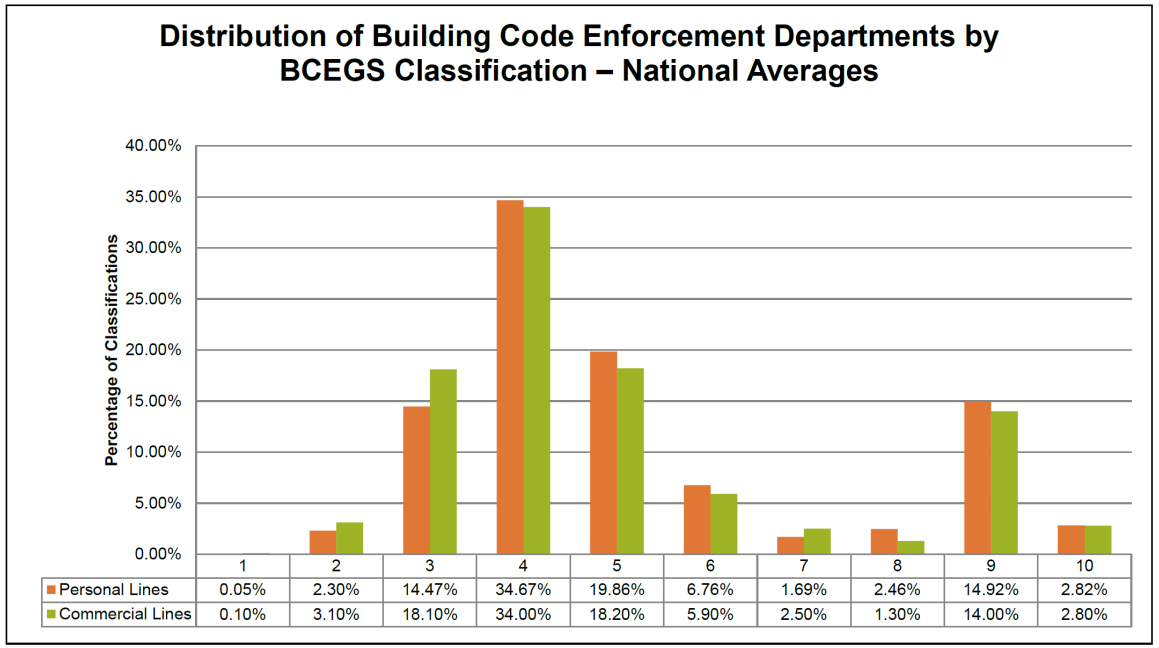
BCEGS Data

BCEGS Classifications Across the Nation

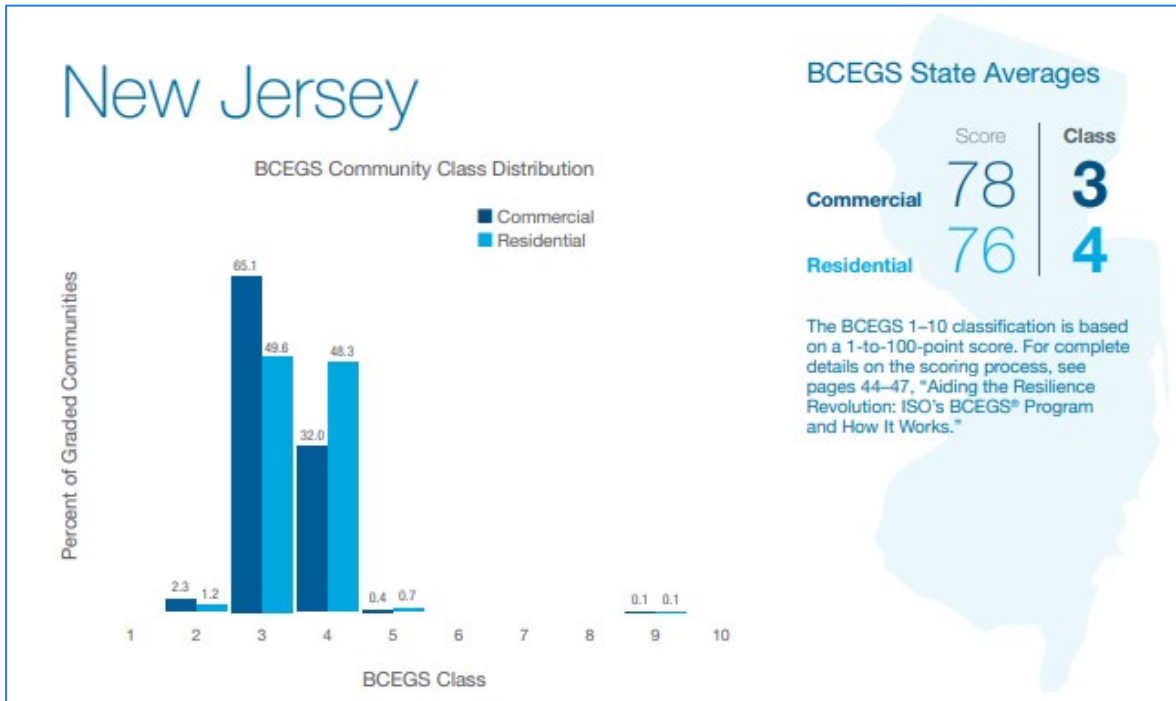


	1	2	3	4	5	6	7	8	9	10
Personal Lines	0.05%	2.30%	14.47%	34.67%	19.86%	6.76%	1.69%	2.46%	14.92%	2.82%
Commercial Lines	0.10%	3.10%	18.10%	34.00%	18.20%	5.90%	2.50%	1.30%	14.00%	2.80%

BCEGS Benchmarking – New Jersey Specific Information



	1	2	3	4	5	6	7	8	9	10
Personal Lines	0.05%	2.30%	14.47%	34.67%	19.86%	6.76%	1.69%	2.46%	14.92%	2.82%
Commercial Lines	0.10%	3.10%	18.10%	34.00%	18.20%	5.90%	2.50%	1.30%	14.00%	2.80%



By the Numbers*

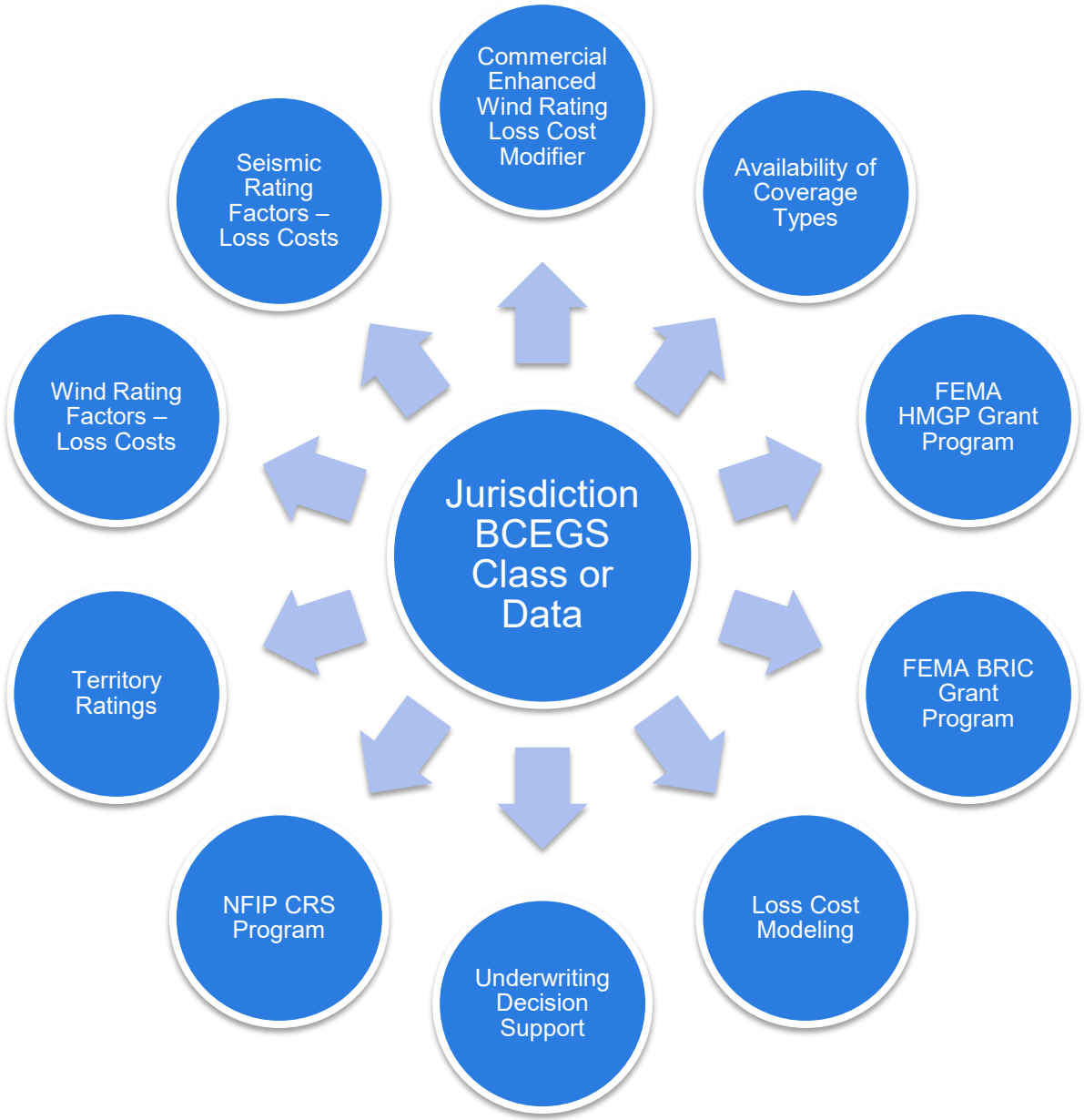
16,996 (national average: 31,618)	Average population served by building code enforcement departments in the state
$24.86 (national average: $22.62)	Average department expenditure per capita of population served
$2.18 (national average: $0.44)	Average department employee training expenditure per capita of population served
8.90% (national average: 2.48%)	Average training expenditure as a percentage of overall department expenditure

*Community data from BCEGS database

Top Three Modeled Natural Hazards**

**Source: AIR Worldwide modeled loss cost data

BCEGS Data Applicability



BCEGS Filed Advisory Rating

What's a filing?

The process of obtaining required regulatory acceptance of ISO's core products (loss costs, rules and forms) for use by participating insurers.

RULE A6.
BUILDING CODE EFFECTIVENESS GRADING

A. General Information

1. The Building Code Effectiveness Grading Schedule develops grades of 1 to 10 for a community based on the adequacy of its building code and the effectiveness of its enforcement of that code. Policies which cover the Windstorm or Hail or Earthquake causes of loss may be eligible for special rating treatment, subject to the criteria in the following paragraphs. The Building Code Effectiveness Grading factor applies, where applicable, in addition to the Public Protection Classification factors.
2. In some communities, two Building Code Effectiveness Grades may be assigned. One grade will apply to 1 and 2 family dwellings; the other grade will apply to all other buildings. The Community Mitigation Classification Manual will indicate the application of each grade. This separation applies even if the residential property is written under a Commercial Property policy. The rate modification factors in Paragraph **E.** of this Additional Rule apply to the numerical grade shown, regardless of whether the property is graded as residential or commercial.
3. The Building Code Effectiveness Grades for a community, and their effective date, are provided in the Community Mitigation Classification Manual published by Insurance Services Office, Inc.

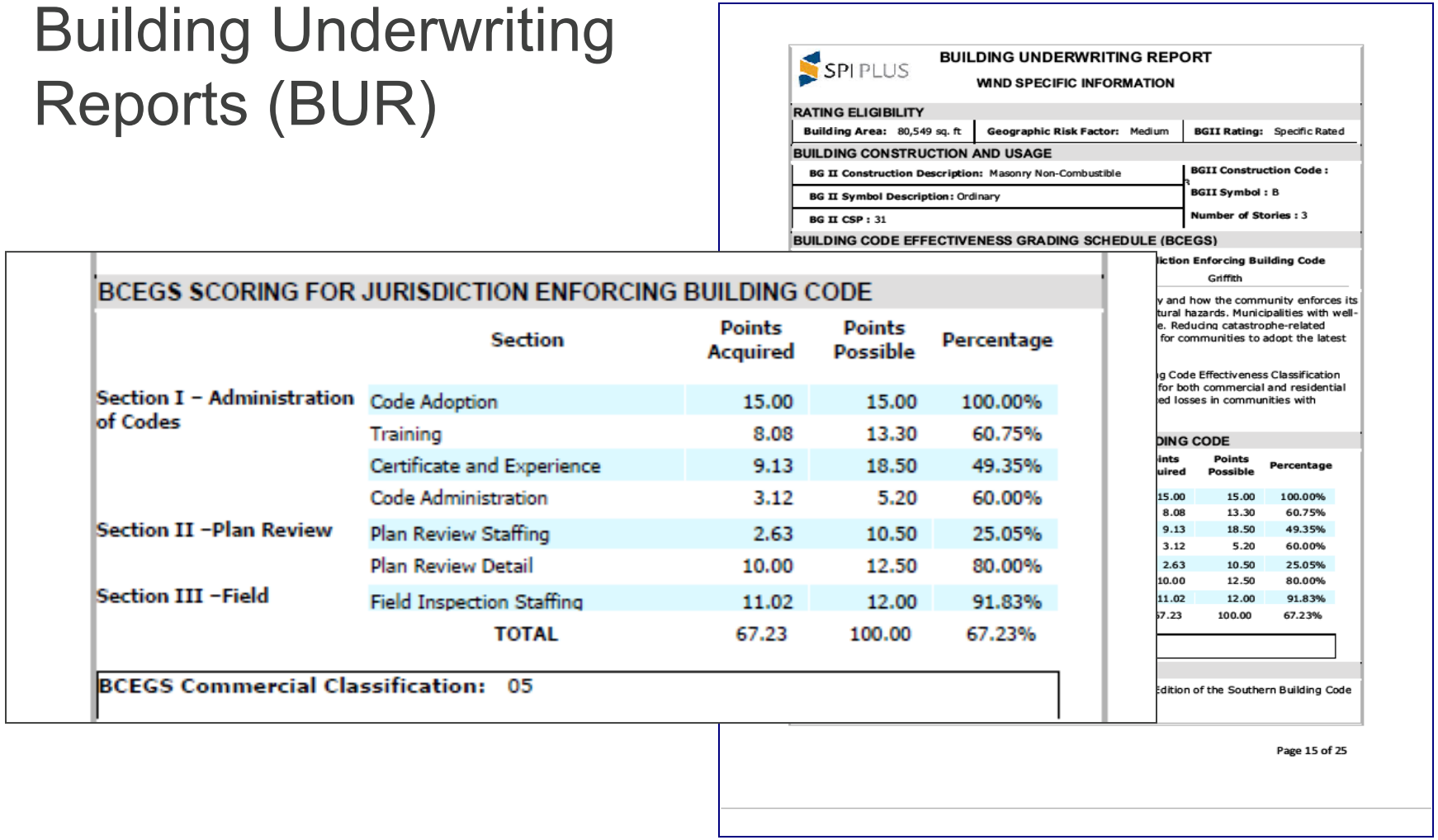
B. Community Grading

1. The Building Code Effectiveness Grading applies to any building that has an original certificate of occupancy dated in the year of the effective date of the community grading, or later. A rating factor has been developed for each community grade.
2. If a community is regraded subsequent to its initial grading, the factor for the revised grade applies to buildings that have an original certificate of occupancy dated the year of the effective date of the revised grading, or later.
3. Where certificates of occupancy are not issued, equivalent documentation acceptable to the company may be used.
4. If, due to an addition or alteration, the original building is changed to comply with the latest building code, the factor for the community grading applicable at the time the reconstruction is completed will apply to such building.
5. The Building Code Effectiveness Grade may apply to Windstorm/Hail or Earthquake, or to both. Specific information is provided in the Community Mitigation Classification Manual. If the grade in the Manual does not apply to one of the causes of loss, the factor should not be applied for that cause of loss.

Nationwide Filed Advisory Ratings PL and CL

BCEGS Data Application – Building Specific Application

Building Underwriting Reports (BUR)



SPI PLUS

BUILDING UNDERWRITING REPORT

WIND SPECIFIC INFORMATION

RATING ELIGIBILITY

Building Area: 80,549 sq. ft | **Geographic Risk Factor:** Medium | **BGII Rating:** Specific Rated

BUILDING CONSTRUCTION AND USAGE

BG II Construction Description: Masonry Non-Combustible

BG II Symbol Description: Ordinary

BG II CSP : 31

BGII Construction Code : a

BGII Symbol : B

Number of Stories : 3

BUILDING CODE EFFECTIVENESS GRADING SCHEDULE (BCEGS)

BCEGS SCORING FOR JURISDICTION ENFORCING BUILDING CODE

	Section	Points Acquired	Points Possible	Percentage
Section I – Administration of Codes	Code Adoption	15.00	15.00	100.00%
	Training	8.08	13.30	60.75%
	Certificate and Experience	9.13	18.50	49.35%
	Code Administration	3.12	5.20	60.00%
Section II –Plan Review	Plan Review Staffing	2.63	10.50	25.05%
	Plan Review Detail	10.00	12.50	80.00%
Section III –Field	Field Inspection Staffing	11.02	12.00	91.83%
	TOTAL	67.23	100.00	67.23%

BCEGS Commercial Classification: 05

Griffith

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Pro-Metrix

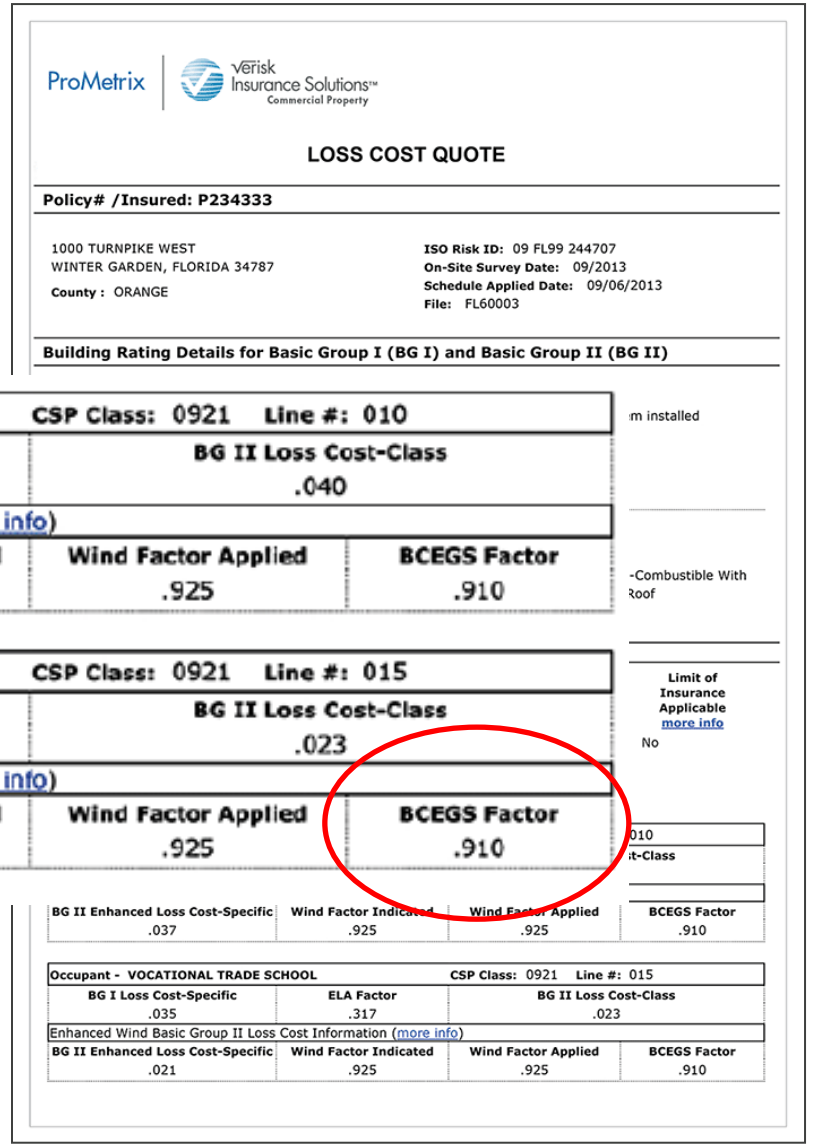
BCEGS in BG II Loss Cost

- *Advisory Loss Cost* is a projection of an insurer's average future loss and loss adjustment expenses
- Delivered for both BG I (fire) and BG II (wind)
- Based on Construction, Occupancy, Protection and Exposure (COPE) information published by Verisk
- Developed using field-verified property information as well as historical premium and claims data
- BCEGS factor can be used by insurers to adjust the BG II loss Cost
- Utilizes ISO's 3 rating schedules – SCOPES, FSRS and BCEGS
- Loss Cost + Expense Load + Profit Load = Rate

Pro-Metrix

BCEGS Data Application

BCEGS in BG II Loss Cost



ProMetrix | Verisk Insurance Solutions™ Commercial Property

LOSS COST QUOTE

Policy# /Insured: P234333

1000 TURNPIKE WEST
WINTER GARDEN, FLORIDA 34787
County : ORANGE

ISO Risk ID: 09 FL99 244707
On-Site Survey Date: 09/2013
Schedule Applied Date: 09/06/2013
File: FL60003

Building Rating Details for Basic Group I (BG I) and Basic Group II (BG II)

Building - SMITHEE VOCATIONAL (2S)		CSP Class: 0921	Line #: 010
BG I Loss Cost-Specific	ELA Factor	BG II Loss Cost-Class	
.023	.317	.040	
Enhanced Wind Basic Group II Loss Cost Information (more info)			
BG II Enhanced Loss Cost-Specific	Wind Factor Indicated	Wind Factor Applied	BCEGS Factor
.037	.925	.925	.910

Occupant - VOCATIONAL TRADE SCHOOL		CSP Class: 0921	Line #: 015
BG I Loss Cost-Specific	ELA Factor	BG II Loss Cost-Class	
.035	.317	.023	
Enhanced Wind Basic Group II Loss Cost Information (more info)			
BG II Enhanced Loss Cost-Specific	Wind Factor Indicated	Wind Factor Applied	BCEGS Factor
.021	.925	.925	.910

m installed

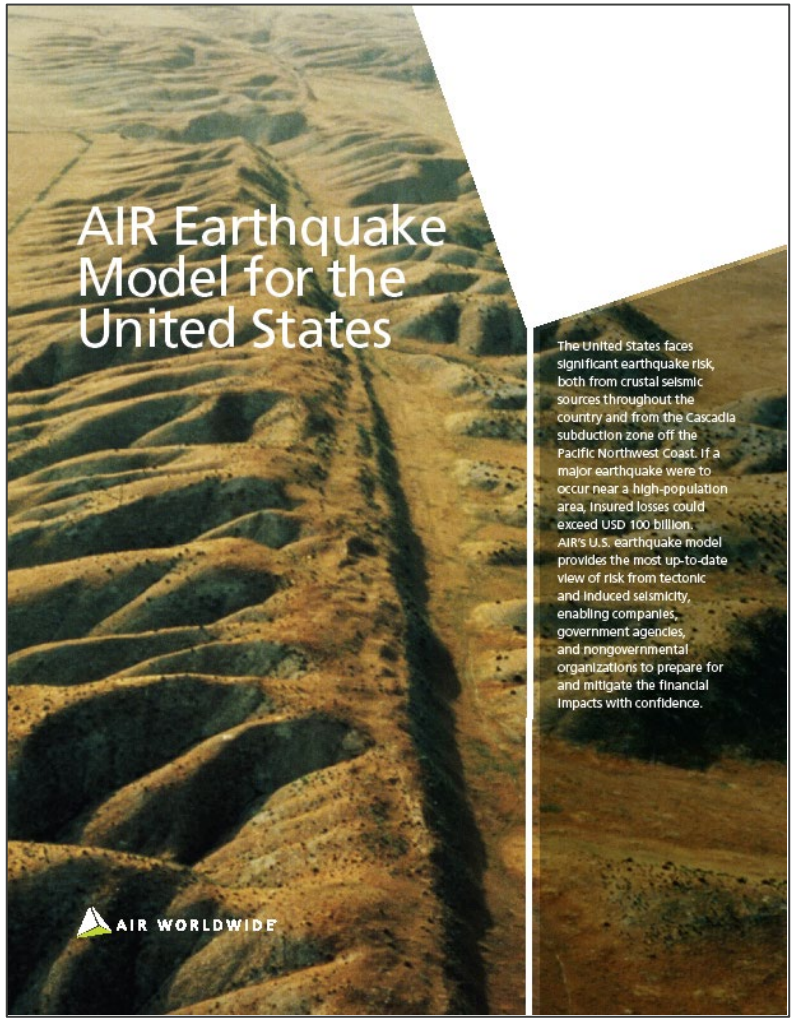
-Combustible With Roof

Limit of Insurance Applicable more info
No

Pro-Metrix

AIR Hazard Modeling – Loss Cost

State-Level BCEGS Classifications are used in the AIR risk models.



AIR Models

In Loss-Cost Modeling – BCEGS is an Indicator of Building Vulnerability

Features of a Building Built to Code

Elements of Good Code Enforcement

Features of a Building Not Built to Code

Poor or No Code Enforcement

AIR Models

BCEGS Direct Relationship to Flood Insurance Discounts

Community Rating System (CRS)

- **Direct discounts to policy-holders in the SFHA for communities that have higher regulatory standards, including building codes.**
- **Points-based system similar to BCEGS and PPC programs.**
- **FEMA / NFIP Program administered by ISO**
- **Credit for having building codes and additional credit for BCEGS score.**
- **Communities can get up to a Class 7 without having building codes adopted.**

(2) BC2 = one of the following. These points are not cumulative.

(a) 10 points, for a BCEGS classification of 5/5, OR

(b) 20 points, for a BCEGS classification of 4/4, OR

(c) 30 points, for a BCEGS classification of 3/3, OR

(d) 40 points, for a BCEGS classification of 2/2, OR

(e) 50 points, for a BCEGS classification of 1/1

b. **Class 6 Prerequisite:** To become a Class 6 or better community, a community must have received a classification of 5/5 or better under the Building Code Effectiveness Grading Schedule.

OMB No. 1660-0022
Expires: December 31, 2016

National Flood Insurance Program
Community Rating System

Coordinator's Manual

FIA-15/2013

FEMA

NFIP CRS Program

BCEGS Direct Relationship to Flood Insurance Discounts

State Profile Summary | CRS Activity Data | Insurance Data

The CRS in New Jersey

APRIL 2022

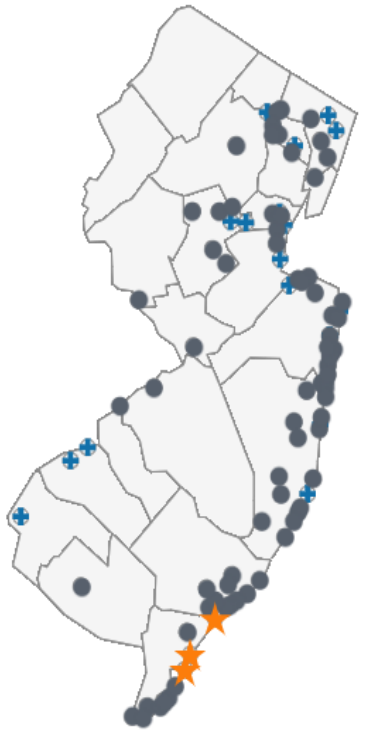
CRS Communities
95

Premiums
$120,946,242

Policies In Force
144,660

CRS Discount
$31,452,510

Class
1 ★
2 ★
3 ★
4 ★
5 ●
6 ●
7 ●
8 ✚
9 ✚



CRS Communities by Class

3	2	2.1% of Total
4	1	1.1% of Total
5	27	28.4% of Total
6	21	22.1% of Total
7	26	27.4% of Total
8	15	15.8% of Total
9	3	3.2% of Total

New Jersey vs. National

BCEGS Usage in FEMA BRIC

BCEGS Classifications are part of the Technical Criteria in BRIC

- 20 Points in Technical Review for Class 1 to 5.
- Increased from 15 points to 20 in Fy21 Cycle
- Based on Subapplicant Classification
  - State can be Subapplicant
  - Multi-Jurisdictional
  - Quasi-Governmental
- ISO provides BCEGS classifications to all communities during survey, information is readily available to the community.
- ISO support for FEMA BRIC is provided via validation effort at the end of the application cycle.
- ISO maintains an information e-mail account for community inquiries

FEMA BRIC
Grant Program

Verisk Resources – isomitigation.com

https://www.isomitigation.com

Contributed Resources – FEMA Building Sciences Branch

https://www.fema.gov/emergency-managers/risk-management/building-science

FEMA

Partner and Supported Resources for Code Officials and Consumers – No Code, No Confidence – FLASH.org

https://inspecttoprotect.org/

Moving Forward - Collaboration

Verisk is supportive of MUNCO and other groups in efforts to communicate the importance of effective code enforcement.

A couple of questions:

How do we communicate this information to state and local decision makers?

- Increased outreach to community leaders (Mayors, County Commissioners)
- Use existing partnerships and organizations (ICC, FLASH, FEMA)

What data can be used to assist the federal, state, and local leaders in understanding risks associated with ineffective building code enforcement?

- Verisk can assist State, county, or community Hazard Mitigation Officers, Emergency Managers and Building Code Officials with basic metrics to better inform decision making and provide targeted outreach to jurisdictions that may benefit from additional resources.

What can we do to provide assistance to your building department?

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