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May 19, 2003

Mark Gervas, City Manager
City of Tillamook
210 Laure Ave
Tillamook,, OR, 97141

RE: Public Protection Classification Results
Tillamook Fire District, Tillamook County, OR

Dear Mr. Gervas:

We wish to thank you and the other community officials for your cooperation during our recent Public Protection Classification (PPC) survey. ISO is the leading supplier of statistical, underwriting, and actuarial information for the property/casualty insurance industry. Most insurers use the PPC classifications for underwriting and calculating premiums for residential, commercial and industrial properties.

ISO has completed its analysis of the structure fire suppression delivery system provided in your community. We are very pleased to report that the resulting classification is a Class 4/8B. This is an improvement from the former classification of Class 5/9. That means your community's fire suppression services are improving in the face of the demands of a changing environment. Congratulations on this recognition of your commitment to serve the needs of your community's property owners and residents.

Enclosed is a summary of the ISO analysis of your fire suppression services. If you would like to know how your community's classification could improve, or if you would like to learn about the potential effect of proposed changes to your fire suppression delivery system, please call us at the phone number listed below.

The PPC program is not intended to analyze all aspects of a comprehensive structure fire suppression delivery system program. It is not for purposes of determining compliance with any state or local law, nor is it for making recommendations about loss prevention or life safety.

If you have any questions about your classification, please let us know.

Sincerely,

Public Protection Department
(800) 930-1677 x 6209 DAT

Encl.

cc: Rick Adams, Fire Chief

REC'D MAY 20

PUBLIC PROTECTION CLASSIFICATION

**IMPROVEMENT STATEMENTS
FOR
TILLAMOOK FD
TILLAMOOK County, OR**

**Prepared by
INSURANCE SERVICES OFFICE, INC.
111 North Canal St., Ste 950, Chicago, IL 60606
312-930-0070 FAX 800-711-6431**

The following statements are based upon the criteria contained in our Fire Suppression Rating Schedule and upon conditions in TILLAMOOK FD, OR during November, 2002. They indicate the performance needed to receive full credit for the specific item in the Schedule, and the quantity you have provided. Partial improvement will result in receiving a partial increase in the credit. These statements relate only to the fire insurance classification of your fire district. They are not for property loss prevention or life safety purposes and no life safety or property loss prevention recommendations are made.

RECEIVING AND HANDLING FIRE ALARMS

Credit For Telephone Service (Item 414).

Credit For Operators (Item 422).

Actual = 1.50%; Maximum = 3.00%

For maximum credit in the Schedule, 4 operators are needed on duty at all times. You have an average of 2 operators on duty.

Credit For Dispatch Circuits (Item 432).

Actual = 3.00%; Maximum = 5.00%

For maximum credit in the Schedule, the primary alarm dispatch circuit should be monitored for integrity in accordance with National Fire Protection Association Standard, 1221.

For maximum credit in the Schedule, the alarm dispatch circuit should have an emergency power supply in accordance with National Fire Protection Association Standard, 1221.

Total credit for Receiving and Handling Fire Alarms (Item 440)

Actual = 6.50%; Maximum = 10.00%

FIRE DEPARTMENT

Credit For Engine Companies (Item 513).

Actual = 9.43%; Maximum = 10.00%

For maximum credit in the Schedule, 3 engine companies are needed in your fire district. These are calculated as follows:

3 for the Basic Fire Flow of 3500 gpm.

You have 3 engine companies in service.

These are calculated as follows:

100 percent for Engine E 11.

83 percent for Engine E/T 12 because of insufficient equipment.

Additionally Engine E/T 12 is lacking: a minimum of 400' of 2 in., 2½ in. or 3 in. hose carried, a minimum of 1200' of 2 in., 2½ in., 3 in. or larger hose carried.

100 percent for Engine E 15.

For maximum credit in the Schedule, at least 2 engine companies should respond for all first alarms for fires in buildings. The credit for engine companies has been reduced by 0 percent due to the lack of adequate response to part of the fire district.

Credit For Reserve Pumpers (Item 523).

Actual = 0.87%; Maximum = 1.00%

For maximum credit in the Schedule, 1 fully-equipped reserve pumper is needed. You have 1 reserve pumper.

This is calculated as follows:

78 percent for Engine E 14 because of insufficient equipment.

Additionally Engine E 14 is lacking: an adequate pump testing program.

Credit For Pump Capacity (Item 532).

Actual = 5.00%; Maximum = 5.00%

Credit For Ladder Service (Item 549).

Actual = 3.54%; Maximum = 5.00%

For maximum credit in the Schedule, 1 ladder company and 1 service company are needed in your fire district.

These are calculated as follows:

1 ladder company and 1 service company due to method of operation.

You have 1 ladder company and 1 service company

These are calculated as follows:

89 percent for Ladder T 31 because of insufficient equipment.

28 percent for Service E/T 21 because of insufficient equipment.

Credit For Reserve Ladder Service (Item 553).

Actual = 0.16%; Maximum = 1.00%

For maximum credit in the Schedule, 1 fully-equipped reserve ladder truck is needed.

You have 1 reserve ladder truck.

This is calculated as follows:

9 percent for Ladder R 48 because of insufficient equipment and insufficient ladder testing and insufficient ladder length.

Credit For Distribution (Item 561).

Actual = 2.31%; Maximum = 4.00%

For maximum credit in the Schedule, all sections of the fire district with hydrant protection should be within 1½ miles of a fully-equipped engine company and 2½ miles of a fully-equipped ladder, service, engine-ladder or engine-service company. The distance to be measured along all-weather roads.

Credit For Company Personnel (Item 571).

Actual = 2.99%; Maximum = 15.00%

An increase in the on-duty company personnel by one person will increase the fire department credit by 0.56 and an increase in the average response by other fire department members by one person will increase the fire department credit by 0.19.

Credit For Training (Item 581).

Actual = 4.77%; Maximum = 9.00%

For maximum credit in the Schedule, the training program should be improved. You received 53 percent credit for the current training program and the use of facilities.

For maximum credit in the Schedule, pre-fire planning inspections of each commercial, industrial, institutional and other similar-type building should be made twice a year by company members. Records of the inspections should include complete and up-to-date notes and sketches.

Total credit for Fire Department (Item 590)

Actual = 29.07%; Maximum = 50.00%

WATER SUPPLY

Credit For the Water Supply (Item 616).

Actual = 24.53%; Maximum = 35.00%

For maximum credit in the Schedule, the needed fire flows should be available at each location in the fire district. Needed fire flows of 2500 gpm and less should be available for 2 hours, 3000 and 3500 gpm for 3 hours and all others for 4 hours. See the attached table for an evaluation of fire flow tests made at representative locations in your fire district.

All AWWA standard hydrants within 1000 feet of a building, measured as hose can be laid by apparatus, are credited; 1000 gpm for hydrants within 300 feet; 670 gpm for 301 to 600 feet; and 250 gpm for 601 to 1000 feet. Credit is reduced when hydrants lack a pumper outlet, and is further reduced when they have only a single 2½-inch outlet.

Credit For Hydrants (Item 621).

Actual = 1.76%; Maximum = 2.00%

For maximum credit in the Schedule, all hydrants should: have a pumper outlet, have a 6-inch or larger branch connection.

Credit For Inspection and Condition of Hydrants (Item 631).

Actual = 2.10%; Maximum = 3.00%

For maximum credit in the Schedule, all hydrants should be inspected twice a year, the inspection should include operation and a test at domestic pressure. Records should be kept of the inspections. Hydrants should be conspicuous, well located for use by a pumper, and in good condition.

Total credit for Water Supply (Item 640)

Actual = 28.39%; Maximum = 40.00%

FIRE FLOW TESTS

TILLAMOOK FD, OR

Tests witnessed on November 20, 2002

Test No.	Needed Fire Flow† gpm	Limited By Supply Works, gpm	Limited by Distribution Mains (flow tests), gpm	Limited By Hydrant Spacing, gpm
1	3500		2500	
2†	6500		2500	4670
2a	2000			
3	2500		2400	
4	3000		2500	
5	1000			
6	2000			
7	3500		2200	
8†	7000		1500	5840
8a	3500		1500	
9†	5500		2300	4840
9a	1000			
10	1750			
11†	5500		2200	3670
11a	2500		2200	
12	3000		1700	
13†	5000	2237	1000	
13a	1000			
14	1000			
15†	9000		1700	2920
15a	2250		1700	1590
16	3500		900	
17	750			
18†	4500		1500	1000
18a	500			
19†	4000	2270	1600	1670
20	1250	767		
21†	7500	2270	2900	
21a	2250		0	

†Needed fire flows exceeding 3500 gpm are not considered in determining the classification of the municipality

INSURANCE SERVICES OFFICE, INC.

CLASSIFICATION DETAILS

Graded Area: TILLAMOOK FD
County: TILLAMOOK State: OR
Date Surveyed: November, 2002 Total Credit: 61.39 Class: 4 / 9 Pop.: 10000

RECEIVING AND HANDLING FIRE ALARMS

This section of the Fire Suppression Rating Schedule reviews the facilities provided for the general public to report fires, and for the operator on duty at the communication center to dispatch fire department companies to the fires.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for Telephone Service (Item 414)		
This item reviews the facilities provided for the public to report fires, including the listing of fire and business numbers in the telephone directory.	2.00	2.00
2. Credit for Operators (Item 422)		
This item reviews the number of operators on-duty at the communication center to handle fire calls.	1.50	3.00
3. Credit for Dispatch Circuits (Item 432)		
This item reviews the dispatch circuit facilities used to transmit alarms to fire department members.	3.00	5.00
4. Total Credit for Receiving and Handling Fire Alarms:	6.50	10.00
Relative Classification for Receiving and Handling Fire Alarms:	4	

CLASSIFICATION DETAILS

Graded Area: TILLAMOOK FD
 County: TILLAMOOK State: OR
 Date Surveyed: November, 2002 Total Credit: 61.39 Class: 4 / 9 Pop.: 10000

FIRE DEPARTMENT

This section of the Fire Suppression Rating Schedule reviews the engine and ladder-service companies, equipment carried, response to fires, training and available fire fighters.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for Engine Companies (Item 513)		
This item reviews the number of engine companies and the hose equipment carried.	9.43	10.00
2. Credit for Reserve Pumpers (Item 523)		
This item reviews the number of reserve pumpers, their pump capacity and the hose equipment carried on each.	0.87	1.00
3. Credit for Pump Capacity (Item 532)		
This item reviews the total available pump capacity.	5.00	5.00
4. Credit for Ladder-Service Companies (Item 549)		
This item reviews the number of ladder and service companies and the equipment carried.	3.54	5.00
5. Credit for Reserve Ladder-Service Companies (Item 553)		
This item reviews the number of reserve ladder and service trucks, and the equipment carried.	0.16	1.00

CLASSIFICATION DETAILS

Graded Area: TILLAMOOK FD
 County: TILLAMOOK State: OR
 Date Surveyed: November, 2002 Total Credit: 61.39 Class: 4 / 9 Pop.: 10000

FIRE DEPARTMENT

(continued)

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
6. Credit for Distribution (Item 561)		
This item reviews the percent of the built-upon area of the city which has an adequately-equipped, responding first-due engine company within 1.5 miles and an adequately-equipped, responding ladder-service company within 2.5 miles.	2.31	4.00
7. Credit for Company Personnel (Item 571)		
This item reviews the average number of equivalent fire fighters and company officers on duty with existing companies.	2.99	15.00+
8. Credit for Training (Item 581)		
This item reviews the training facilities and their use.	4.77	9.00
9. Total Credit for Fire Department:	29.07	50.00+
Relative Classification for Fire Department:	5	

+ This indicates that credit for manning is open-ended, with no maximum credit for this item.

CLASSIFICATION DETAILS

Graded Area: TILLAMOOK FD

County: TILLAMOOK

State: OR

Date Surveyed: November, 2002 Total Credit: 61.39 Class: 4 / 9 Pop.: 10000

WATER SUPPLY

This section of the Fire Suppression Rating Schedule reviews the water supply system that is available for fire suppression in the city.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for the Water System (Item 616)		
This item reviews the supply works, the main capacity and hydrant distribution.	24.53	35.00
2. Credit for Hydrants (Item 621)		
This item reviews the type of hydrants, and method of installation.	1.76	2.00
3. Credit for Inspection and Condition of Hydrants (Item 631)		
This item reviews the frequency of inspections of hydrants and their condition	2.10	3.00
4. Total Credit for Water Supply:	28.39	40.00
Relative Classification for Water Supply:	3	

Grading Sheet For: TILLAMOOK FD, OR
TILLAMOOK County

Public Protection Class: 4 / 9

Surveyed: November, 2002

<u>Feature</u>	<u>Credit Assigned</u>	<u>Maximum Credit</u>
Receiving and Handling Fire Alarms	6.50%	10.00%
Fire Department	29.07%	50.00%
Water Supply	28.39%	40.00%
*Divergence	-2.57%	
	61.39%	100.00%
Total Credit		

The Public Protection Class is based on the total percentage credit as follows:

<u>Class</u>	<u>%</u>
1	90.00 or more
2	80.00 to 89.99
3	70.00 to 79.99
4	60.00 to 69.99
5	50.00 to 59.99
6	40.00 to 49.99
7	30.00 to 39.99
8	20.00 to 29.99
9	10.00 to 19.99
10	0 to 9.99

*Divergence is a reduction in credit to reflect a difference in the relative credits for Fire Department and Water Supply.

The above classification has been developed for use in property insurance premium calculations.

INSURANCE SERVICES OFFICE, INC.
HYDRANT FLOW DATA SUMMARY

City TILLAMOOK PUBLIC WORKS State OR County TILLAMOOK

Witnessed by Insurance Services Office, Inc.

Date November 20, 2002

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW - GPM		PRESSURE		FLOW - AT 20 PSI		REMARKS***
				INDIVIDUAL HYDRANTS	TOTAL	STATIC PSI	RESID. PSI	NEEDED **	AVAIL.	
1	Comm	Ivy & 3rd	Tillamook Water	1090	1090	87	73	3500	2500	
2	Comm	Hwy 101 @ Safeway	Tillamook Water	1090	1090	92	77	6500	2500	
2a	Comm	Hwy 101 @ Safeway	Tillamook Water	1090	1090	92	77	2000	2500	
3	Comm	3rd & Cedar	Tillamook Water	1050	1050	87	72	2500	2400	
4	Comm	8th & Stillwell	Tillamook Water	1060	1060	89	75	3000	2500	
5	Res	9th & Cedar	Tillamook Water	920	920	90	64	1000	1600	
6	Comm	11th & Laurel	Tillamook Water	1060	1060	90	76	2000	2500	
7	Comm	5th & Miller	Tillamook Water	1060	1060	88	70	3500	2200	
8	Comm	12th E of Miller	Tillamook Water	890	890	85	59	7000	1500	
8a	Comm	12th E of Miller	Tillamook Water	890	890	85	59	3500	1500	
9	Comm	Alder & Spruce	Tillamook Water	1030	1030	80	66	5500	2300	
9a	Res	Alder & Spruce	Tillamook Water	1030	1030	80	66	1000	2300	
10	Comm	Maple & Williams	Tillamook Water	1060	1060	83	70	1750	2500	
11	Comm	Hwy 101 @ Wilson River Loop	Tillamook Water	1060	1060	90	72	5500	2200	
11a	Comm	Hwy 101 @ Wilson River Loop	Tillamook Water	1060	1060	90	72	2500	2200	
12	Comm	1st & Cedar	Tillamook Water	1060	1060	84	57	3000	1700	

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR PROPERTY INSURANCE PREMIUM CALCULATIONS ONLY AND ARE NOT INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION. THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

*Comm = Commercial; Res = Residential.

**Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.

INSURANCE SERVICES OFFICE, INC.
HYDRANT FLOW DATA SUMMARY

City TILLAMOOK PUBLIC WORKS State OR Witnessed by Insurance Services Office, Inc. Date November 20, 2002
 County TILLAMOOK

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW - GPM <small>Q=(29.83(Cd²p^{0.5}))</small>		PRESSURE PSI		FLOW - AT 20 PSI <small>Q_s=Q_r(h_r^{0.5}/h_s^{0.5})</small>		REMARKS***	
				INDIVIDUAL HYDRANTS	TOTAL	STATIC	RESID.	NEEDED **	AVAIL.		
13	Comm	Fairview Road & Wilson River Rd	Fairview Water District	860	860	128	48	5000	1000		
13a	Res	Fairview Road & Wilson River Rd	Fairview Water District	860	860	128	48	1000	1000		
14	Res	Hughey Land & Bluebird Ln	Fairview Water District	920	920	100	30	1000	1000		
15	Comm	Hanger Rd & 4th	Tillamook Water	890	890	70	55	9000	1700		
15a	Comm	Hanger Rd & 4th	Tillamook Water	890	890	70	55	2250	1700		
16	Comm	Officers Row Loop	Tillamook Water	670	670	70	42	3500	900		
17	Res	Hwy 101 & Munson Creek	Tillamook Water	750	750	84	50	750	1100		
18	Comm	So Prairie Rd @ School	Tillamook Water	920	920	84	58	4500	1500		
18a	Res	So Prairie Rd @ School	Tillamook Water	920	920	84	58	500	1500		
19	Comm	Latimer Rd @ Railroad	Bay City	980	980	85	65	4000	1900		
20	Res	1st & D	Cape Meares	930	930	78	56	1250	1600		
21	Comm	Tillamook Co Creamery Association	Bay City	1300	1300	130	105	7500	2900		
21a	Comm	Tillamook Co Creamery Association	Bay City	1300	1300	130	105	2250	2900		
				†limited by available hydrants.							

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR PROPERTY INSURANCE PREMIUM CALCULATIONS ONLY AND ARE NOT INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION. THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

*Comm = Commercial; Res = Residential.

**Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.