

# LOS ANGELES FIRE DEPARTMENT



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January 5, 2015

BOARD OF FIRE COMMISSIONERS  
FILE NO. 15-001

TO: Board of Fire Commissioners

FROM: Ralph M. Terrazas, Fire Chief *RMT*

SUBJECT: FIRE PREVENTION BUREAU OVERVIEW AND ACTION PLAN

|               |                                   |   |                                    |
|---------------|-----------------------------------|---|------------------------------------|
| FINAL ACTION: | <input type="checkbox"/> Approved | <input type="checkbox"/> Approved w/Corrections | <input type="checkbox"/> Withdrawn |
|               | <input type="checkbox"/> Denied   | <input type="checkbox"/> Received & Filed       | <input type="checkbox"/> Other     |

## SUMMARY

As directed by the Board of Fire Commissioners, the Fire Department is providing an overview of the Fire Prevention Bureau and an Action Plan to enhance the current business model to improve performance and leverage technology while developing a performance management system.

## RECOMMENDATION

That the Board:  
Receive and file this report.

## DISCUSSION

The vision of the Fire Prevention Bureau is to be inspection professionals and work as a cohesive team that is dedicated to ensuring world class service to the community and Firefighters we serve.

The mission of the Fire Prevention Bureau is to provide all those that we come in contact with unparalleled quality and service, while being metric driven, technologically sophisticated and community focused.

We believe the best way to achieve success is to ensure our personnel, both sworn and civilian, are supported by leadership that embraces constant improvement, is open to change, and evolves as technology and our City evolves.

As a bureau we interact with the public and our colleagues within the City family in a unique way as compared to other elements of the Fire Department, as such, we must remain open minded and dedicated to bringing pragmatic solutions to what can often be complex challenges.

Above all, we are the preeminent experts within the City government when it comes to public and firefighter safety, providing outstanding customer service to our residents and businesses.

The Fire Prevention Bureau has established four primary goals all of which focus on effectively and efficiently serving internal and external customers. These fire prevention goals will ultimately coincide with our strategic plan.

1. Develop the Fire Prevention Bureau Action Plan with effective service delivery in the areas of public education, timely inspections and re-inspections, mandated inspections and risk based inspections. Expand our partnerships with all City departments and stakeholder organizations (i.e. the Central City Association, BOMA, Department of Building and Safety, and Housing Department).
2. Reorganize the Fire Prevention Bureau into a relevant and contemporary organization that is metric driven and values community risk reduction. This will require changing our current business model and evaluating how the Fire Prevention Bureau can enhance the new Four Bureau model.
3. Provide effective service delivery to new construction projects in order to enhance economic development. Improve plan check services by increasing staff levels and improving communications with the Department of Building and Safety to develop a partnership plan which enhances customer service.
4. Leverage technology to track fire protection system testing, hydrant testing, false alarms, and brush inspections. Additionally, evaluate a Self-Inspection Program for field work load reduction.

There are currently 90 Inspector I authorities within the Fire Prevention Bureau with seven vacancies. The Inspector I's are the enforcement Inspectors whose main purpose is to conduct inspections and correct conditions that pose a threat to life and property based on adopted code requirements, and to motivate owners and building managers to prevent future hazards by educating them on the hazards and proper methods of prevention.

Over the last several years during the City's recessionary period, 20 Inspector positions and 11 civilian positions were eliminated from the Fire Prevention Bureau; these reductions were budget initiated not metrics driven. This fiscal year we have averaged seven sworn and two civilian vacancies. Inspection cycles were adjusted from 12 months intervals to 18 months in the Industrial Commercial Section, but very little data validated that change. A review of the first 18 month cycle showed less inspections being conducted on a monthly basis and only one third of the notice of violations written received a follow up inspection.

Los Angeles residents depend on their Fire Department to not only respond to fires, but to prevent them. The Fire Prevention Bureau is responsible for inspecting facilities that pose the greatest hazards to residents and firefighters. In the review of our recently completed 18 month inspection cycle, we found the Fire Department had not followed up on numerous documented fire code violations. In addition, the Fire Department's use of data to track fire prevention activities and to prioritize inspections can be improved.

The Fire Department also needs to work with the Office of Finance to improve collection efforts for Operational Fire Permits. We have begun working together to develop written policies and procedures that outline the division of responsibility for accounts between the Fire Department and Office of Finance. Some estimates indicate that with proper tracking and follow up; an additional three million dollars of revenue can be generated.

In order to achieve these and other improvements, the following Action Plan has been developed:

| Fire Prevention Bureau Action Plan            |                              |
|---|------------------------------|
| Action Item                                   | Completion Timeframe         |
| Redesign Inspector Performance Evaluation     | 4 <sup>th</sup> Quarter 2014 |
| Embrace Innovation Center Status              | 4 <sup>th</sup> Quarter 2014 |
| Publish FPB Strategic Plan                    | 1 <sup>st</sup> Quarter 2015 |
| Streamline Fire Permit Process and Collection | 1 <sup>st</sup> Quarter 2015 |
| Leverage Technology – Inter Agency Sharing    | 1 <sup>st</sup> Quarter 2015 |
| Establish Risk Base Inspection Criteria       | 1 <sup>st</sup> Quarter 2015 |
| Evaluate Inspection Frequency                 | 1 <sup>st</sup> Quarter 2015 |
| Analyze Inspector Workload – 5 Step Process   | 1 <sup>st</sup> Quarter 2015 |
| Implement Supervisor Accountability           | 2 <sup>nd</sup> Quarter 2015 |
| Evaluate developing a Special Events Unit     | 2 <sup>nd</sup> Quarter 2015 |
| Develop Community Risk Reduction Program      | 2 <sup>nd</sup> Quarter 2015 |
| Establish Performance Management              | 2 <sup>nd</sup> Quarter 2015 |
| Right Size Inspection Districts               | 3 <sup>rd</sup> Quarter 2015 |
| Develop Alternative Staffing Proposal         | 3 <sup>rd</sup> Quarter 2015 |
| Reorganize FPB into new business model        | 3 <sup>rd</sup> Quarter 2015 |
| Automate Chief Reg 4 Requirements City-wide   | 3 <sup>rd</sup> Quarter 2015 |
| Establish an Apartment Inspection Fee         | 3 <sup>rd</sup> Quarter 2015 |
| Implement Self Inspection Program             | 4 <sup>th</sup> Quarter 2015 |
| Implement False Alarm Program                 | 4 <sup>th</sup> Quarter 2015 |
| Enhance FPB Inspection System                 | 4 <sup>th</sup> Quarter 2015 |
| Replace Field Fire Prevention (FPOS System)   | 4 <sup>th</sup> Quarter 2015 |

#### Expectations and Accountability of Inspectors

The expectation is that all required inspections are conducted annually on their required cycle date and re-inspections are conducted in accordance with current policy.

Currently we do not meet those criteria on a regular basis. Lack of inspection or negligent inspection practices can result in casualties and fire loss. When a fire occurs and inspection practices are found to be negligent, the City, Fire Department, Fire Marshal, and Inspector can be held accountable.

Utilizing data and established inspection criteria, the goal is to determine how many inspections an Inspector can conduct per day, per week, per month, and per year. In our current deployment model this number fluctuates from unit to unit and often times fluctuates within units.

To determine this, the Fire Prevention Bureau has embarked on utilizing the 165 average work days per Inspector to calculate the number of potential inspections for a year.

Currently we have outlined five steps for analyzing Inspector work load which include:

- (1) Identifying the duties, responsibilities of each type of inspection.
- (2) Determining the total time demand per inspection.
- (3) Determining the required personnel hours.
- (4) Calculating the average personnel availability.
- (5) Calculating the total personnel required.

This method of personnel analysis combines identified duties and responsibilities and our pre-determined metrics from the Fire Operational Permit, as well as historic data. We look at the low end daily estimate of one inspection per day, and the high end estimate of five inspections per day to provide a range for potential inspections that should be performed by the individual Inspector. Taken into consideration are personnel availability and time adjustments such as administrative needs, vacation, sick leave, IOD, and training to identify the number of personnel positions needed. Additionally, we are discussing inspection activities with other fire departments in the region to see if a median number can be agreed upon for a similar building that would be acceptable to the Southern California Fire Prevention Officers.

Anticipated completion of the statistical time analysis study to evaluate inspection time and resources is required the second quarter of 2015. Based on the time analysis, Inspectors will be allocated to inspect occupancies as deemed necessary by their immediate supervisor.

As an example, a statistical time analysis was conducted in our Underground Tank Enforcement Unit based on 2013 data. Enforcement inspections are performed by ICC Certified Fire Prevention Inspectors. The number of Inspectors required to enforce the program is based on time spent on inspections and administrative duties. (Table A)

| Table A                                   |         |
|---|---------|
| Total Staff Hours/Year                    | 10,219  |
| Total Hours/Year per Staff                | 1,684   |
| Total Number of Staff                     | 6       |
| Total Number of UST Inspections           | 1,322   |
| Total Number of Inspections Per Inspector | 220     |
| Average UST Inspection Time               | 5 hours |

The frequency in which occupancies are inspected is determined by State and local mandates. Historically, life-risk associated with an occupancy determines the priority of the inspection, and how Inspectors are prepared and trained to obtain compliance, fines, and penalties associated with non-compliance. Under the direction of the Fire Chief, the Fire Prevention Bureau has embarked on changing our current business model, looking at State mandates and risk based inspections to optimize our resources.

Below Table B outlines our current inspection responsibilities and their frequency. We are in the process of validating each inspection responsibility and measuring each variable of the inspection process to “right size” inspection responsibilities so they are more balanced.

The validation should be completed by the end of the third quarter of 2015.

| Type of Inspection         | Yearly | 18 Month | State Mandate | Local Mandate | Tri Annual | Two Years |
|----------------------------|--------|----------|---------------|---------------|------------|-----------|
| High-rise                  | Yes    |          | Yes           | Yes           |            |           |
| Schools                    | Yes    |          | Yes           | Yes           |            |           |
| Churches                   | Yes    |          | No            | No            |            |           |
| Institutions               | Yes    |          | No            | Yes           |            |           |
| Jails                      | Yes    |          | Yes           | No            |            | Yes       |
| Public Assemblage          | Yes    |          | No            | Yes           |            |           |
| Industrial Commercial      | No     | Yes      | No            | No            | No         |           |
| Brush                      | Yes    |          | No            | Yes           |            |           |
| Hazardous Materials        | No     |          | Yes           | No            | Yes        |           |
| Underground Tanks          | Yes    |          | Yes           | No            |            |           |
| Apartments 3 or more units | Yes    |          | Yes           | No            |            |           |
| Day Care                   | Yes    |          | No            | Yes           |            |           |

Note: Apartment buildings have joint inspection responsibilities by the Emergency Services Bureau and Fire Prevention Bureau.

#### Risk Based Inspections

Looking at other jurisdictions across the country, fire risk estimates can be used to prioritize occupancy inspections.

There are many different approaches to evaluating the associated fire risk, and assumptions must be made as to what variables increase or decrease the chance of fire or the life-hazard that can take place when a fire occurs. In the case of public assemblage inspection of a night club, a variable might include occupant capacity; a very packed night club, for example, has the potential for multiple casualties therefore is classified as a high risk inspection. A movie theater with fixed seating and ample exiting could be categorized as a low risk inspection. However, by today’s Fire Department inspection guidelines, both occupancies are inspected on an annual basis.

As we develop risk based inspection criteria, the Fire Prevention Bureau and Emergency Services Bureau in partnership need to prioritize inspections on State mandated Residential 1-Unit (Hotels and Motels) and Residential 2-Unit (Apartments and Condominiums) occupancies and follow-up on violations in multi-family residences. Incorporating these inspections into the Fire Prevention Bureau’s risk based inspections will take coordination and cooperation between the newly formed Four Bureaus of the Fire Department. There should be a sense of Fire Department accountability for prevention efforts rather than divisions between the Fire Prevention Bureau and

Emergency Services Bureau. This might include clear lines of reporting from Emergency Service Bureau to the Fire Marshal office. It might also include periodic meetings between the Fire Prevention Bureau and Emergency Services Bureau staff to discuss concerns specific to multi-family residences and a shared approach on how to address them.

Although interior inspections of residences do not occur, field resources conduct State mandated, basic inspections of the exterior of apartment buildings, checking for things such as access to exits and fire extinguishers. Such inspections do not involve entrance into individual units and therefore, do not test for working smoke alarms in units. Here in the City of Los Angeles, the Housing Department inspects the interior of each unit on a three year cycle. Their inspection does include the testing of smoke alarms.

Inter-agency cooperation discussions have begun to discuss data sharing and leveraging technology with both the Housing Department and the Department of Building and Safety. Sharing data will provide the optimal public safety inspections for our residents, as the shared information could assist in identifying high risk occupancies.

Since interior inspections are not an option in the way that they are for other occupancies; the Fire Department should focus on other activities that can reduce fire risk such as following up on outstanding violations from exterior inspections and developing a public education program. The Fire Department has implemented a Disaster Awareness Course (DAC) currently managed by Fire Prevention Bureau staff and the Smoke Alarm Field Education (S.A.F.E.) program managed by the Emergency Services Bureau. A more robust model could be implemented with the reinstatement of a Safety Education Program managed within the Fire Prevention Bureau. Additionally, public private partnerships such as the one that currently exist with MySafeLA can be expanded.

#### Performance Management

The Fire Prevention Bureau has been in discussion with McKinsey and Company to develop a four step performance management system which includes strategy and design, target setting and scorecards, performance dialogues, and consequence management. In the area of code compliance, we are moving towards measuring on a consistent basis:

1. Percentage of code violations noted that were corrected.
2. Percentage of fires that were preventable or could have been mitigated by inspection or by the educational and motivational elements of inspection.
3. Percentage of fires where there were pending, uncorrected violations present at the time of the fire.

Additionally, we have begun evaluating our Inspectors based on their performance by scheduling field checks to assess the quality of inspections performed.

## Solutions and Options for Improving Number of Inspections Completed

### Technology

The Fire Prevention Bureau convened several workgroups to look at various facets of the Inspector's duties and responsibilities. Solutions provided included:

- Advanced inspection computer program to create a menu-driven inspection protocol that would operate with checklist.
- Route inspections for efficiency in assignments.
- Develop work scheduling programs that could organize assignments each day based on which inspections were due and who was on duty.
- Link to the network to upload and download files from the Inspector's car and provide a printer in the car to generate forms to be left at the inspected property.

It is important to make sure that this technology provides a real enhancement of an Inspector's work. As we evaluate technology, one option that currently exists in the City is individual files for each property, geo-coded by address. Geo-coding allows the inspection files to be easily linked to other local government databases such as Los Angeles Tax Database (LATAX), the Housing Department, and the Department of Building and Safety organized by assessor's parcel number (APN) of the property or address. Linking data together including our computer-aided dispatch systems, fire incident databases, and tax rolls, we will be able to find contact information, and pending violations with due dates which will identify risk based inspections.

To ensure that all occupancies which require an inspection get inspected, the National Fire Protection Association (NFPA) recommends using geographic areas of responsibility to assign inspections. By assigning Inspectors block by block or street by street, there are fewer problems with missed coverage. We are currently evaluating this concept to equalize work load, reduce travel time, and improve efficiency. By clustering inspections, an Inspector can become familiar with numerous types of properties. This model may align appropriately with the newly implemented Four Bureau model.

### Self-Inspection Program

Some departments have instituted self-inspection programs to both meet the suggested goal of annually inspecting all occupancies and as a method of educating business owners about hazards and the proper methods of prevention. The Self-Inspection Program requires that business owners be responsible for checking their own occupancies for fire hazards and code compliance. The Fire Department is evaluating this option for our field based tri-annual inspections. This equates to what is traditionally known as "Mom and Pop" inspections.

Looking at Battalion 11 data, a Self-Inspection Program would eliminate close to 2300 inspections per year. This program could serve as a work load reduction for field resources and keep them readily available for emergency responses and not impact

response times. A Self-Inspection Program can be implemented in the fourth quarter of 2015 in Battalion 11 with limited funding, training and process development.

Changing Our Strategy

Supervisor Accountability

Currently Inspectors manage their own districts and supervisors have virtually little oversight in scheduling inspections, yet the supervisor is held accountable when the specific unit is not complete. Changing our model requiring supervisors to manage inspection scheduling will bring more accountability and supervisorial oversight. The Housing Department and the Department of Building and Safety moved to this model and report a 20-30% increase in productivity.

The Department of Building & Safety has over 400 Inspectors reach their goal of making 95% of called inspections within 24 hours of an inspection request. The LADBS currently reaches their goals mainly because they aggressively pursue filling of vacancies as soon as practical and have a continued on-going training program.

Each afternoon, inspection responsibilities are reviewed by Supervising Inspectors for the following day and assigned accordingly. This process evens out the work load among Inspectors. The above step is done by Supervising Inspectors with pre-approved absences taken into account. The following morning, before Inspectors go out, work loads can be adjusted due to staffing shortages such as last minute leaves. Supervisors can request assistance from other “regions” to accommodate an inspection request. Department of Building & Safety Inspectors have both called inspections and follow-up/progress inspections. To accommodate all calls, Inspectors may forgo progress/follow-up inspections to handle initial request for inspections on a short-term basis.

Alternative Staffing Options

The Fire Department needs to develop and implement a comprehensive and aggressive, time-limited modified duty program assigning light-duty Firefighters to assist the Fire Prevention Bureau with its fire prevention efforts as well as public education campaigns.

| Current NIOD/IOD Comparison to LADBS and Field Resources |     |    |       |       |     |
|--|-----|----|-------|-------|-----|
|  | FPB |    | LADBS | Field |     |
| Inspectors   | 129 |    | 400   | 0     |     |
| IOD  | 3   |    | 7     | 58    |     |
| Avg. CTO   | 23% | 29 | 20%   | 80    | 28% |

In addition to the potential use of light-duty Firefighters, the Fire Department should consider whether fire station staff could assist in more or different ways than they already do with inspections and prevention activities. As an example, during the annual brush sweep, Firefighters are detailed to the Fire Prevention Bureau to assist with the inspection of over 140,000 parcels. Utilizing technology to inspect parcels based on risk could be a way to minimize impacting field resources.



Additionally, through the use of V-Hours, members on the current Inspector promotional list could be detailed to the Fire Prevention Bureau for training and inspection support staff prior to their promotion, this would allow them to hit the ground running their first day on the job.

The PA Consulting Report recommended evaluating the use of civilian Inspectors versus sworn Inspectors. The Fire Department has embraced converting sworn plan check staff to civilian Fire Protection Engineers. Additionally, the Fire Department needs to evaluate the value of a civilian Inspector for our Underground Storage Tank inspection responsibilities. Other jurisdictions use Environmental Inspectors or Fire Protection Engineers to conduct this work. Replacing the current sworn Inspectors with civilian Inspectors would allow for the sworn Inspectors to be reallocated into state mandated inspections responsibilities.

#### Community Risk Reduction

The Fire Department currently has fire safety educational materials on topics such as conducting practice fire drills and how smoke alarms save lives. While these materials are helpful, the Fire Department does not currently have a formal public education program that involves meeting directly with the community and targeting risks based on historical data.

The International City/County Management Association (ICMA) recommends that a fire department identify the needs in its community and then target public education accordingly.

A fire department needs to analyze its data about the community's fire or injury problem and then target audiences most at risk for fire loss. Taking this approach usually leads to the conclusion that there are several target audiences besides school children. National data published by the NFPA and U.S. Fire Administration (USFA) suggest that other groups at high risk for fire loss are elderly people, young children, ethnic minorities, and low-income residents. In fact, the strongest correlating factor for fire loss is usually the income level of the victims.

Public education programs are most effective when they are developed specifically for each target audience or target message. And for maximum effect, they are often combined with other prevention strategies. Portland, Oregon, for example, has a combination program designed specifically for elderly (mobility-impaired) people that couples fire safety education with low-cost program to prevent falls.

Door-to-door visits in high-risk areas are providing documented results in the United Kingdom. Many fire departments (like that in Dallas, Texas) are finding value in having Firefighters be more actively involved with their communities. The solid educational value of station-based prevention efforts is substantiated by greatly reduced fire incident rates (by 40 percent in some areas of the United Kingdom).

## **CONCLUSION**

Inspectors agree that annual inspections of all public properties would reduce fire losses within the community. With fire department growth not being matched by population growth, especially in fire prevention, and with lack of financial support in budgets, many fire departments are unable to achieve inspections of all or nearly all public buildings within one year.

Inspections that occur more frequently would yield a safer community. Documenting the number of hazards noted and abated through the inspection process is a good way to track hazards, and by comparing this to the fire rates, effectiveness can be measured. This would provide some evidence that risk levels are being reduced.

As an innovation center, the members of the Fire Prevention Bureau are encouraged to test new procedures to make City government more effective and efficient and are empowered to innovate to find better ways to do their work.

In order to achieve these and other improvements, the Action Plan is the road map to a more progressive and prosperous Fire Prevention Bureau.

Board report prepared by Deputy Chief John N. Vidovich, Bureau of Fire Prevention and Public Safety.