Dear Resident:

2019 Floodplain Management Plan (FMP) Annual Implementation Progress Report

The City of Los Angeles joined the National Flood Insurance Program (NFIP) in 1980, which made federally-backed flood insurance available to all City residents. The NFIP/Community Rating System (CRS) was implemented by the Federal Emergency Management Agency (FEMA) in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP requirements. Flood insurance premium rates are adjusted to reflect the reduced flood risk.

Since October 2005, the City has received a class 7 rating under CRS, which means the residents within FEMA-designated Special Flood Hazard Area(s) (SFHA) receive a 15% flood insurance premium discount and others in the City outside the SFHA receive a 5% discount.

In 2015, the City of Los Angeles adopted a Comprehensive Floodplain Management Plan pursuant to the CRS activity 510 planning requirements that is the cornerstone for guiding the City’s floodplain management programs. To maintain compliance with CRS activity 510 program requirements, this plan is currently undergoing a 5-year update to assure that the plan has the vision necessary to direct the City’s floodplain management program for the next 5-years, taking into account current and future flood conditions expected for that time frame. This plan update will be an iterative process conducted with full citizen and stakeholder involvement. This plan update process was initiated in July of 2019 and is targeted for completion in the Spring of 2020. For more information on the plan, the process and how you can be involved, please visit: https://pw.lacounty.gov/wmnd/NFIP/FMP2020/

Average Yearly Rainfall

According to the latest statistics from National Oceanic and Atmospheric Administration’s (NOAA) National Climatic Data Center, precipitation averaged across the Continental United States in 2018 was 37.86 inches, 7.90 inches above the 20th century average. This made 2018 the 3rd wettest year on record for nation. Since 1985, precipitation across the Continental United States has increased at an average rate of 1.81 inch per century.

Per County of Los Angeles precipitation records for the 2018-19 water year (from October 1, 2018 to September 30, 2019), the Downtown Los Angeles (USC) gauge ended the water year with 16.24 inches of rain. (This is about 113.81% above the average rainfall of 14.27 inches.)

Recent Activities

Annual NFIP Newsletters for FY19-20

With October 1st marking the beginning of rainy season, Bureau of Engineering (BOE) Stormwater staff are working on preparing the annual mailers to be sent out to the LA residents informing them about the latest and greatest of the national Flood Insurance Program (NFIP) and how to get prepared for the upcoming rain storms especially for those who live in the flood-prone area of LA. Prior to mid-December, the Street Improvement and Stormwater Division (SSID) mailed out three (3) different mailers including NFIP postcard, Repetitive Loss Property (RLP) Newsletter, and Annual NFIP Newsletter in preparation for the upcoming winter storms. Please keep a look out for these mail items in your mail box.

National Flood Insurance Program’s (NFIP) Reinsurance Program for 2019

FEMA received the authority to secure reinsurance from the private markets through the Biggert-Waters Flood Insurance Reform Act of 2012 and the Homeowners Flood Insurance Affordability Act of 2014. Through the Reinsurance Program, NFIP gains financial stability and secures for itself an improved robust position to cover potential claims related to catastrophic flood losses.

Under the 2019 Reinsurance Agreement, FEMA has transferred $1.32 billion of the NFIP's flood risk for the 2019 hurricane season to the private sector through 28 reinsurance companies. By engaging both the traditional reinsurance markets and the capital markets, the NFIP can reduce risk transfer costs, access greater market capacity, and further diversify its risk transfer partners.

For more information about the Reinsurance Program, visit: https://www.fema.gov/nfip-reinsurance-program

Ballona Creek Physical Map Revision

The Ballona Creek Physical Map Revision has been finalized and the revised Flood Insurance Rate Map Panel is now effective as December 21, 2018. If you would like to see how this Flood Map Revision has impacted your property please use the following link: https://eng.facity.org/ballona

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The NFIP is a federal program enabling property owners in participating communities to purchase protection against property losses due to flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents.

Flood insurance covers direct losses caused by surface flooding, including a river flowing over its banks, a lake or ocean storm (including tsunami and seiches), and local flooding.

**There is a 30 day waiting period before the policy becomes effective.**

There are two types of coverage: Structural and Contents. Structural coverage is for the walls, floors, insulation, furnace and other items permanently attached to the structure. Contents coverage, purchased separately, requires the contents to be in an insurable structure.

**Insurance Premium Discount**

Due to the City of Los Angeles’ active participation in the NFIP and CRS, new and renewed flood insurance policies in SFHA continue to receive a 15% premium discount. Through the NFIP, flood insurance is available to all City residents who wish to purchase flood insurance regardless of their flood risk or flood history. Properties located outside the SFHA receive a 5% premium discount.

Insurance agents should use the latest Flood Insurance Manual in order to apply the discount automatically. This manual is available on the Web at: [https://www.fema.gov/flood-insurance-manual](https://www.fema.gov/flood-insurance-manual)

**When disaster strikes, every minute counts**

Every September, FEMA promotes the National Preparedness Month. FEMA believes that preparation saves lives and prevents loss. Taking the time to prepare yourself can make a life changing difference. What do you need? Put together an emergency kit with life essentials such as water, food, and medication for at least three days. Don’t forget your pet’s needs and any important documents you may need in the event of a disaster. Where are going? Designate multiple emergency meet-up destinations for you and your family in the wake of a disaster. Can we talk? Phone service may be unavailable during a disaster. Create a family emergency communication plan using this link: [https://go.usa.gov/xPcCF](https://go.usa.gov/xPcCF). Who do you know? It is good to get to know your neighbors so you can help one another during a disaster. Keep in mind that the elderly and disabled in your neighborhood may need assistance during evacuation. For more information on how to be prepared during a disaster event, please go to: [https://www.fema.gov/news-release/2019/09/10/when-disaster-strikes-every-minute-counts](https://www.fema.gov/news-release/2019/09/10/when-disaster-strikes-every-minute-counts)

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**Why Flood Insurance is better than Disaster Assistance?**

**Flood Insurance**

- You are in control. Flood insurance claims are paid even if a disaster is not declared by the President.
- More than 25 percent of all claims paid by the NFIP are outside of an SFHA.
- There is no payback requirement.
- Flood insurance policies are continuous, and are not non-renewed or cancelled for repeat losses.
- Flood insurance reimburses you for all covered losses up to $250,000 for homeowners and $500,000 for businesses.
- The average flood insurance policy costs about $650 per year.
- For a $100,000 flood insurance coverage, your premium payment is about $400 a year ($33 a month).

**Disaster Assistance**

- Most forms of federal disaster assistance require a presidential declaration.
- Federal disaster assistance declarations are awarded in less than 50% of flooding incidents.
- The most typical form of disaster assistance is a loan that must be repaid with interest.
- The duration of a Small Business Administration (SBA) disaster home loan is approximately 30 years.
- The average Individuals and Households Program award related to flooding was less than $4,000.
- Repayment on a $50,000 SBA disaster home loan is $240 a month or $2,880 annually at 4% interest. This comes out to more than $8 dollars per day.

Over 5.1 million people currently hold flood insurance policies in more than 22,100 communities across the U.S. From 1978, the NFIP has paid over $52.5 billion for flood insurance claims and related costs (as of 8/31/16). Since the City of Los Angeles participates in the CRS, you can qualify for an insurance premium discount of up to 15%. For more policy and claim statistics, visit the National Flood Insurance Program at: [https://www.fema.gov/media-library/assets/documents/106144](https://www.fema.gov/media-library/assets/documents/106144)
NFIP (Continued from page 2)

Mandatory Purchase Requirement

The mandatory flood insurance purchase requirement applies to all forms of federal or federally related financial assistance for buildings located in a SFHA. A home located within a SFHA has a 25 percent chance of suffering flood damage during the term of a 30-year mortgage.

This requirement affects loans and grants for the purchase, construction, repair, or improvement of any publicly or privately owned building in the SFHA, including machinery, equipment, fixtures, and furnishings contained in such buildings.

The requirement also applies to secured mortgage loans from financial institutions, such as commercial lenders, savings and loan associations, savings banks, and credit unions that are regulated, supervised or insured by Federal agencies such as the Federal Deposit Insurance Corporation and the Office of Thrift Supervision. It also applies to all mortgage loans purchased by Fannie Mae or Freddie Mac in the secondary mortgage market.

How It Works

Before a person can receive a loan or other financial assistance from one of the affected agencies or lenders, the property needs to be verified to see if it is in a SFHA. SFHAs are land areas that are at high risk for flooding. These areas are indicated on the Digital Flood Insurance Rate Map (DFIRM). It is shown as one or more zones that begin with the letter "A" or "V".

Many lenders and insurance agents also have copies of the DFIRM for the City of Los Angeles. It is the lender’s responsibility to check the DFIRM to determine if the building is in an SFHA. If the building is in an SFHA, your lender is required by law to require you to purchase a flood insurance policy on the building. Federal regulations require purchase of structural insurance coverage equal to the amount of the loan or the maximum amount available from the NFIP, whichever is less. The maximum amount available for a single-family house is $250,000 for structure and $100,000 for its contents.

The mandatory purchase requirement does not affect loans or financial assistance for items that are not covered by a flood insurance policy, such as vehicles, business expenses, landscaping, and vacant lots. It does not affect loans for buildings that are not in the SFHA, even though a portion of the lot may be flood prone. **While not mandated by law, a lender may require a flood insurance policy as a condition of a loan for a property in any zone on a DFIRM.**

Federal disaster assistance is usually a loan that must be paid back with interest.

In 2015, the average flood policy costs about $700 a year and the average total paid claim has been more than $31,000. For the Preferred Risk Policy, which provides affordable flood insurance protection, premium can start as low as $137 a year.

You are eligible to purchase flood insurance because the City of Los Angeles participates in the NFIP. It takes 30 days after purchase for a policy to take effect, so it is important to buy insurance before floodwaters start to rise. All claims and expenses of the NFIP program are funded by insurance premiums, not tax dollars.

Financial Assistance

Financial assistance includes loans and grants from agencies such as the Department of Veterans Affairs, Farmers Home Administration, Federal Housing Administration, Small Business Administration, and FEMA.

FEMA Grant Assistance

Grant assistance is provided to those who have suffered damage and loss from disasters occurring in that state. When there is a presidential declaration, FEMA begins accepting assistance applications for a period of time that varies depending on the scope and magnitude of the disaster, as well as affected areas and amendments to the governor’s declaration request. Those applicants may be eligible for FEMA grant money. This disaster assistance does not have to be repaid and is to be used for vital expenses that cannot be managed via other means.

Increased Cost of Compliance (ICC) Coverage

If your property is damaged by flood, you may be required by law to bring your home up to community and/or state floodplain management standards. If you have NFIP insurance, and your home has been declared substantially damaged by your community, ICC coverage will provide coverage up to $30,000 of the cost to elevate, floodproof, demolish, or relocate your property. ICC coverage is in addition to the coverage you receive to repair flood damage; however, the total payout on a policy may not exceed $250,000 for residential buildings and $500,000 for non-residential buildings.

ICC coverage does not apply to substantial improvements unless a structure is substantially damaged due to flooding. More information on ICC and flood insurance can be found at following websites:

https://www.fema.gov/increased-cost-compliance-coverage

https://www.fema.gov/media-library/assets/documents/1130
Flood Zone Map

The flood zone map of the City of Los Angeles is included as an insert of this newsletter (see page 5). If you want to verify whether or not your property is located within a flood zone, you can log on at: https://navigatela.lacity.org or email us at Eng.nfip@lacity.org or call (213) 485-4820.

The Bureau of Engineering keeps records of the DFIRM for the City of Los Angeles. If you have recently purchased or re-financed your home, your lender may require you to obtain a flood insurance policy. Whether you own or rent the property you live in, you need to know the flood risks associated with the flood designation in order to take precautions that protect your interests. The City of Los Angeles prepares annual mailing to provide you with information that may help you understand and reduce the flood risk surrounding your home. If you have questions regarding this publication, you can email the City of Los Angeles at Eng.nfip@lacity.org or call (213) 485-4820.

What Can Homeowners Do if They Believe Their Homes Are Erroneously Included in the Flood Zone?

If a homeowner can show that the home is located above the Base Flood Elevation (BFE) he/she can apply for a map amendment by completing an application for a Letter of Map Amendment (LOMA) and submitting this request to FEMA. A LOMA application (known as MT-EZ) can be obtained online at: https://www.fema.gov/media-library/assets/documents/8001

FEMA’s review is free to individual property owners who apply for single lot LOMA review. However, a Registered Professional Engineer or Licensed Land Surveyor will need to be hired by the homeowner to certify the elevation information in the application. More information is available by accessing FEMA’s web site at: https://www.fema.gov/letter-map-amendment-letter-map-revision-based-fill-process

If you would like assistance in completing a LOMA application from a Map Specialist, you may call the FEMA Map Service Center toll-free at (877)-FEMA-MAP or (877)-336-2627. Please note that the City does not approve or deny any map amendment requests since the FIRMs are published by a federal agency.

Building or Remodeling in the Flood Zone

All developments in the floodplain, not just construction of buildings, need local permits.

The minimum Lowest Finished Floor Elevation (LFFE) of all new buildings and existing building undergoing substantial improvement (including remodeling) located in SFHA must be one foot higher than the expected Base Flood Elevation (BFE) per City Ordinance No. 172081.

Certain flood hazard areas are considered floodways or passages to the 100-year flow, therefore, no new development will be allowed. Other areas that experience high velocity flow and heavy debris loads may require special design considerations.

No basements for residential structures located in the flood zones will be permitted in new buildings. Substantial improvements and substantial damage residential projects (including multiple residential units) will be required to seal any existing basements.

Mandeville Canyon is considered a Flood Risk Area and developers are likely to be required to obtain a watercourse permit per Special Order SO003-1005. A copy of the Special Order can be obtained by emailing a request to Eng.nfip@lacity.org.

If your property is in the flood zone, please contact the City’s NFIP information line at (213) 485-4820 or email us at Eng.nfip@lacity.org before designing your project.

What are Substantial Improvements?

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the depreciated market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:

- Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or

- Any alterations of a “historic structure," provided that the alteration will not preclude the structure’s continued designation as a “historic structure.”

Floodplain management requirements apply to new construction and substantial improvements.

What is a Floodplain and Special Flood Hazard Areas (SFHA)?

Floodplain is defined as any land area susceptible to being inundated by flood waters from any source.

SFHAs are areas subject to inundation by a 100-year flood, a flood that has a 1-percent or greater chance of being equaled or exceeded during any given year. They are shown on the DFIRM as zones labeled with the letters A, AO, AH, A1-A30, AE, A99, AR, AR/AE, AR/AC, AR/A1-A30, AR/A, V, VE, and V1-V30. In an SFHA, there is at least a 1 in 4 chance of flooding during a 30-year mortgage. All homes and business owners in these areas with mortgages from Federally-regulated or insured lenders are required to buy flood insurance.

For a more thorough explanation of a Floodplain and SFHA please check out:

https://www.fema.gov/flood-zones
PERSONAL SAFETY DURING A FLOOD

The most visible features of the City of Los Angeles are the 270 miles of open flood control channels, which include the Los Angeles River, Dominguez Channel, and Ballona Creek. They serve to collect rainwater from most of the City’s storm drains and smaller open channels, and move the water out to either the Santa Monica Bay or San Pedro Bay. When it rains, it fills up with fast flowing water that can kill anyone who gets caught up or swept away in it. It is illegal to enter the flood control channels at anytime.

What if I see someone fall into the channel?

Immediately call 911. Do not go into the channel to try to save them. Don’t try to save them using a rope as the force of the water will pull you in. Find some sort of flotation device, styrofoam ice chests, foam cushions, any unattached object they can use to hang on to.

What if I fall in?

Remain calm, float on your back with your head up from the water. Use your feet and legs to steer yourself clear of obstructions. If a large obstacle is blocking the channel, try to flip over your stomach and approach the object head on, and crawl over the top of it. People die in swift water when they get pinned or trapped against debris. Never finding yourself in this situation is the best way of surviving swift waters.

- Do not walk through flowing water.
- Do not drive through a flooded area.
- Stay away from power lines and electrical wires.
- If flooded, have your electricity turned off by the Department of Water and Power.
- Look out for animals, especially snakes.
- Be alert for gas leaks.

Emergency Alert System

On January 7, 2010, Los Angeles County officials launched an Emergency Alert System, similar to reverse 911, that will notify residents and businesses by phone, text or e-mail about dangerous conditions in their area. Residents and businesses will be contacted if there are emergencies like wildfires or floods near their home or offices, and tell them whether evacuation is necessary.

The Sheriff Department’s Emergency Communications Center will be responsible for sending out the alerts. Members of the public who would rather receive the emergency notification via their cell phone or e-mail account will have to register that information through the https://www.lacounty.gov/emergency/alert-la/ website.

You will also have the option of registering your fax numbers and voice-over Internet Protocol (IP) lines. But only one phone number or e-mail address may be entered per street address. If the number is busy or does not answer, the system will be re-dialed twice. If it reaches an answering machine, the system leaves a message. The system will also have the ability to detect and communicate with telecommunication devices for the deaf.

Tsunami - What to Do

Tsunamis (pronounced soo-rá-mees), also known as seismic sea waves (mistakenly called “tidal waves”), are a series of enormous waves created by an underwater disturbance such as an earthquake, landslide, volcanic eruption, or meteorite. A tsunami can move hundreds of miles per hour in the open ocean and smash into land with waves as high as 100 feet or more. From the area where the tsunami originates, waves travel outward in all directions. Once the wave approaches the shore, it builds in height. The topography of the coastline and the ocean floor will influence the size of the wave. There may be more than one wave and the succeeding one may be larger than the one before. That is why a small tsunami at one beach can be a giant wave a few miles away. All tsunamis are potentially dangerous, even though they may not damage every coastline they strike. A tsunami can strike anywhere along most of the U.S. coastline. The most destructive tsunamis have occurred along the coasts of California, Oregon, Washington, Alaska, and Hawaii. Earthquake-induced movement of the ocean floor most often generates tsunamis. If a major earthquake or landslide occurs close to shore, the first wave in a series could reach the beach in a few minutes, even before a warning is issued. Areas are at greater risk if they are less than 25 feet above sea level and within a mile of the shoreline. Drowning is the most common cause of death associated with a tsunami. Tsunami waves and the receding water are very destructive to structures in the run-up zone. Other hazards include flooding, contamination of drinking water, and fires from gas lines or ruptured tanks.

What to Do Before and During a Tsunami

The following are guidelines for what you should do if a tsunami is likely in your area:

1. Turn on your radio to learn if there is a tsunami warning.
2. If an earthquake occurs and you are in a coastal area move inland to higher ground immediately and stay there.
3. Stay away from the beach. Never go down to the beach to watch a tsunami come in. If you can see the wave you are too close to escape it.

CAUTION: If there is noticeable recession in water away from the shoreline this is nature’s tsunami warning and it should be heeded. You should move away immediately.

What to Do After a Tsunami

The following are guidelines for the period following a tsunami:

1. Stay away from flooded and damaged areas until officials say it is safe to return.
2. Stay away from debris in the water; it may pose a safety hazard to boats and people. Save yourself not your possessions.

See https://www.ready.gov/tsunami for more information.
**SUBSTANTIAL IMPROVEMENT**

1. Submit the site, floor, survey and cross-section/elevation plans electronically in PDF format in person or through the NFIP email at eng.nfip@lacity.org.

2. For flood zone AO, provide a topographic survey that shows the natural grade (corner elevations) of the existing & proposed footprint of the structure on the existing site. The survey must be stamped, dated and signed by licensed Surveyor or a Civil Engineer who licensed prior to No. 33306. The survey needs to reference NAVD (1988 Datum and City’s Benchmark I.D. number).

3. Floor and elevation plans shall indicate the Base Flood Elevation (BFE) and minimum Lowest finished Floor Elevation (LFFE). If the Base Flood Elevation (BFE) is unknown, it will be determined from the Highest Adjacent Grade (HAG), to the improvement from the provided survey, plus the floor depth. The minimum finished floor elevation will be the BFE plus zone flood freeboard (factor of safety) per City Ordinance No. 172081.

4. Floodproofing is required below the min. LFFE per FEMA TR-2. Concrete and masonry are considered to be floodproofing materials. An Elevation Certificate will be required at the end of construction for all substantial improvement projects prior to the issuance of the Certificate of Occupancy.

5. Plans must also show flood vents for building enclosures, i.e. crawlspaces, foundations, garage, etc. Flood Vents required based on the ratio of one square inch of venting (net area) per one square foot of 1st floor area of the addition. The bottom of the vents must be within 12 inches from the adjacent grade. Vents to be on at least 2 sides of the building enclosures.

6. For building additions, if major improvements are also done to the existing structure such as removing a wall, the existing floor must be raised to the new minimum LFFE and flood vents and floodproofing shall also be required.

7. Additional information may be required for flood zone A such as documentation of calculations confirming the new or improved structure will withstand potential flooding (but not limited to):
   a. Hydraulic and hydrologic calculations
   b. Federal Emergency Management Agency (FEMA) established calculations for hydrostatic, hydrodynamic and buoyancy forces.
   c. Written correspondence from any government agency confirming approval of improvement within an agency easement.
   d. Structural plans and calculations wet-stamped and signed with original signature of a licensed civil or structural engineer.

**NON-SUBSTANTIAL IMPROVEMENT**

If you contend that your improvements are less than 50% of the of the existing structure, you will need to provide the following documents for verification.

1. Recent appraisal of existing structure by a certified appraiser dating from no more than six months prior. The appraisal needs to indicate the Depreciated Cost of Improvement Value. Current year County Assessor’s tax records may be used in lieu of an appraisal report.

2. Cost estimate from the contractor/engineer/architect with breakdowns for labor, material, profit and overhead. (Material costs must be further broken down by unit cost and quantity of each type of material). A sample construction estimate will be provided.

3. Affidavits signed and notarized by the owner and contractor/engineer/architect confirming the scope of work in the construction estimate.

**NON-RESIDENTIAL BUILDINGS PROJECTS WITH/WISEOUT SUBGRADE STRUCTURES**

In addition to the documents listed under the Substantial Improvement column to the left, you must submit a flood proofing certificate, and emergency evacuation plan and a covenant agreement (samples can be provided) that shall be attached to the title of the property until your property is no longer in a Special Flood Hazard Area (SFHA). Dry floodproofing is also required below the BFE + 1 Elevation per FEMA P-336 Bulletin.

**LETTER OF MAP AMENDMENT (LOMA)**

If you believe that your property does not sit within a floodplain, you may file a Letter of Map Amendment (LOMA) with FEMA to remove your property from the Special Flood Hazard Area (SFHA). Issuance of a LOMA may eliminate flood clearance requirements for building permit applicants and also the flood insurance purchase requirement for a federally backed financing.

You may file a LOMA with FEMA directly. Please see https://www.fema.gov/mt-1-application-forms-instructions for more information.

**LETTER OF MAP REVISION (LOMR)**

If you would like to revise or modify the effective Flood Insurance Rate Map (FIRM) and wish to request a redrawing of the flood boundary, you must file a LOMR with FEMA or a Letter of Map Revision based on Fill (LOMR-F).

The LOMR application shall include, but is not limited to, calculations specified on the MT-1 and MT-2 forms. Please contact the FEMA Map Service Center at https://msc.fema.gov or call 1-877-FEMA MAP (1-877-336-2627) for assistance.

Please contact the FEMA map service center at https://msc.fema.gov or call 1-877-FEMA MAP (1-877-336-2627) for assistance.
The original storm drain system was developed in the 1930s by the Army Corps of Engineers. As the city began to grow rapidly in the 1920s and 1930s, rainwater that was once absorbed by miles of undeveloped land began to run off the newly paved and developed areas, increasing the amount of water flowing into Los Angeles rivers and local creeks. These waterways could not contain the increased amount of water and the region experienced massive flooding. Because of this, the Army Corp of Engineers lined the Los Angeles River and Ballona Creek with concrete and started the development of an underground urban drainage system. As Los Angeles continued to grow, a complex drainage system developed.

Today, the city's storm drain system totals 35,000 catch basins, over 1,500 miles of underground pipes, and 100 miles of open channels. Runoff from approximately 1,060 square miles of developed land reach Santa Monica and San Pedro Bays through approximately 60 storm drain outfalls. Approximately 100 million gallons of water flow through Los Angeles' storm drain system on an average dry day. When it rains, the amount of water flowing through the channels can increase to 10 billion gallons reaching speeds of 35 mph and depths of 25 feet. Runoff from streets, parking lots, yards, etc. enters the storm drain, receives no treatment and flows directly to the ocean. Paint thinner and paint products, motor oil, pesticides, styrofoam cups, paper, human and animal wastes, antifreeze, golf balls, dirty diapers and dead animals are found everyday in the storm drain system. Every year, roughly 40 tons of trash and debris are deposited onto our local beaches from stormwater runoff. It's important to our environment and safety that we keep our waterways clean.

A stream is a watercourse that is a naturally occurring swale or depression, or engineered channel which carries fresh or estuarine water either seasonally or year round. It is the desire of the City of Los Angeles to protect streams and the native riparian area vegetation along stream systems and riparian areas. Los Angeles Municipal Code Sections 64.07, 64.08, and 64.09 prohibit anything that obstructs or interferes with the flow of water through a water course or channel in any manner without proper permits.

If you want to know more about our watershed protection program including clean water, please log on to:

https://www.lasstormwater.org

Typical Flood Problems

Hillside Drainage Problem

This is the cause of most insurance claims in the City of Los Angeles. This occurs on properties located at the bottoms of steep hills. Flooding happens when the drainage system is deficient or inadequately designed. Runoff is not diverted to the street and enters the home or garage. In some situations, neighbors change the normal drainage patterns, creating flood risks to other properties.

Mudsides from slope failures are also common problems. If erosion on your property is a problem or if others have changed the normal drainage patterns, you can call (213) 435-4820 to request an investigation, or information on how to protect your home. Sand bags are provided free during the rainy season (please refer to the City Services Phone List provided).

Street Drainage Problem

Flooding may occur when street runoff enters private property. If the property is located on a street sump area (lowest point of the nearby streets), or if the building pads on these properties are lower than the street level, and/or the driveway is sloped toward the house and garage, the street flow can pond. Drainage problems can be caused by undersized or broken City storm drains, or clogged City catch basins. If this problem applies to you, you can call the Bureau of Engineering to request a drainage investigation, and the Bureau of Sanitation at (800) 974-9794 to request that the catch basins be cleaned or obstructions removed from City drains.

On-Site Drainage Problem

When private drain inlets or v-ditches are inadequate or become plugged with yard debris, water ponds within the property and cannot drain to the street. Underground garages with insufficient drainage are also commonly flooded.

Other Hazards

These properties have site-specific hazards that need special and individual attention. For example:

- Buildings damaged by coastal flooding exacerbated by a storm drain failure;
- Catastrophic rains far exceeding drain capacity;
- Buildings built too low into the bed of a natural watercourse;
- Groundwater seepage enters the lower level of the house, flooding the basement after heavy storms.

Flood Prevention Tips

- Keep drainage areas (ditches, swales, small channels) free of debris.
- Consult an engineer to design a permanent water/flood debris control device, if needed.
- Ensure that drainage pipes within your property are cleared and work properly.
- Landscape slope areas with plants suitable for fire retardant and erosion control.
- Report clogged catch basins to request cleaning and floodwaters overtopping the curb for engineering investigations.
Free Flood Information

The City of Los Angeles provides free flood zone information. Copies of the Federal Emergency Management Agency Flood Insurance Rate Maps are available for review in all Bureau of Engineering district offices. For flood zone information and availability of elevation certificates, contact us by email at Eng.nfip@lacity.org, or call (213) 485-4820 (call back time is within 3 business days). This information is also available to you directly through the Internet at:

https://navigatela.lacity.org/navigatela

Investigation of Drainage Deficiencies

Request a drainage investigation when the water in the streets overtops the curb by calling your local Bureau of Engineering (BOE) District office:

- Harbor District............(310) 732-4677
- West L.A.---------------(310) 575-8384
- Valley District..........(818) 374-5090
- Central District.........(213) 482-7030

If requested, the Bureau of Engineering staff will visit your property to review your flood problem and recommend measures to stop flooding or prevent flood damage. Call the City's Bureau of Engineering at (213) 485-4820. These services are free.

Report Clogged Catch Basins

The City of Los Angeles Bureau of Sanitation routinely clears the city's 35,000 catch basins at least once a year, some with more frequency. However, if your neighborhood catch basin becomes clogged with debris, please call the City Hot Line (800) 974-9794 or (800) 773-2489 between 7:30 a.m. and 5 p.m. Monday through Friday, or (213) 495-7575 after 4 p.m. and on weekends. And remember, storm drains are for rainwater only!

Sand Bags

Free sand and sandbags are offered through the Fire Stations and the Bureau of Street Services yards during the storm season. A complete list of maintenance yards and local fire stations offering sand bags is available on line at the following web site (or call 311 to request a copy of this list). https://www.lafd.org/news/lafd-provides-sandbags-homeowners-1

Before you build in the floodplain

All new development and construction in the floodplain is regulated and requires a special review before a building permit is issued.

Contact the NFIP Information Line at (213) 485-4820, or by email at Eng.nfip@lacity.org during the planning stages to inquire about the regulations applicable to your project. Suspected illegal floodplain development can be reported at the same number.

Hillside Problems

Report problems with hillsides as well as temporary erosion caused by construction projects, and alteration or modifications to natural drainage that affect your property to the Building and Safety Call Center at: (888) 524-2845 or 3-1-1. You can download the brochure "Be Prepared: Homeowner's Guide for Flood, Debris, and Erosion Control" published by the City of Los Angeles, Department of Building and Safety at: https://ladbs.org/5000-series-series-publications/misc-publications/homeowners-guide-for-flood-debris-flow-and-erosion-control.pdf or call to request a copy at: (888) 524-2845.

Illegal Dumping

Used motor oil, discarded food, trash and other debris are just some of the items routinely dumped into storm drains throughout the city. Curbside catch basins are the entry points of the storm drain system, which eventually discharges out into the ocean. Additionally, catch basins filled with debris can create unhealthy conditions in residential neighborhoods by becoming a breeding ground for rats, roaches and disease. An ordinance passed in 1999 (LAMC Sec 64.70) makes it illegal to dump or discharge trash, debris, chemicals, contaminated water, or any other liquid or solid material into the storm drain system. Violators are subject to stiff fines and criminal prosecution. Residents are encouraged to report illegal dumping by visiting https://www.lacity.org/myla311 to create a service request or simply call 3-1-1. Alternatively, you can call (800) 974-9794 or (600) 966-2469 for illegal dumping into storm drain. More information are available at: https://www.lactysan.org/san/faces/home/service/service-request

Floodplain Management

Additional information regarding flood protection, floodplain management and the NFIP can be found through the FEMA web site at: https://www.fema.gov/floodplain-management
Recent Activities (Continued from page 1)

CRS Annual Recertification

This year, BOE Stormwater Group received the recertification notice on June 14th, 2019 and was given a due date of August 1st, 2019. Recertification helps determine the CRS rating level which currently provides a 15% discount in the flood insurance premium for residents who live in a SFHA. BOE staff worked diligently with LA Building and Safety, EMD, Council Offices, and Mayor’s Office in preparing the recertification package that consisted of CRS questionnaires, permit list for all substantial development within Special Flood Hazard Area(s) of the City, over 33 Elevation Certificate (EC) documents, annual NFIP related newsletters and mailers, sign-in sheets for community workshops hosted by staff for public outreach/education efforts, and draft of Floodplain Management Plan (FMP). The packet has been completed and submitted to FEMA for recertification.

FMP Update

The Flood Management Plan is being updated for the year 2020. One of our goals with the FMP 2020 update is to incorporate as much public input as possible. We have developed a survey for the general public in order for us to gauge the major issues that concern our community with regards to flooding and flood insurance. This information will lead us to implementing refined measures that will help us better protect life and property. Please participate in the survey at https://www.surveymonkey.com/r/2019CLACFMP

California homeowners urged to buy flood insurance.

More than 240,000 Californians have flood insurance, according to FEMA statistics. However, in recent years insurance premiums have failed to reflect the true risks to properties. The National Flood Insurance Program is encouraging homeowners to purchase flood insurance regardless of the locations of their properties. Please see the following link for additional information: