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Staff Report Discussing Potential Mitigation of Changes to the 100 Year Flood Zone Included in the Draft Flood Rate Insurance Maps Distributed by the Federal Emergency Management Agency (FEMA) in 2015

## SUMMARY AND RECOMMENDATIONS

This is a report on flood zone mitigation activity to date and potential next steps.

Staff seeks comments from Council on exploring funding options including an assessment district consisting of properties that benefit from the flood mitigation work proposed in the vicinity of Neptune Drive and Marina Boulevard.

## BACKGROUND

The Federal Emergency Management Agency (FEMA) strives to improve the Nation's capability to prepare for, protect against, respond to, recover from and mitigate all hazards including flooding. FEMA addresses flood hazards by evaluating flood risk and publishing their findings in their Flood Rate Insurance Maps (FIRMs). FEMA issued new FIRMs for San Leandro in March 2015 that raise the base flood elevation by approximately one foot and consequently expand the 100 year flood zone to include approximately 1,090 additional land parcels. A 100 year flood is an event that has a 1% likelihood of occurring each year. FEMA expects to issue a final determination on the new FIRMs in the middle of 2016; the maps will go into effect 6 months after that final determination date.

Risk of flooding is an important consideration for property owners and lenders who finance property. Each individual should examine their risk and decide how much, if any, insurance they want to purchase to guard against loss. Federally backed mortgages require flood insurance when the subject property is within the 100 year flood zone. Properties newly added to the 100 year flood zone

can receive a discounted insurance rate when the insurance is purchased before or soon after new maps are adopted. FEMA reports that one in three San Leandro properties within the existing 100 year flood zone currently carry insurance.

Proposed FIRMs indicate that most of the 100 year flood zone expansion is due to four locations where flood water enters developed areas. Alameda County Flood Control and City staffs have identified mitigation measures at these four locations that potentially eliminate the related 100 year flood zone expansion. There are six parcels of land that are added to the 100 year flood zone on the FIRMs that will not be impacted by mitigation measures at these four locations. Additionally City staff has initiated the application process for the FY 2016 Pre-Disaster Mitigation (PDM) Grant Program sponsored by FEMA that could potentially fund 75% of the implementation cost of some of these mitigation efforts.

### **Analysis**

Expansion of the 100 year flood zone can be reduced by constructing improvements at four locations. If these mitigation measures are not constructed, then the published risk of flooding for approximately 1,090 parcels of land will increase to 1% per year. Individual properties within the 100 year flood zone may have elevations sufficient to prevent flooding. Property owners may hire a surveyor to determine the elevation of their land and/or buildings and may file an elevation certificate with FEMA and request exclusion from the flood zone if their property is above the base flood elevation. Properties newly added to the 100 year flood zone that have a federally backed mortgage will be required to purchase flood insurance annually.

### **Mitigation Location No. 1 - Davis Street/Water Pollution Control Plant**

FEMA indicates that there is a low point in the north bank of the slough at the west end of Davis Street, adjacent to the driveway of the City's Water Pollution Control Plant (WPCP). Per the proposed FIRMs, water entry at this point increases the 100 year flood zone to include sixteen additional properties on Davis Street and Eden Road, including the land that WPCP is built upon. Staff has issued a purchase order for a topographic survey of this area and will include raising the grade adjacent to the slough and driveway in the upcoming WPCP Asphaltic Concrete (AC) replacement project. As this project is underway, additional WPCP Enterprise funding of up to \$60,000 may be required and if needed will be requested at the time of project award. This project is scheduled for construction in 2017.

### **Mitigation Location No. 2 - 13165 Neptune Drive**

A low point on the San Francisco Bay shoreline behind 13165 Neptune Drive has been identified as one of two points that allow water to enter into the Marina Faire and Mulford Gardens neighborhoods. Per the proposed FIRMs, water entry at these points increases the 100 year flood zone to include 1,054 additional properties. This low point can be eliminated by importing soil, grading the site, and installing rip rap or rock protection along the San Francisco Bay shoreline. Staff has contacted the property owners of 13165 Neptune Drive; they support the project and are willing to entertain a request for permission to construct these improvements. The project is estimated to cost \$500,000; staff has applied for a FEMA grant that could fund up to 75% of these costs. Staff recommends exploring formation of an assessment district to cover any costs not covered by grant funds. The assessment district will consist of all parcels that would be removed from the 100 year flood zone by the project. Absent grants, the cost per parcel would be approximately \$475 which is close to the

cost of discounted flood insurance for one year, and less than half the average annual cost of flood insurance in San Leandro. Costs per parcel could be as low as \$120 if a FEMA grant is awarded. Including formation of an assessment district, design, permitting, and construction, this project is anticipated to take three years to complete.

### **Mitigation Location No. 3 - Estudillo Canal**

The Alameda County Flood Control District (ACFCD) operates the Estudillo Canal which collects and conveys storm water to the San Francisco Bay. The north bank of this canal is now listed by FEMA in the proposed FIRMs as the second of two sources of flood water that impacts 1,054 properties in the Marina Faire and Mulford Gardens neighborhoods. ACFCD is in the process of designing improvements to the banks of the Canal to eliminate this source of water. They anticipate applying for permits in the middle of 2016 and performing construction in the summer of 2017.

### **Mitigation Location No. 4 - Mission Bay Mobile Home Park**

The fourth source of floodwater is the western property line of Mission Bay Mobile Home Park, adjacent to the Coast Subdivision line of the Union Pacific Railroad. The proposed FIRMs indicate the single parcel of land that is the mobile home park as well as two parcels of the Marina Vista neighborhood to the north will be added to the 100 year flood zone. It appears that the two Marina Vista parcels are above the base flood elevation and could be removed from the zone if the property owners filed a certificate of elevation. Due to space constraints an earthen dike cannot be constructed to stop water entry. In lieu of a dike, the existing masonry fence can be replaced with an engineered concrete sea wall that could act as a dam at an estimated cost of \$600,000. Staff has met with the mobile home park operator and discussed the project. Since the work will occur on one parcel of land and since that same parcel receives the flood protection there is little or no benefit to including the City in the project. The property owner has not yet indicated what, if any, mitigation measures they plan to pursue. A FEMA grant will be submitted for this proposed mitigation and if awarded it would cover 75% of the cost leaving a 25% match of \$150,000 as the responsibility of the property owner.

Additionally, one property on Williams Street and three parcels in Heron Bay are added to the 100 year flood zone on the proposed FIRMs. There are no obvious mitigation projects that can remove these three parcels from the zone. It may be that only a portion of these properties is within the zone and the property owners can obtain relief from insurance requirements by filing an elevation certificate.

### **Applicable General Plan Policies**

Goal 29: Reduce the potential for injury, property damage, and loss of life resulting from earthquakes, landslides, floods, and other natural disasters.

### **Environmental Review**

An environmental review will be performed during the design phase of these projects.

### **Summary of Public Outreach Efforts**

The revised FIRMs were advertised by FEMA and the City in various publications as described in a

presentation to Council on November 16, 2015.

The City mailed notice of the revised FIRMs to affected property owners in January, 2016.

This action item was advertised in several newspapers representing the diversity of San Leandro and on social media.

### **Fiscal Impacts**

The WPCP AC Replacement project has a budget of \$860,000 that was appropriated in the FY 2014-15 budget. Grading work in the vicinity of the slough may increase the project cost by up to \$60,000. If an additional appropriation is required it will be requested from the Water Pollution Control Plant Enterprise Fund when the construction contract is awarded. The work may be authorized or abandoned at that time.

Neptune Drive flood protection work will require a budget of \$500,000. If preliminary investigation reveals support among the property owners for an assessment district, \$100,000 of general funds will be requested for district formation, design, and permitting costs. If there is not sufficient support for an assessment district Staff will return to council to review alternatives. Staff will continue to seek grants to cover a portion of the project cost.

### **ATTACHMENT**

- Slides of Flood Zone Mitigation Presentation

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