TO: HONORABLE CITY COUNCIL

ATTENTION: FINANCE COMMITTEE

FROM: CITY MANAGER DEPARTMENT: PUBLIC WORKS

DATE: MARCH 23, 2004 CMR:193:04

SUBJECT: STORM DRAIN FUNDING ALTERNATIVES

REPORT IN BRIEF

Council approved a monthly Storm Drainage Fee in 1989 to fund the City’s storm drain program. The fee, $4.25 per month for a single-family residential parcel, has not been increased since 1994 and is insufficient to cover the program’s operating costs. The General Fund is currently providing $800,000 in supplemental funding to maintain a baseline level of service for storm drain maintenance and storm water quality protection. There is no funding for storm drain capital improvements, despite a backlog of capital needs. Staff has analyzed alternative funding mechanisms and levels of service to devise an optimal storm drain program by selecting a downsized list of capital projects and operational upgrades that could be funded with a moderately sized fee increase.

Staff believes that all of the capital improvements recommended in the 1993 Storm Drain Condition Assessment and Master Plan studies (CH2M Hill Engineers) eventually need to be addressed, but has concluded that funding will likely become available only on an incremental basis. As a result, staff has reviewed the identified capital needs and designated the most critical elements for initial implementation. The proposed list of improvements includes citywide storm drain system rehabilitation and curb and gutter replacement projects as well as area-specific projects to correct the worst drainage system capacity deficiencies.

Staff recommends that the Committee consider an alternative to fund the proposed enhanced storm drain program through a combination of a moderate increase in the Storm Drainage Fee, increased funding from the General Fund, and cost savings from a reduction in the annual sidewalk replacement program and give conceptual approval and direction to staff, but defer any final decision on the issue until after the final impacts of State budget actions on FY 2004/05 are determined.
RECOMMENDATION
Staff recommends that the Finance Committee recommend that Council:

1. Endorse an enhanced storm drain program consisting of the following elements:
   a. Continuation of the existing baseline level of service
   b. Additional annual funding of $500,000 for system repair and rehabilitation
   c. Additional annual funding of $250,000 for curb and gutter repairs
   d. Additional annual funding of $1 million for storm drain capital improvements (capacity upgrades)

2. Provide $1 million annually from the General Fund for the storm drain program ($500,000 of this funding would be generated through an equal reduction in annual funding for sidewalk replacement).

3. Direct staff to pursue property owner approval of an increase in the monthly Storm Drainage Fee to $7.50 per Equivalent Residential Unit (ERU) to fund the enhanced storm drain program. It is also recommended that the ballot measure include a sunset clause that requires reauthorization of the rate increase by a majority of property owners upon completion of the identified capital improvements and a provision for an independent oversight body to review and report on annual storm drain expenditures.

4. Postpone a final decision on storm drain funding until after the State of California has adopted its FY 04-05 budget.

BACKGROUND
The City’s storm drain capital improvement, maintenance and water quality protection programs are funded through the Storm Drainage Fund, an enterprise fund established by Council in 1989. Revenue is generated by a Storm Drainage Fee, which is collected through monthly City utility bills. The fee, $4.25 per month for a single-family residential parcel, has not been increased since 1994 and is insufficient to cover the program’s operating costs. For the current year, the General Fund is providing $800,000 in supplemental funding to maintain a baseline level of service for storm drain maintenance and storm water quality protection. There is no funding provided for storm drain capital improvements, despite a backlog of capital needs.

The Storm Drainage Fee is a property-related fee subject to the provisions of Proposition 218, requiring a majority of property owners to approve a fee increase. The City conducted a property owner election in September 2000, seeking approval to increase the Storm Drainage Fee from its current level of $4.25 per month up to $9.00 per month to cover needed storm drain improvements. The ballot measure was unsuccessful.
On March 18, 2002, Council approved staff’s recommended conceptual strategy for identifying a funding mechanism for future storm drain improvements, including the appointment by the City Manager of a Blue Ribbon Storm Drain Committee to review storm drain funding needs. The Committee of fifteen residents, business representatives, and community leaders had its first meeting on May 3, 2002 and met 15 times for a total of 37 hours.

The Committee presented its findings to Council at a study session on November 12, 2002. The Committee formulated recommendations addressing future storm drain program elements and funding. The recommended storm drain program included augmented maintenance practices, a specific set of prioritized capital improvements, and expanded storm water quality protection activities. The Committee recommended funding the storm drain program on a pay-as-you-go basis by increasing the Storm Drainage Fee to $13.90 per month. The Committee also addressed fee sunset provisions, the creation of an oversight committee, and other policy issues related to the City’s storm drain program.

Two members of the Committee, Richard Alexander and Elizabeth Dahlen, issued minority reports documenting their differences of opinion with the consensus-based Committee report. The two minority report authors expressed opposition to the concept of a separate fee-based storm drain utility, instead advocating that the storm drain program be funded through the General Fund. They requested information on how other local jurisdictions fund their storm drain programs. Attachment A is a summary of storm drain funding mechanisms used by nearby cities. They also questioned the cost of the proposed capital improvements as compared to the benefit that they would provide and requested that staff conduct a benefit/cost analysis in order to justify the drainage improvements. While is has not been possible to conduct a classic quantitative analysis, staff has identified several qualitative negative consequences if the recommended drainage improvements are not implemented. Potential impacts include continued risk of public health and safety issues and flood damage to private property caused by storm drain system back-ups, accelerated pavement deterioration, and an increased backlog of pipeline and curb and gutter repairs due to continued deterioration of existing storm drain infrastructure. Staff has estimated the potential financial costs of some of these impacts in order to provide Council with a sense of the economic consequences of not implementing the recommended drainage improvements (Attachment B). It is not possible to quantify the non monetary costs of the public health and safety issues. The emotional cost to residents and homeowners over potential damage to their families and property has already been a major impact on this community and continues to arise during every heavy rainfall.

Lastly, the Committee dissenters argued that eliminating the flood risk from San Francisquito Creek should be a higher priority than improving storm drains, and noted
that the proposed drainage improvements would not solve the creek flooding issue. Staff acknowledges that San Francisquito Creek flooding is a critical issue for the community and continues to work closely with the San Francisquito Creek Joint Powers Authority and its member agencies towards developing a comprehensive flood control project for the creek. It should be noted that significant technical and political progress has been made over the past two years towards the ultimate flood control solution for San Francisquito Creek by virtue of the federal approval of U.S. Army Corps of Engineers participation in the studies. While staff has always made it very clear that the recommended drainage improvements will not prevent creek flooding, staff advocates proceeding with the implementation of the storm drain improvements concurrently with creek improvements since the two systems are complementary components of the overall drainage system serving the community. In particular, the upgrades to the storm drains and pump stations will provide a significant backup capacity in quickly removing any creek flooding waters that may occur.

In light of the state of the City budget, the City Manager decided to suspend active discussion of storm drain funding in February 2003. Future consideration of the issue was deferred to the Finance Committee budget deliberations during Spring 2003 in order that storm drain needs could be reviewed in the larger context of the City budget and the multiple financial challenges facing the City. During the hearings for the FY 2003-05 budget, Finance Committee members directed staff to reexamine the alternatives for future funding of the City’s storm drain program and to return to Council with an update.

Staff has been analyzing alternative funding mechanisms and levels of service in order to devise an optimal storm drain program. The goal has been to select a downsized list of capital projects and operational upgrades that could be funded with a moderately sized fee increase. Staff has reviewed the complete list of capital improvements recommended by the Storm Drain Committee and has identified the most critical projects. Based on analysis of the available options, staff has developed a set of alternative levels of service and funding schemes for the Finance Committee to review.

**DISCUSSION**

**Proposed Storm Drain Program Level of Service Enhancements**

Staff is proposing a series of incremental enhancements to the existing storm drain program level of service. Each of the enhancements is discussed below, with a description of associated cost and benefits, both in terms of total annual expenditures and the rate increase required to fund the enhancements under the existing Storm Drainage Fee rate structure. Under the existing rate structure, each $500,000 in annual expenditures equates to a fee of $1.00 per month for single-family residential customers.
Council may review each of the following proposed enhancements independently and choose which of them to implement; they are not mutually dependent alternatives.

**Full Funding for the Current Baseline Level of Service**  
As noted above, revenue from the monthly Storm Drainage Fee is not adequate to cover current storm drain program operating costs. For FY 2003-04, the General Fund is providing $800,000 in supplemental funding to maintain a baseline level of service for storm drain maintenance and storm water quality protection programs. In addition, the Wastewater Treatment Fund is providing $100,000 annually for storm water quality protection activities conducted by Public Works Environmental Compliance staff. Based on the current rate schedule, the Storm Drainage Fee would need to be increased by $1.75 per month per Equivalent Residential Unit (ERU) (to a revised monthly rate of $6.00) to fully fund the storm drain program’s existing baseline level of service.

**Operational Changes to Baseline Level of Service**  
Although the storm drain program could certainly benefit from increased funding for maintenance activities, no additional maintenance funding is requested at this time. The existing maintenance staffing of 5.9 FTE (consisting of a half-time supervisor, an electrician, and a full-time two-person field crew, supplemented with part-time assistance from other Public Works Operations staff during annual catch basin cleaning in the fall and emergency response during the rainy season) is adequate to keep the storm drain system functioning. Additional funding could enable the staff to undertake a more proactive maintenance approach, including periodic video inspection of underground pipelines, enhanced capability to make in-house pipeline and curb and gutter repairs, and implementation of a program to replace infrastructure and equipment on a scheduled basis before it wears out. The need for increased maintenance funding should be noted and scheduled for reconsideration at a later date.

**Storm Drain Capital Improvements**  
No new funding for storm drain capital improvements has been available for several years. The Storm Drain Master Plan and Storm Drain Condition Assessment studies, conducted in 1993, identified a backlog of $60 million (1993 dollars) in capital needs to replace deteriorated infrastructure and augment inadequate drainage capacity throughout the City. In the 2000 property owner election, staff sought funding for the highest priority capital improvements from the two studies, a set of projects totaling $48 million (2000 dollars). The Storm Drain Committee reviewed the Master Plan and Condition Assessment recommendations and endorsed a further reduction in the scope of the improvements down to a $42 million (2002 dollars) set of projects.

Staff believes that all of the storm drain capital improvements recommended in the two studies eventually need to be addressed, but has concluded that funding will likely become available only on an incremental basis. As a result, staff has reviewed the identified capital needs and designated the most critical elements for initial
implementation. The proposed list of projects can be separated into two categories: citywide and area-specific.

**Citywide Storm Drain Capital Improvements**

The first type of citywide storm drain improvements are system rehabilitation and replacement projects. The 1993 Storm Drain Condition Assessment identified over $5 million in deteriorated storm drain pipelines, manholes, and catch basins in the City’s storm drain system. Since that study was conducted, the storm drain infrastructure has aged an additional ten years and has continued to degrade. In particular, staff has become aware that there are a large number of corrugated metal pipelines throughout the City that are in much worse condition than originally diagnosed. Many of these pipelines are partially rusted away and are subject to complete failure. Should a pipe collapse, it can potentially cause the street above to sink and impact adjacent utility lines in addition to causing localized flooding. The Storm Drain Committee ranked system rehabilitation and replacement as a high priority for funding. Staff recommends that $500,000 per year be allocated towards storm drain rehabilitation and replacement, equating to a monthly Storm Drain Fee increase of $1.00.

Another citywide drainage system infrastructure need is curb and gutter repairs. Curb and gutter is an integral part of the City’s storm drain system. Runoff from streets and adjacent developed land is collected and conveyed to storm drain catch basins via the network of curbs and gutters. The effectiveness of gutters is highly dependent upon their slope. Gutters must slope continuously downhill in order to convey storm runoff without ponding. This is particularly critical in Palo Alto with its relatively flat natural topography. There are many sections of curb and gutter throughout the City that do not drain well due to settlement or uplift. Ponded water collects in gutters and spreads into the adjacent street when it is trapped in localized low spots or dammed by high points in the gutter profile. Gutters typically settle due to water penetration into the underlying base material combined with heavy loading from vehicles. Uplift occurs most commonly when shallow roots from adjacent street trees heave the concrete gutters upward.

Due to the large number of street trees in Palo Alto’s urban forest, uplifted gutters are the most common drainage problem throughout the City. Staff currently has a backlog of over 100 documented drainage problems attributable to damaged curb and gutter, and there is a much larger number of undocumented problem sites. Damaged gutters are the most common source of resident complaints regarding poor drainage. Prior to the storm drainage funding shortfall, staff budgeted $200,000 per year to replace damaged curb and gutter. This funding was eliminated in FY 1998-99. Without this dedicated funding source, gutters are now repaired only as incidental work on other infrastructure maintenance projects. For example, damaged gutters are replaced as part of street repairs during the annual street resurfacing project. Gutters are also repaired if they are integral with a section of sidewalk being replaced as part of the annual sidewalk replacement.
project. Staff recommends that $250,000 per year be allocated towards curb and gutter replacement, equating to a monthly Storm Drain Fee increase of $0.50.

Area-Specific Storm Drain Capital Improvements
Staff has reviewed the list of storm drain system capacity improvement projects recommended in the 1993 Storm Drain Master Plan and has identified the most critical projects. The cost of these high-priority projects totals approximately $13 million (2004 dollars). The proposed project list is significantly shorter and less costly than the list prepared for the year 2000 property owner election and the list endorsed by the Storm Drain Committee. In compiling this list of projects, staff attempted to achieve the following objectives:

- Provide benefits to a broad cross-section of City residents and businesses
- Address the most severe drainage system deficiencies
- Improve drainage in those areas with highest potential for flooding during heavy rains
- Implement projects in downstream segments of the storm drain network that are needed to accommodate future upstream drainage improvements

Attachment C contains a list and brief description of the recommended area-specific storm drain infrastructure improvement projects. A map showing the locations of the proposed projects is provided as Attachment D.

The recommended projects have several similarities. First of all, the majority of the projects are in the eastern portion of the City, at the downstream end of the drainage network. When implementing a sequential series of related drainage improvements, work must start at the most downstream point and progress upstream. This methodology ensures that improvements in one area do not inadvertently create problems elsewhere. For example, improvements made to storm drains in the upper portion of the watershed may cause flooding in downstream neighborhoods if the storm drains serving those areas are inadequate. Secondly, several of the high-priority projects include new or upgraded pump stations or connections to existing pump stations. The effectiveness of storm drains is highly dependent upon the level of water in the creek that receives the storm runoff. Storm drains that flow to creeks by gravity (without the benefit of a pump) cease flowing when the water level in the creek is higher than the water in the storm drain. Pumps allow runoff to be emptied into creeks regardless of the water level. Adding a pump station to an existing gravity storm drain outfall dramatically improves the performance of the entire tributary storm drain network. Likewise, connecting existing storm drains to an existing pump station will improve drainage in an entire neighborhood without incurring the cost of upsizing the storm drain pipelines. The third similarity shared by many of the proposed projects is that they serve low-lying or landlocked areas where storm runoff currently ponds during moderate to severe storm events. These are
the areas that are most vulnerable to severe flooding and potential property damage because there is no overland release point for accumulated storm runoff. Examples of these at-risk areas include DeSoto Drive, Walter Hays Drive, Clara Drive, Gailen Avenue, and Bibbits Drive. Staff recommends that $1 million per year be allocated towards the identified storm drain capacity upgrade projects, equating to a monthly Storm Drain Fee increase of $2.00.

**Proposed Storm Drain Funding**

Council has several options available for funding an enhanced storm drain program. Two primary issues are key to the funding question. First of all, Council must decide whether or not to continue contributing General Fund dollars towards storm drainage, and if so, the amount of that contribution. Secondly, it must be decided whether to fund storm drain capital improvements on a pay-as-you-go basis or through debt financing.

As a Council-approved enterprise, the Storm Drainage Fund should ideally be a self-sufficient entity, fully funded through user fees. One of staff’s goals has been to minimize the amount of General Fund dollars directed at the storm drain program, in an effort to free up funds for other competing needs. It is staff’s belief, however, that the community will not support a significant increase in the monthly Storm Drainage Fee. Balancing the competing goals of minimizing costs to the General Fund and holding the Storm Drainage Fee to an amount residents and businesses would support is a challenge. There has been a concerted effort to think creatively and to conduct a comprehensive review of City programs to develop a funding recommendation for the storm drain program.

Staff has identified the annual sidewalk replacement program as a potential area for cost savings that could then be applied to storm drainage. Currently the City budgets $1.9 million each year for sidewalk replacement. The sidewalk replacement program is funded jointly through the General Fund ($1.5 million) and the Utility Users Tax ($400,000). Staff recommends that Council review the possibility of reducing General Fund funding for sidewalks by either reducing the amount of sidewalk replaced annually or by sharing the cost of sidewalk replacement with property owners. The savings achieved by this adjustment could be diverted to fund storm drain program enhancements, while at the same time minimizing the impact to the General Fund and the amount of the Storm Drainage Fee increase.

The sidewalk program currently funds approximately $1.9 million per year of 100% City-funded repairs, implemented on a rotating district basis that goes throughout the City on cyclic basis. Property owners outside of the current district must either wait up to nine years for the repairs in their district to be addressed, or fund the repairs 100% at their own expense. Staff’s storm drain funding proposal would revise the sidewalk program to provide $1 million per year for repairs on a rotating district basis, utilize $500,000 per
year to create a new 50/50 cost sharing program that would allow property owners outside of the then-current district to make sidewalk repairs on a first-come, first-served basis, and transfer $500,000 per year of the General Fund monies to the storm drain program. This approach would have the multiple benefits of maintaining the current level of sidewalk repair activity, creating an opportunity for properties outside of the rotational basis to participate, and increasing the level of General Fund participation in the storm drain program. It should be noted that State Law (Streets and Highways Code) gives cities the choice of whether to require property owners to repair sidewalks or to undertake it as a city program. Most cities in California provide far less city resources for sidewalk repairs, especially on a per capita basis, than does Palo Alto.

Staff recommends that Council consider providing $1 million per year in General Fund dollars for the storm drain program, with $500,000 of the funding coming from a corresponding reduction in annual sidewalk replacement program spending. This level of General Fund financial contribution would result in a $2.00 reduction in the Storm Drainage Fee for single-family residential customers for any given level of service. Staff’s recommendation on applying General Fund dollars to the storm drain program are tentative at this time due to the uncertainty surrounding the State budget and its potential financial impacts to the City. Therefore, staff recommends that Council postpone a final decision on storm drain funding until after the State of California has adopted its FY 04-05 budget.

Council must also decide whether to fund storm drain capital improvements on a pay-as-you-go basis or through debt financing. The pay-as-you-go approach would result in lower total costs, but a relatively slow rate of project implementation. The debt financing option would accelerate the construction schedule by providing up-front funding, but would result in debt service payments over an extended period of time. As stated above, staff recommends that $1 million be allocated annually for storm drain capital improvements. Since many of the high-priority capital improvements are multi-million dollar projects, it would take several years to accrue enough cash to fund even a single project on a pay-as-you-go basis. For example, the proposed San Francisquito Creek pump station, estimated to cost $4.5 million, would take four and one-half years to fund. Under the debt financing option, the annual $1 million capital improvement funding allocation would be sufficient to support a utility revenue bond of up to $14 million, based on current low interest rates. The issuance of such a bond would enable the City to obtain up-front funds to implement projects, but would require annual debt service payments for a period of 25 years.

The attached matrix (Attachment E) shows the cost impact of each recommended storm drain program element to the monthly Storm Drainage Fee. For comparison purposes, the matrix also includes the cost of implementing all of the storm drain capital improvements recommended in the Condition Assessment and Master Plan studies, based
on the assumption of spending $3 million per year for capital improvements over a period of 25 to 30 years. The matrix also shows the fee impact of contributing either $500,000 or $1 million in General Fund dollars to the Storm Drainage Fund.

RESOURCE IMPACT
Staff’s recommendation would have the following financial impacts:

- The monthly Storm Drainage Fee for developed properties would increase from $4.25 to $7.50 per Equivalent Residential Unit
- General Fund contribution to the storm drain program would increase to $1 million.

This would be achieved by:

- General Fund would transfer $500,000
- The General Fund cost for sidewalk replacement would decrease by $500,000 and funding for the storm drain program would increase by $500,000 via a transfer

As a consequence of these proposed changes, the General Fund would realize a net savings of $300,000 since the current direct subsidy to the Storm Drain Fund is $800,000.

POLICY IMPLICATIONS
Staff’s recommendations are consistent with the Comprehensive Plan: Policy N-24 states that the City should “improve storm drainage performance by constructing new system improvements where necessary and replacing undersized or otherwise inadequate lines with larger lines or parallel lines.” Program N-36 further states that the City should “complete improvements to the storm drainage system consistent with the priorities outlined in the City’s 1993 Storm Drainage Master Plan, provided that an appropriate funding mechanism is identified and approved by the City Council.”

ENVIRONMENTAL REVIEW
Consideration of financial options does not require California Environmental Quality Act (CEQA) review. Individual storm drain infrastructure improvement projects will be subject to environmental review as they are developed.

ATTACHMENTS
Attachment A: Summary of storm drain funding mechanisms
Attachment B: Summary of economic consequences of not implementing the recommended drainage improvements
Attachment C: Description of proposed storm drain capital improvements
Attachment D: Map of proposed storm drain capital improvements
Attachment E: Storm drain funding alternatives matrix

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