CANYON LAKES
GEOLOGIC HAZARD ABATEMENT DISTRICT

TO:	**Canyon Lakes GHAD Board of Directors**
FROM:	**GHAD Attorney Patricia Curtin**
BOARD MEETING DATE:	**June 20, 2017**
SUBJECT:	**Canyon Lakes GHAD Resolution No. 2017/01**

RECOMMENDATION(S):

ADOPT Canyon Lakes GHAD Resolution No. 2017/01 adopting the GHAD budget for 2017/2018 fiscal year and updating GHAD Manager payment limit under Consulting Services Agreement, as recommended by the GHAD Attorney and General Manager.

RECEIVE the GHAD Statement of Investment Policy prepared by the GHAD Treasurer.

FISCAL IMPACT:

The GHAD is funded 100% through assessments levied on properties within the GHAD. Therefore, there is no impact on the County General Fund.

BACKGROUND:

On June 4, 1985, the Contra Costa County Board of Supervisors adopted Resolution No. 85/289 approving the formation of the Canyon Lakes Geologic Hazard Abatement District (GHAD) and appointed itself to serve as the GHAD Board of Directors. The GHAD Board is requested to adopt budgets for the GHAD operations each fiscal year. The GHAD Board is being requested to adopt the fiscal year budget for 2016/2017 as prepared by the GHAD General Manager, Sands Construction Company, Inc., which is attached to Resolution No. 2017/01 as Exhibit A. The budget identifies the annual payment limit as $100,155, under Administration.

CONSEQUENCE OF NEGATIVE ACTION:

The GHAD will not be able to continue operation starting July 1, 2017 if the budget is not approved.

GHAD STATEMENT OF INVESTMENT POLICY

The GHAD Manager, GHAD Attorney, and GHAD Treasurer recommend that the GHAD Board review and acknowledge receipt of an annual Statement of Investment Policy with sets forth a prudent and systematic investment relative to the monies generated by the GHAD property

assessments. These activities help ensure the appropriate management of the GHAD investment portfolio in order to achieve a meaningful return on investment.

The responsibility for conducting the GHAD investment program is delegated to the Treasurer, who has established written procedures for the operation of the investment program, consistent with the Statement of Investment Policy. The Treasurer coordinates closely with the GHAD Manager on budget, cash flow and disbursements and is responsible for managing the investment of GHAD revenues and reserve funds. The Treasurer has further authority, with consent of the GHAD Board of Directors, to engage the services of one or more third party custodians ("Custodian") to provide safekeeping and custody of assets.

The GHAD law does not include any direction or prohibitions on investment practices for GHAD funds. Government Code Sections 53601, 53607, and 53646 of the State of California regulate investment practices. The Statement of Investment Policy uses the State's provisions for local government investments as a starting point for developing and implementing the GHAD's investment policies and practices.

Finally, the GHAD's Statement of Investment Policy shall be reviewed regularly by the GHAD Manager and Treasurer. The Board of Directors shall approve all substantive modifications of the Policy.

The Statement of Investment Policy is attached to Resolution No. 2017/01 as Exhibit B.

THE BOARD OF DIRECTORS OF CANYON LAKES GEOLOGIC HAZARD ABATEMENT DISTRICT

Adopted this Resolution on June 20, 2017, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

RESOLUTION NO. 2017/01 (CANYON LAKES GHAD)

SUBJECT: Adopting 2017/2018 annual budget and updating GHAD Manager rates under the existing consulting services agreement.

WHEREAS, on June 4, 1985, the Contra Costa County Board of Supervisors adopted Resolution 85/289 approving the formation of the Canyon Lakes Geologic Hazard Abatement District (GHAD) and appointed itself to serve as the GHAD Board of Directors.

WHEREAS, on March 15, 2011, pursuant to Resolution No. 2011/01, the GHAD Board approved the consultant services agreement (Agreement) with Sands Construction Company, Inc., to act as Interim GHAD Manager. This Agreement, in section 3, requires the GHAD Board to determine by resolution each fiscal year the annual payment limit for GHAD Manager services.

WHEREAS, on January 08, 2013, pursuant to Resolution No. 2013/01, the GHAD Board removed the term "Interim" from the GHAD Manager title, the Agreement was incorporated therein by reference.

WHEREAS, the GHAD Board of Directors desires to adopt the budget for the fiscal year 2017/2018 prepared by the GHAD Manager, Sands Construction Company, Inc., attached hereto as Exhibit A. The budget attached in Exhibit A identifies the annual payment limit at $100,155, at page 2 under Administration.

The Board of Directors of the GHAD HEREBY RESOLVES THAT:

1. The GHAD Board approves the GHAD budget for the 2017/2018 fiscal year attached as Exhibit A and incorporated herein by this reference.

2. The GHAD Board adopts the annual payment limit for GHAD Manager services at $100,155 as set forth in Exhibit A and incorporates this payment limit into the consulting services agreement.

3. The GHAD Board hereby acknowledges receipt of the Statement of Investment Policy dated June 2017 attached hereto as Exhibit B.

4. The recitals are incorporated herein by this reference.

This Resolution shall become effective immediately upon its passage and adoption.

CANYON LAKES
GEOLOGIC HAZARD ABATEMENT DISTRICT

Program Budget

FISCAL YEAR 2017-2018

APRIL 2017

EXHIBIT A

CANYON LAKES
GEOLOGIC HAZARD ABATEMENT DISTRICT

May 30, 2017

Canyon Lakes GHAD Board of Directors
c/o Supervisor Candace Andersen
309 Diablo Road
Danville, California 94526

SUBJECT: Program Budget for Fiscal Year 2017-2018
Canyon Lakes Geologic Hazard Abatement District

Dear Board of Directors:

Attached please find the proposed program budget for the Canyon Lakes Geologic Hazard Abatement District (Canyon Lakes GHAD or GHAD) for fiscal year 2017/2018. The proposed fiscal year budget totals $981,500, which exceeds projected revenues and anticipates a $345,000 deficit and the need to draw a commensurate amount from the reserve fund. At the time of this publication, it is expected that the fund balance on June 30, 2017 will be approximately $3,738,000. A fund balance of $3,393,000 is projected for June 30, 2018.

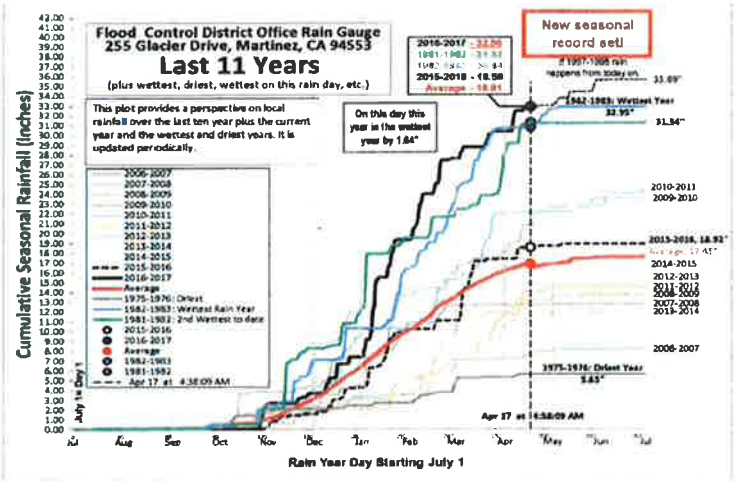
There are four major budget categories, their respective budget expenses breakdown as follows:

Major Repair	58 percent
Preventive Maintenance and Operations	15 percent
Special Projects	6 percent
Administration	21 percent

As a percentage of the annual budget, the Major Projects Program will utilize a large portion of the budget and require significant draws from the reserve fund. The heavy rains from this last season produced several landslides with preliminary damage estimates totaling over $600.00. The Canyon Lakes GHAD has applied to the Federal Emergency Response Agency (FEMA) for federal and state disaster area funds. Damage and repair estimates include emergency response, cleanup and protective measures; as well as engineering and construction and repair costs. Repair and restoration will be prioritized and will likely continue through the next few years.

The Preventive Maintenance Program will focus on continued efforts to secure damaged areas and complete asset site restorations. The program will continue to upgrade and analyze these sites and the associated data collection to insure all predictive features of these instrumentation and asset sites are fully realized. Specifically, we will continue to target the following program elements - Concrete Interceptor Ditch Systems (Repair and Replace Program); the Horizontal Drains (Site Maintenance Program, and a district wide cleaning program); the Piezometers (Site Maintenance Program), and the Soil Debris Bench (Maintenance Program). The Operations Program will continue its existing monitoring profile through this period.

The Bay Area received record setting precipitation this past season as shown in the impressive numbers recorded in the graphic below.



The San Ramon area received approximately 40.00 – inches of rain this year[1]. GHAD historical records indicate an increase in landslide activity throughout the district once 150% of the annual rainfall thresholds have been met. This year's cumulative rainfall topped out at about 200% of normal, thus producing a record setting number of landslides. Currently, The National Oceanic and Atmospheric Administration (NOAA) predicts El Niño neutral conditions in the Southern Oscillation; however, these early probability forecasts have often changed throughout the summer months.

The Special Projects Program costs will be directed to finalizing Amendment 2 to the Plan of Control which clarifies the independent role of the GHAD and strengthens those areas of the plan that define the scope of the District's responsibilities. It is anticipated that the Amended Plan will be presented to the GHAD Board for approval and brought into service during fiscal year 2017/2018. It is anticipated that the GHAD will pursue additional studies in the areas of Fiscal Policy and Geologic Risk Analyses. Approximately 6% of the annual budget has been established for the Special Projects Program. We continue to work to strengthen our communication with district constituents and stakeholders within the Canyon Lakes community.

This budget anticipates continued strengthening and building efficiencies within the Administration Program. General legal counsel will continue to be provided by the Canyon Lakes GHAD Board appointed attorney, Patricia Curtin of Wendel, Rosen, Black & Dean, LLP, and specific litigation counsel will be provided by Timothy J. Ryan of Bold, Polisner, Maddow, Nelson & Judson.

A summary of the expenses is shown on Table 1, pages 4 and 5, followed by brief descriptions of each of the budget items on pages 6 through 14.

Respectfully yours,

Canyon Lakes Geologic Hazard Abatement District

Michael D. Sands
Sands Construction Company, Inc.
General Manager

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[1] Contra Costa County Flood Control District – July 1 – June 30 (precipitation year)

Distribution list:

Canyon Lakes GHAD Board of Directors:

Supervisor Candace Andersen
309 Diablo Road
Danville, CA 94526

Supervisor John M. Gioia
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El Cerrito, CA 94530

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GHAD Attorney:

Patricia Curtin, Esq. (Canyon Lakes GHAD Attorney)
Wendel Rosen Black & Dean, LLP
1111 Broadway, 24th Floor
Oakland, CA 94607

GHAD Treasurer:

Mark I. Miller
Watermark Asset Management, Inc.
2010 Crow Canyon Place, Suite 210
San Ramon, CA 94583

Upon Execution: The following entities will be noticed that management will post approved Budget at www.canyonlakesghad.com

Canyon Crest Homeowners Association
c/o Association Management Company, Inc.
P.O. Box 503
Pleasanton, CA 94566
(925) 462-2138 ext. 102
Attention: Ms. Tani Cligny

Canyon Green Homeowners Association
Fleur DuMont Homeowners Association
Canyon View Homeowners Association
c/o Homeowner Association Services
2266 Camino Ramon
San Ramon, CA 94583
(925) 830-4848
Attention: Tom Bantz and Brian Ritter

Canyon Owners' Association
c/o Howe Association Management, Inc.
485 Hartz Avenue, Suite 100
Danville, CA 94526
(925) 837-2805 ext. 1#
Attention: Jackie Howe

Canyon Woods Homeowners Association
c/o Christison Company
3090 Independence Drive
Livermore, CA 94551-9469
(925) 371-5710
Attention: Elizabeth Ramirez

Echo Ridge Homeowners Association
The Lake at Canyon Lakes Homeowners Association
c/o Common Interest Management Services
315 Diablo Road, Suite 221
Danville, CA 94526
(925) 743-3080 ext. 235
Attention: Janice Schock and Melanie Malik

Golden View Elementary School
Nancy White, Principal
5025 Canyon Crest Drive
San Ramon, CA 94583
(925) 735-0555

San Ramon Regional Center
Gary Sloan, CEO
6001 Norris Canyon Road
San Ramon, CA 94583
(925) 275-9200

Vista Pointe Canyon Lakes Owners Assoc
c/o M & C Association Management
4305 Hacienda Drive, Suite 180
Pleasanton, CA 94588
Pleasanton, CA 94588
Attention: Adrian Breato

Canyon Lakes Geologic Hazard Abatement District
Program Budget
Fiscal Year 2017/2018

The following proposed line item program budget (Table 1) summarizes the anticipated expenditures for fiscal year 2017/2018 for the Canyon Lakes Geologic Hazard Abatement District (Canyon Lakes GHAD, GHAD or District). Through an ongoing risk management assessment the GHAD manager evaluates and addresses risk through the implementation of an annual program budget consisting of four major categories. Preceding Table 1, and directly below, please see a general overview description of the four major program elements within the budget.

Major Projects Program

The annual Major Projects Program includes; landslide repair projects, drainage improvement projects and capital improvement projects necessary to either control, mitigate, or prevent landslide activity. Other large program responses necessary to implement the Plan of Control, including specific purpose studies and investigations, may also be included in the Major Projects Program.

Generally, for consideration of inclusion into the Major Projects Program, a project or study would represent a level of complexity requiring plans, specifications, and comprehensive engineering analysis including modeling and research, or a project with a protracted scope such as those requiring multiple regulatory agency approvals. Most Major Projects have a projected cost that exceeds $20,000.

Historically, the Major Projects Program has been comprised of significant landslide repair projects and other responsive large projects; at other times, it has included programmatic studies and investigations useful in generating proactive responses. This diversity of projects demonstrates the importance of a flexible Major Projects Program structure that adapts between responsive and proactive needs and capabilities to manage the dynamic nature of larger scale geologic events.

Preventive Maintenance and Operations

The annual Preventive Maintenance and Operations Program includes all minor repairs, cleanup, maintenance, monitoring and replacement of drainage structures and other assets that degrade over a serviceable life. The goal of preventive maintenance is to keep the assets in operational condition and identify potential slope stability risks before they manifest, allowing measures to be taken to either prevent, or mitigate the impact of these hazards as defined in the Canyon Lakes GHAD Plan of Control.

Canyon Lakes GHAD assets include, concrete lined ditches, subdrainage systems, groundwater measuring instrumentation, slope inclinometers, and moisture gauges, and slope debris catchment features.

The Preventive maintenance program also includes preparations for emergency response, winterization measures including erosion protection, slope stabilization supplies, and instrument maintenance.

The Operations Program is primarily populated with scheduled instrument monitoring events. Data from these instruments are evaluated to establish risk and trends in an effort to avert landslide activity. In addition to the instrumentation monitoring program, the Operations Program contains the Incident Response and Community Relations Program, which incorporates comprehensive first response capabilities, and fosters community incident interaction.

Special Projects

The Canyon Lakes GHAD pursues ongoing and new activities identified as Special Projects. Special Projects include activities requested by the Board such as the Communications Program, or projects and studies designed to improve the District's operational effectiveness and insure financial solvency. Special Projects also include utilizing new technologies to increase the efficiencies of the day-to-day operations of the GHAD. Establishment, testing and placing into service a new Geographic Information System (GIS) has been one of many successful fruitions of the Special Projects Program.

Administration

Administrative expenses are required to operate the Canyon Lakes GHAD and implement the projects. Administrative expenses include the various roles, personnel and consultants to manage the operations including; the General Manager, Administrative Manager, Construction Services Manager, certain clerical and accounting staff, consultants, and legal support.

With respect to the General Management of the Canyon Lakes GHAD - the Canyon Lakes GHAD Board of Directors through Resolution 2016/01, among other business, established a Consulting Services Agreement with Sands Construction Company, Inc. to act as General Manager. The payment limit established for a term through June 30, 2017 is $100,155. The scope of services for the General Manager include, managing the day-to-day operations through implementation of the necessary financial recordkeeping and reporting; updating and maintaining governing documents, such as the Plan of Control; and managing and updating administrative tools such as the Reserve Study, Communications Plan, Work program and Monthly Incident Log. The General Manager Consulting Services Agreement provides for certain administrative positions including, but not limited to; a General Manager, an Administrative Manager, a Construction Services Manager and a Network Administrator as well as overhead costs, such as office space rent, office supplies and postage. The General Manager will retain the necessary professionals, including without limitation, engineers, accounting professionals, and vendors to facilitate the operations of the GHAD. The General Manager Consulting Services Agreement and associated budget allows for the conditional use of subcontractors such as administrative sub-consultants and

engineering or construction sub-consultants, within the payment limits of the Consulting Services Agreement.

With respect to the operations management of the Canyon Lakes GHAD, the Operations Manager payment limit is set at $126,780 for a term through June 30, 2017. The scope of services for the Operations Manager include implementing the Major Projects and Preventive Maintenance Programs through forecasting work schedules and priorities; preparing Requests for Proposals and managing maintenance and repair operations within the Major Projects and Preventive Maintenance Programs - including project management and construction management; and preparing for and responding to emergency incidents. The Operations Manager Consulting Services Agreement provides for certain operational positions including, but not limited to, an Operations Manager, Construction Services Manager and Construction Services Technician, as well as certain overhead costs, such as, office supplies, and electronic monitoring devices testing apparatus rental. The Operations Manager Consulting Services Agreement and associated budget allows for the conditional use of subcontractors such as contractors, engineers, and special inspectors, within the payment limits of the Consulting Services Agreement.

A summary of the proposed Fiscal Year 2017/2018 Budget is presented in Table 1 on the following pages.

Table 1 – Summary of Proposal Fiscal Year 2017/2018 Budget

Budget Item	Budget Amount	% of Total Budget
Major Repairs		
1252 Canyon Side Landslide Repair	87,500	
Canyon Side – Open Space Landslide Repair	92,500	
Crow Canyon Road Landslide Repair	186,000	
Fairway #14 Open Space Landslide Reapir	140,000	
Unanticipated Sites	10,000	
Landscape Replacement (associated with repairs)	50,000	
Total Major Projects	**$566,000**	**58%**

Preventive Maintenance/Operations		
Preventive Maintenance		
Drainage		
Storm Drain Facilities	0.00	
B-58 Concrete Lined Ditches		
Maintenance/Clean/Map	20,000	
Repair and Replace	5,000	
Subdrain Systems	5,000	
Horizontal Drains	50,000	
Subdrain Outlets/Pumps	5,000	
Piezometers	5,000	
Settlement Monitors	1,000	
Retention Basins	5,000	
Minor Repairs	10,000	
Winterization	8,000	
Emergency Response	10,000	
Debris Benches	3,000	
Subtotal	**$127,000**	
Operations		
Piezometer Monitoring	5,000	
Horizontal Drain Monitoring	5,000	
Subdrain Monitoring	5,000	
Settlement Monitoring	1,000	
Incident Response/Homeowner Relations	10,000	
Subtotal	**$26,000**	
Total Preventive Maintenance/Operations	**$153,000**	**15%**

Special Projects		
Plan of Control	30,000	
Reserve Study	1,000	
Special Studies	5,000	
Information Technology/GIS	16,500	
Accounting Systems Upgrade	1,000	
Procedures Manual	1,000	
Communications Program	3,000	
CA Association of GHAD – Membership/Insurance	2,500	
Total Special Projects	**$60,000**	**6%**

Administration		
Legal fees		
General Counsel	25,000	
Special Counsel		
Litigation/Legal Concerns		
HOA/CCCFCD	30,000	
Assessment Roll Update	5,000	
Staffing/Administrative Support	65,000	
Accounting/Bookkeeping	60,000	
Training/Education	1,000	
Office – Rent/Supplies/Equipment/Lease	16,500	
Total Administration	**$202,500**	**21%**

TOTAL PROPOSED BUDGET FY2017/2018	**$981,500**	**100%**

Available Funds	
Estimated Beginning Fund Balance – July 1, 2017*	3,738,000
Estimated Property Owner Assessments	570,000
Estimated Interest on Investments	66,500
Other Income	00
Total Available Funds	**$4,374,500**
Uses of Funds	
Major Projects	566,000
Preventive Maintenance	153,000
Special Projects	60,000
Administrative	202,500
Total Use of Funds	**$981,500**
Estimated Reserve Available/Ending Fund Balance June 30, 2018	**$3,393,000**

* Includes estimated true-up revenue payment (June 2017) of $30,004; Projected Fund Balance date of publication

DESCRIPTION OF BUDGET ITEMS

Major Repairs

1252 Canyon Side Landslide Repair

During the heavy rains in the early months of 2017 a series of landslides occurred on the slopes around Canyon Side. This slide was initially reported by the San Ramon Public Works Department and immediate response included covering and securing the area. The site has been maintained throughout the winter and engineering analysis is currently underway. We anticipate repairs will be implemented during theis fiscal year.

Estimated Cost $87,500

Canyon Side – Open Space Landslide Repair

While on a site reconnaissance, GHAD staff observed an additional rotational slide threatening to enter the downslope watercourse. Barriers were set in place and drainage established. The site has been covered and maintained throughout the winter. Engineering designs and plans are currently being completed. Potential environmental issues will be considered with any design and action to proceed with a repair.

Estimated Cost $92,500

Crow Canyon Road Landslide Repair

This landslide occurred during an extremely heavy rain event and threatened the right of way of Crow Canyon Road. Immediate responses included; securing the site with plastic and barriers placed at the toe of slope to prevent future movement of the landslide debris from encroaching the right of way. This project is currently under engineering analysis and planning. The GHAD was able to obtain authorization to utilize Lidar scanning of the failure via drone flights, which greatly expedited the process of repair development.

Estimated Cost $186,000

Fairway #14 Open Space Landslide Repair

The fairway 14 landslide and debris flows occurred during heavy rains. The site is quite large and incorporates an area of several hundred feet of hillside. The resulting debris flows encroached onto the golf course - some siltation making its way to the watercourse below. Although this golf course site presents a lower priority for the GHAD to repair[2], it does produce the potential for significant mobilized slide debris to encounter the adjacent seasonal stream. The GHAD is currently working on possible mitigation schemes that will likely utilize a debris wall at the base of slope to prevent further incidents of land movement.

Estimated Cost $140,000

Unanticipated Sites:

During heavy rain years unexpected repairs are necessary to avert or control landslides that may threaten property within the District. It is vital for the manager to retain the availability of funds within the Major Repair Program to address such an event.

It is also common to experience a change in the planned construction schedule to include additional sites. Known sites can rise in priority throughout the year and additional sites may emerge.

Estimated Cost $10,000

[2] GHAD Plan of Control and past practices to protect structures on a priority basis given the availability of funds

Landscape Replacement:

Typically, remedial landscaping is either included in the scope of work for major projects or eliminated completely from the repair scheme: however, on occasion the associated License Agreements executed in preparation of the work will address a reimbursement or allowance to the property owner for remedial landscaping installation. With as many sites and events that the Canyon Lakes GHAD has to attend to over the next fiscal year, we have allowed for certain, unknown at this time, reimbursements for landscape/structure reimbursements.

Estimated Cost $50,000

Preventative Maintenance and Operations

Preventative Maintenance

Preventative maintenance generally consists of those measures taken to prevent an incident or landslide event, including asset maintenance, drainage structures, instrument sites and winterization measures. Operations include ongoing monitoring programs and responses to community requests. Details of the proposed budget for each of these categories are listed below.

Given the unique nature of the damage and response efforts necessary within the Major Projects Program this year, the Preventive Maintenance Program will continue through this fiscal year with those tasks that are essential to maintaining slope instrumentation sites and information and data collection and other measures to insure slope stability. We will defer discretionary efforts within the Preventive Maintenance program until we complete efforts to address the damages sustained during this year's rain events.

B-58 Drain Systems

Maintenance – Allows for one major annual cleaning and mapping. District staff periodically walks the B-58 systems to get a first-hand account of their current conditions and project their serviceable life. This information, along with other empirical data, is utilized in our Reserve Study updates. With the extreme weather conditions this year and the related soil and vegetation load impacting the network of B-58 systems, we have anticipated and allowed for a greater effort to maintain proper drainage for these facilities over the fiscal year.

Estimated Cost $20,000

Repair and Replacement – The GHAD has completed all of the listed 250 lineal feet of damaged B-58 throughout the district. In the future, a priority will be established based on the degree of damage and risk to improved properties, and a percentage of future replacement projects will be budgeted throughout the upcoming years. In recent years minor repairs were accomplished involving approximately 1500 lineal feet of B-58 drainage systems. This year an additional 100 lineal feet of minor repair (cracks and

small spalls) has been budgeted for repair. The remaining budget will be utilized on repairs to existing B-58s on a site-by-site basis.

Estimated Cost $5,000

Subdrain Systems

Outlet sites for subdrain systems must be monitored and maintenance provided to insure outlets have not been damaged or impeded. This budget will allow for an inspection and minor maintenance of these sites.

Estimated Cost $5,000

Horizontal Drains

The District Manager has placed a high priority on verifying the condition of and restoring as many existing horizontal drains throughout the development as possible. A definitive list of sites requiring repairs has been determined and work continued through fiscal year 2016/2017 on restoring the sites and installing identification markers. The work this year has been expanded to include commencement of a multi-year cleaning program.

Estimated Cost $50,000

Subdrain Outlets/Pumps

The Canyon Lakes GHAD conducts ongoing efforts to identify, locate, and make determinations about the effectiveness of the network of subdrains throughout the Development. The District anticipates that on-site restoration work may be necessary at some sites. This additional work as well as the introduction of the subdrain systems into the District GIS system has been incorporated into this budget item.

The District maintains three substation subdrain pumping facility sites located around the lake at Canyon Lakes. Periodic site checks for operation are required. In recent years the equipment, instrumentation and electronics have been updated. A budget has been established to provide ongoing site maintenance and pump replacement.

Estimated Cost $5,000

Piezometers

The District reads and maintains in excess of 72 piezometers measuring ground water elevations. A definitive list of sites requiring repairs has been determined and work completed on restoring many of the sites and installing identification markers and protective monuments at virtually all sites. The work this year has been expanded to include a greater number of sites and inclusion of the sites into the GIS system.

Estimated Cost $5,000

Settlement Monitors

Over time, a number of settlement monitors have been placed throughout the development. These monitors were, in large part, installed as part of a specific study and therefore are not continually monitored. A modest budget has been established for site preservation and maintenance.

Estimated Cost $1,000

Retention Basins

Protracted drought conditions in northern California have resulted in significant reduction in water levels in many dual-purpose storm water retention facilities in the area, including within the Canyon Lakes development. The GHAD manager is actively working with local Homeowners Associations and jurisdictional agencies to further explore the potential risk ramifications in an effort to collectively plan for impact.

Estimated Cost $5,000

Minor Repairs

A budget is established annually for anticipated, as well as unanticipated minor repair projects. There is not currently any anticipated minor projects within the Preventive Maintenance Program.

Estimated Cost $10,000

Winterization

An annual budget for the cost of winterization materials and installation has been established.

Estimated Cost $8,000

Emergency Response

During the winter rainy season the Canyon Lakes GHAD responds to a range of urgent active and threatening landslides and drainage issues where property damage is threatened. These incidents typically involve mud or debris flows, plugged storm drains at the base of slopes or flooded properties due to the overflow of runoff from plugged or damaged facilities. In severe cases these responses can be the initiation of slope stabilization measures in preparation for a major repair.

Estimated Cost $10,000

Debris Benches

Numerous earthen debris benches exist throughout the district. It is essential that these facilities are inspected to insure capacities and drainage have not been compromised. Annual inspections are made and periodic debris removal plans are initiated. This year's budget allows for geotechnical evaluations and the periodic removal of accumulated debris from several of those benches identified during the study and routine monitoring events.

Estimated Cost $3,000

Operations

An inventory of on-site instrumentation including hundreds of piezometers, inclinometers, horizontal drains, subdrains and settlement monuments are monitored periodically throughout the year as a preventative measure. Collected data from these sites is analyzed and aggregated into the GIS system for further analysis to establish trends.

Monitoring sites can be established for a variety of uses. Often completed repair sites require monitoring to confirm that the slope has been stabilized. Other sites have been utilized to indicate signs of unstable conditions developing and have been instrumental in determining slope conditions prior to the activation of a landslide.

Through the use of collected data such as water depth, magnitude of slope movement, depth of movement and ground surface movement, the District has been able to arrest slope movement in advance of an incipient failure. Archiving of historical data is currently being integrated into the GHAD GIS system.

Throughout the year the District receives incident response or assistance calls from property owners regarding slope stability or drainage issues. Community relations, including incident responses through the annual Operations Program has been institutionalized as a role of GHAD management. All incidents are recorded within the GIS and move through the district response mechanisms as is appropriate and consistent with the GHAD Plan of Control.

The GHAD manager receives updates in long-range weather and oceanic temperature changes through the National Oceanic and Atmospheric Administration (NOAA) and other scientific and atmospheric agencies that track data and produce probabilistic assessments on the likelihood of a recurrence of heavy rain conditions.

Estimated Cost $26,000

Special Projects

During fiscal year 2017/2018 the District will continue several special projects. Brief descriptions of the special projects are presented in Table 1 and further described below:

Plan of Control Update

At the time of this publication, Amendment 2 to the Plan of Control has been drafted and will be presented to the Board which will contain additional clarifications with respect to the GHADs responsibilities and authorities and make certain minor clarifications in the language.

Estimated Cost $30,000

Reserve Study

The Canyon Lakes GHAD reserve fund study has been completed. The Reserve Study functions as a pro-forma analysis of the financial needs of the GHAD. It serves as a tool to calculate the annual contribution requirements by the District to build and maintain sufficient

funds for emergencies based on past weather patterns and slide repair costs. The Reserve Study projects annual contribution to the funds required over a forty-year period and is periodically updated to represent new conditions and impacts.

Estimated Cost $1,000

Special Studies

The Canyon Lakes GHAD intends to conduct targeted studies in the areas of fiscal policy and geologic risk. The recent research and study into the Plan of Control update and the Reserve analysis will be utilized to provide initial data to conduct these research projects. The Canyon Lakes GHAD, now in its 30th year, has the unique opportunity to address many of the issues surrounding long-term viability and sustainability, within changing environmental and financial conditions. Using empirical data we can assess potentially increasing financial loads and geologic risks that may accompany the maturation process of this district. We are confident that these studies have produced and will continue to produce beneficial results.

Estimated Cost $5,000

Information Systems and Technology

GHAD has completed an upgrade to its GIS system to include all of the GHAD's data collection and monitoring operations. The system is now fully operational and is run from internal servers, combined with secure and private "cloud" storage. The record and tool that this system offers facilitates the General Manager's ability to locate past repairs and assist in a variety of risk assessments within the District. Upgrades have now provided additional state-of-the-art security and redundancy features not historically available.

As a result of an independent evaluation of the GHAD's information systems conducted in 2012 and again in 2015, the GHAD has modernized its IT systems and security. Additionally, a new GHAD website was launched www.canyonlakesghad.com to assist property owners and disseminate information to our constituents.

It is anticipated that work will continue on enhancements to the GHAD GIS during this term. Work will include, incorporating access features to data and graphic representations, and improving performance and usability of the site.

Estimated Cost $16,500

Accounting System Upgrade

Periodic upgrades are necessary to enhance accounting system capabilities. The GHAD utilizes expense accounting software to assist in reporting and the day to day operation of the District. Continued accounting systems enhancements will be implemented allowing more data entry streamlining, enhanced reporting, and quality control assurance procedures, augmenting the current systems.

Estimated Cost $1,000

Procedures Manual

GHAD continually upgrades procedures and modifies plans to incorporate new technologies that assist the GHAD in delivering the highest level of services. Procedures require certain modifications and enhancements as new methodologies are introduced and incorporated into the GHAD Standard Operation Procedures. Certain financial and operations procedures have been institutionalized within the program. Additional procedures will be incorporated to further define and standardize the following areas:

- Preventive Maintenance/Operations
- Communications
- Administrative Procedures

Estimated Cost $1,000

Communications Plan

The Canyon Lakes GHAD maintains a communications plan designed to keep constituents current on GHAD operations and developments. The plan addresses several venues and mediums in which to disseminate information within this district, and to other concerned parties, and to establish clear and accessible channels for community interaction. The GHAD has now implemented a web page for public information and a multi-page informational brochure has been completed and distributed to interested Homeowner Associations (HOA) that describes the GHAD and its responsibilities and limitations.

Estimated Cost $3,000

Outreach/Legislative Review
California Association of GHADs (CAGHADs) Membership/Insurance

The proliferation of new GHADs within California has resulted in new legislation and adopted procedures. The Canyon Lakes GHAD Manager, in association with others, shares information and knowledge through a consortium of GHAD managers known as the California Association of GHADs (CAGHADs). The CAGHAD has recently obtained General Liability policies for its member GHADs. Policy premium costs for the Canyon Lakes GHAD are approximately $1,400[3]. Additionally, the GHAD manager participates in the CAGHADs as the organization pursues other financial assets that may provide the GHADs additional options for extraordinary event financial planning. In 2016 the CAGHAD Board adopted a new fee schedule reducing the annual GHAD fees for membership by 50%.

Estimated Cost $2,500

Administration

The administration of the Canyon Lakes GHAD includes all costs associated with legal support, office expenses, staffing, and accounting. Brief descriptions are presented below.

[3] Nominal increases in unit costs are expected in 2016

Legal

General Counsel – GHAD management must interact regularly with GHAD Counsel. The day-to-day operations of the GHAD present myriad of opportunities and issues to work directly with GHAD counsel, in the areas of contracts, agreements, issues or new business to present to the Board, legislation, property owner issues, etc.

Estimated Cost $25,000

Special Counsel – GHAD management requires the services of special counsel from time to time in the areas of litigation and other legal concerns.

Estimated Cost $30,000

Assessment Roll Update

Annually, the district funds an effort to recalculate the final assessment roll for the district. This budget allows for a periodic analysis of the comprehensiveness of the roll in addition to calculating the properties status and rate modifications.

Estimated Cost $5,000

Staffing/Administrative Support

The GHAD staff includes the General Manager, a Construction Services Manager, an Administration Manager and frequently other support staff. The General Manager administers all GHAD day-to-day operations, including financial budgeting and communications regarding its activities. The Construction Services Manager, among other tasks, administers the Major Projects and Preventive Maintenance Programs and associated work schedules, consulting and construction contracts, and documents. The administrative staff is responsible for accounting/bookkeeping, contract administration, clerical, and construction management support. Additional management staff costs are also applied to specific projects as appropriate. Authorized business expenses such as rent, office supplies and leases are included in Staffing.

Estimated Cost $142,500

Statement of Investment Policy

Canyon Lakes GHAD
Policy Dated: June 2017

EXHIBIT B

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I. Introduction

Geologic Hazard Abatement Districts ("GHADs") are local governmental districts specifically formed for the purpose of prevention, mitigation, abatement or control of geologic hazards. GHADs are political subdivisions of the state and is not an agency or instrumentality of a local agency. A geologic hazard is broadly defined as an actual or threatened landslide, land subsidence, soil erosion, earthquake, fault movement, or any other natural or unnatural movement of land or earth. The board of directors of a GHAD is comprised of either five landowners from within the GHAD boundaries or the legislative body of the city or county that created the GHAD. The powers of the GHAD are vested in the board of directors.

A GHAD is empowered to acquire, construct, operate, manage or maintain improvements on public or private lands which are necessary or incidental to prevent, mitigate, abate or control geologic hazards within the district. The GHAD may assess landowners for the operation and maintenance of improvements acquired or constructed pursuant to GHAD law, found in the California Public Resources Code Section 26500 *et seq.* ("GHAD Law"). Further, the GHAD prepares plans of control which describe in detail a geologic hazard, its location and a plan for the prevention, mitigation, abatement or control thereof.

The GHAD Treasurer is entrusted with the financial management of the district's resources in close collaboration and cooperation with the GHAD Manager.

The GHAD Manager is empowered with the day-to-day responsibility of managing and overseeing the operations of the GHAD, including managing the annual budget, responding to constituents, execution and management of contracts.

The purpose of this Statement of Investment Policy ("Policy") is to identify various policies and procedures that enhance opportunities for a prudent and systematic investment policy and to organize investment-related activities. Activities include providing accurate cash projections, the expeditious collection of revenue, the control of disbursements, cost-effective management of custodial relations, prudent investment and portfolio allocation for a real return on investment.

II. Statement of Objectives

In managing the GHAD investment portfolio, the GHAD Treasurer seeks to balance the investments to meet the short term, intermediate, and long term (reserve) needs of the GHAD. Investments are intended to achieve a real rate of return while minimizing the potential for capital losses arising from market changes or issuer default. While the GHAD Treasurer will not make investments for the purpose of trading or speculation as the dominant criterion, they will seek to enhance total portfolio return by means of effective investment allocation.

The GHAD will consider the following objectives for portfolio management:

1. **Safety** - Each investment transaction shall seek to ensure that capital losses are minimized, whether they are from securities defaults or erosion of market value.

2. **Liquidity** - The investment portfolio will remain sufficiently liquid to enable the GHAD to meet all operating requirements that might be reasonably anticipated while preserving principal.

3. **Yield** - The GHAD may establish a performance benchmark based on current investment objectives and constraints. The investment portfolio shall be managed to attain a real rate of return throughout budgetary and economic cycles, taking into account the GHAD's policy constraints and cash flow requirements. The portfolio yield represents current income while total return will include both income and capital appreciation/depreciation.

4. **Diversification** - The investment portfolio will be diversified to manage interest rate, market event, liquidity, and credit risk to meet the GHAD's investment objectives.

5. **Real Rate of Return-** the investment portfolio will seek an investment return in excess of inflation.

III. Use of State Investment Guidelines

GHAD Law does not include any direction or prohibitions on investment practices for GHAD funds. Government Code Sections 53601, 53607, and 53646 of the State of California regulate investment practices for cities, districts and local agencies. This Policy uses the State's provisions for local government investments as a starting point for developing and implementing the GHAD's investment policies and practices.

IV. GHAD Treasurer Authority

The responsibility for conducting the GHAD investment program lies with the GHAD Treasurer, who has established procedures for the operation of the investment program, consistent with this Policy. Within the aforementioned authorities, the GHAD Treasurer coordinates closely with the GHAD Manager on budget, cash flow and disbursements and is responsible for managing the investment of GHAD revenues and reserve funds. The GHAD Treasurer has further authority to engage the services of one or more third party custodians ("Custodian") to provide safekeeping and custody of assets.

For purposes of this Policy, the GHAD Treasurer must be registered under the Investment Advisors Act of 1940, as a registered Investment Advisor and The custodians must be registered broker-dealers with (FINRA) Financial Industry National Regulatory Authority and a member of the Securities Investor Protection Corporation (SIPC).

V. Investment Policy Adoption

This Policy shall be reviewed and approved by the GHAD Manager and GHAD Treasurer. If the GHAD Manager and GHAD Treasurer determine substantial modifications to this Policy are necessary, such modifications shall be reported to the Board of Directors.

VI. Standard of Prudence

GHAD Board members, employees and consultants involved in the investment process ("Participants") shall act responsibly as custodians of the public trust. Participants acknowledge that the GHAD's investment portfolio is subject to public review and evaluation. Nevertheless, in a diversified portfolio, it must be recognized that occasional measured losses are inevitable, and must be considered within the context of the overall portfolio's investment return, provided that adequate diversification has been implemented.

The standard of prudence to be used by investment officials shall be the "prudent Investment Manager standard," which states:

> *"When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing investments, the Investment Manager shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the client, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the (client) Investment Manager."*

Participants acting in accordance with this Policy and exercising due diligence, shall be relieved of personal responsibility for an individual security's credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and the liquidity and the sale of securities are carried out in accordance with the terms of this Policy.

VII. Reporting

While there is no requirement in GHAD Law to do the following, the following investment activity reports will be completed.

A. Monthly

At the direction of the GHAD Treasurer, the Custodians shall provide a monthly institutional brokerage statement with an investment and transaction summary to the GHAD Manager.

B. Quarterly

The GHAD Treasurer shall submit quarterly investment reports to the GHAD Manager.

The quarterly report shall highlight key aspects of information contained in the investment reports; a summary of investment activity for each GHAD, total account balance, balance by position, quarterly performance summary of the investment portfolio and review of cash flow required to meet expenditures for the next six months.

C. Other

The GHAD Treasurer shall present to the GHAD Manager an annual report on the investment program and investment activity no later than 180 days following the end of the fiscal year. The annual report may include a performance summary, suggest policies and improvements that might enhance the investment program, and include an investment plan for the ensuing fiscal year. The GHAD Treasurer will provide additional data deemed necessary by the GHAD Manager to facilitate any additional accounting or reporting requirement.

VIII. Investment Instruments

The following sections describe individual investment types appropriate for the GHAD.

A. **United States Treasury Notes, Bonds, Bills, or Certificates of Indebtedness**, or those for which the faith and credit of the United States are pledged for the payment of principal and interest.

CA Govt Code 53601(b)

B. **Negotiable Certificates of Deposit** issued by a nationally- or state-chartered bank, a savings association or a federal association as defined by Section 5102 of the California Financial Code, a state or federal credit union, or by a federally-licensed or state-licensed branch of a foreign bank.

CA Govt Code 53601 (i)

C. **Money Market Funds** Shares of beneficial interest issued by diversified management companies that are money market funds registered with the Securities and Exchange Commission under the Investment Company Act of 1940 (15 U.S.C.).

The GHAD will typically utilize, but is not limited to, Government and Treasury money funds in portfolios. A Government money fund invests at least 99.5% of its total assets in cash, government securities, and/or repurchase agreements that are "collateralized fully" (i.e., collateralized by cash or government securities). A Treasury fund is a type of government money fund that invests in US Treasury Bills, Bonds and Notes.

CA Govt Code 53601 (l)

D. **Mutual Funds** an investment program funded by shareholders that trades in diversified holdings and is professionally managed.

E. **Exchange Traded Funds (ETF)** marketable securities that track an index; which can be comprised of a basket of assets (such as commodities, bonds, or equities) Unlike mutual funds, an ETF trades like a common stock on a stock exchange. ETFs experience price changes throughout the day as they are bought and sold.

F. **Municipal Bonds** issued by the State of California and any local agency within the state, including bonds payable solely out of revenues from a revenue-producing property owned, controlled, or operated by the state or any local agency, or by a department, board, agency or authority of the state or any local agency.

Registered treasury notes or bonds of any of the other 49 United States in addition to California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any of the other 49 United States, in addition to California.

CA Govt Code 53601 (c), CA Govt Code 53601 (d), CA Govt Code 53601 (e)

G. **Asset-Backed Securities** defined as all mortgage pass-through securities, collateralized mortgage obligations, mortgage-backed or other pay-through bonds, equipment lease-backed certificates, consumer receivable pass-through certificates, and consumer receivable-backed bonds.

Asset-backed securities shall be rated at least "AA" or the equivalent by a NRSRO at the time of purchase. Additionally, securities eligible for investment under this subsection shall be issued by an issuer whose debt is rated at least "A" or the equivalent by a NRSRO at the time of purchase.

CA Govt Code 53601 (o)

H. **Structured Notes**, a debt obligation that also contains an embedded derivative component that adjusts the security's risk/return profile. The return performance of a structured note will track both that of the underlying debt obligation and the derivative embedded within it.

The minimum rating criteria for particular investment categories is applied on the date of purchase. The GHAD may from time to time be invested in a security whose rating is downgraded. In the event a rating drops, the securities shall be reviewed and a plan of action shall be implemented by the GHAD Treasurer.

IX. Investment Diversification

Investments shall be based on a review of cash flow forecasts. Investments will be reviewed quarterly to permit the GHAD Manager to meet all projected obligations.

The short term allocation will be invested in safe and liquid assets, typically money market funds, to ensure that operational expenses will be met for the current budgetary year (1x operating expense).

The intermediate allocation is maintained at 1x operating expense and is invested in inflation-protected securities and short-term fixed income holdings. This allocation is intended to cover

unexpected events (earthquakes, extreme weather conditions, etc.) if the annual operating funds are exhausted.

The long term reserve allocation invests assets in excess of the operating and intermediate budget allocations and is used to generate income and modest growth for future use. The objective of the long term reserve allocation is balanced between long-term capital appreciation and high current income, with an emphasis on income. This sleeve of the portfolio strives to provide a real rate of return over time (nominal rates of return adjusting for factors such as inflation, interest rates, credit spreads and foreign exchange).

The minimum rating criteria for particular investment categories is applied on the date of purchase. The GHAD may from time to time be invested in a security whose rating is downgraded. In the event a rating drops, the securities shall be reviewed and a plan of action shall be implemented by the GHAD Treasurer.

X. Internal Controls

The GHAD Treasurer shall implement a system of internal controls. These controls are designed to prevent loss of investments arising from fraud, employee error, misrepresentation by third parties or imprudent actions by Participants involved in the investment process. Controls deemed most important include:

- **Separating transaction authority from accounting and record keeping.** Separating the person who authorizes or performs the transaction from the people who record or otherwise account for the transaction, fosters a system of checks and balances.

- **Avoiding physical delivery securities.** Book entry securities are much easier to transfer and account for since actual delivery of a document never takes place. Delivered securities must be properly safeguarded against loss or destruction. The potential for fraud and loss increases with physically delivered securities.

- **Confirming telephone transactions for investments and wire transfers in writing.** Due to the potential for error and improprieties arising from telephone transactions, all telephone transactions should be supported by written communications and approved by the appropriate person. Written communications may be via fax/email if on letterhead and the safekeeping institution has a list of authorized signatures.

- **Developing money transfer agreements with the third party custodian.** This agreement should outline the various controls and security provisions, and delineate responsibilities of each party making and receiving money transfers.

XI. Financial Institution Selection

The GHAD Treasurer shall review and select qualified financial institutions from which securities are held, purchased or sold.

In selecting financial institutions for the deposit or investment of GHAD funds, the GHAD Treasurer shall consider the financial stability of the institutions. The GHAD Treasurer shall

continue to monitor financial institutions' creditworthiness throughout the period in which GHAD funds are deposited or invested.

The GHAD Treasurer is authorized to conduct investment transactions on the GHAD's behalf. The GHAD Treasurer may use its own list of approved broker/dealers and financial institutions for investment purposes.

XII. Risk Tolerance

It is recognized that investment risks can result from issuer defaults, market price changes, or various technical complications leading to temporary illiquidity. Portfolio diversification is employed as a way to control risk. The GHAD Treasurer is expected to display prudence in the selection of securities as a way to minimize risk. No individual investment transaction shall be undertaken that jeopardizes the total capital position of the overall portfolio.

The GHAD Treasurer shall use strategies to control risks of default, market price changes, illiquidity, credit quality, investment duration and portfolio volatility (standard deviation). The GHAD Treasurer shall periodically review with GHAD Manager the investment results, risks and the steps that have been taken to mitigate future risks.

XIII. Safekeeping and Custody

To protect against potential fraud and embezzlement, the assets of the GHAD shall be secured through third-party custody and safekeeping procedures.

The GHAD Treasurer shall maintain a list of financial institutions authorized to provide custodial services. Assets are held directly with the Custodian who provides independent verification of assets through monthly institutional account statements. Each GHAD will maintain a separate account with the Custodian.

The GHAD Treasurer is responsible for the coordination, review and monitoring of GHAD cash disbursements. Through a dual control verification process, the GHAD Treasurer verifies disbursement requests from the GHAD Manager. GHAD Managers shall only submit check requests for vendors approved by the GHAD Manager. The GHAD Treasurer coordinates and verifies disbursements from the Custodian to the approved vendors.

Glossary

ASK PRICE: The price at which a seller offers to sell a security to a buyer.

ASSET-BACKED SECURITIES: Bonds created from various types of consumer debt. Returns on these securities come from customer payments on their outstanding loans. The primary types of asset-backed securities are mortgages, home equity loans, auto loans, leases, credit card receivables and student loans.

BANKERS' ACCEPTANCE: A letter of credit issued in a foreign trade transaction which allows exporters to receive payment prior to importation of their goods. Banks provide short-term financing to facilitate the transaction and may sell the obligation to a third party. Bankers' Acceptances are secured by the issuer of the bill, while the underlying goods also serve as collateral.

BANK DEPOSITS: Collateral in the form of currency that may be in the form of demand accounts (checking) or investments in accounts that have a fixed term and negotiated rate of interest.

BENCHMARK: A comparative base for measuring the performance or risk of the investment portfolio. A benchmark should represent a close correlation to the level of risk and the average duration of the portfolio's investments.

BID PRICE: The price at which a buyer offers to purchase a security from the seller.

BOND: A debt investment in which an investor loans money to an entity (corporate or governmental) that borrows the funds for a defined period of time at a fixed interest rate called a coupon payment. Bonds are used by companies, municipalities, states and the U.S. government to finance a variety of projects and operating activities.

BROKER: A broker aligns buyers and sellers of securities and receives a commission when a sale occurs. Brokers generally do not hold inventory or make a market for securities.

CALIFORNIA LOCAL AGENCY OBLIGATIONS: Bonds that are issued by a California county, city, city and county, including a chartered city or county, school district, community college district, public district, county board of education, county superintendent of schools, or any public or municipal corporation.

CD (CERTIFICATE OF DEPOSIT): Time deposits issued by a bank, savings or federal credit union, or state-licensed branch of a foreign bank. Negotiable Certificates of Deposits rely on the credit rating of the issuing entity.

COLLATERAL: Securities, evidence of deposit, or other property that a borrower pledges to secure repayment of a loan. Also refers to securities pledged by a bank to secure deposits of public monies.

COLLATERALIZATION: Process by which a borrower pledges securities, property, or other deposits for the purpose of securing the repayment of a loan and/or security.

COMMERCIAL PAPER: Short-term unsecured promissory note issued by a company or financial institution. Commercial paper is issued at a discount and matures at face value. Usually a maximum maturity of 270 days, and given a short-term debt rating by one or more NRSROs.

COUPON: The annual rate of interest that a bond's issuer promises to pay the bondholder, expressed as a percentage of the bond's face value.

CREDIT RISK: Credit risk is the likelihood that an issuer will be unable to make scheduled payments of interest or principal on an outstanding obligation.

CUSTODIAN: An agent such as a brokerage firm or a bank that stores a customer's investments for safekeeping. The custodian does not have fiduciary responsibilities.

DEALER: A dealer, as opposed to a broker, acts as a principal in security transactions, selling securities from, and buying securities for his/her own position.

DEFAULT: To default is to fail to repay principal or make timely interest payments on a bond or other debt investment security, or failure to fulfill the terms of a note or contract.

DELIVERY VERSUS PAYMENT (DVP): A securities industry procedure whereby payment for a security must be made at the time the security is delivered to the purchaser's agent.

DIVERSIFICATION: Dividing investment funds among a variety of securities offering independent returns.

DURATION: The weighted average time to maturity of a bond where the weights are the present values of future cash flows. Duration measures the price sensitivity of a bond to changes in interest rates.

EXCHANGE TRADED FUNDS (ETF): ETF is a marketable security that tracks an index, a commodity, bonds, or a basket of assets like an index fund. Unlike mutual funds, an ETF trades like a common stock on a stock exchange. ETFs experience price changes throughout the day as they are bought and sold. ETFs typically have higher daily liquidity and lower fees than mutual fund shares.

FIDUCIARY: An individual who holds something in trust for another and bears liability for its safekeeping.

FLOATING RATE INVESTMENTS: Notes whose interest rate is adjusted according to the interest rates of other financial instruments. These instruments provide protection against rising or falling interest rates, but may pay lower yield than fixed rate notes.

FUTURES: Commodities, which are sold in the present time and are to be delivered at a future date.

INTEREST ONLY STRIPs: Securities with cash flow based entirely on the monthly interest payments received from a mortgage, Treasury, or bond payment. No principal is included in these types of securities.

INVERSE FLOATING RATE INVESTMENTS: Variable-rate notes (such as inverse floating rate notes) whose coupon and value increase as interest rates decrease.

INVESTMENT PROGRAM: The process of modern portfolio management. The process includes establishing investment policy, analysis of the economic and capital markets environment, portfolio monitoring and rebalancing, and measuring performance.

LIQUIDITY: The ease with which investments can be converted to cash at their present market value. Liquidity is significantly affected by the number of buyers and sellers trading a given security and the number of units of the security available for trading.

LOCAL AGENCY BONDS: These bonds are issued by a county or city including a chartered city or county, school district, community college district, public district, county board of education, county superintendent of schools, or any public or municipal corporation.

LOCAL AGENCY INVESTMENT FUND (LAIF): A voluntary investment fund open to state and local government entities and certain non-profit organizations in California in which organizations pool their funds for investment. LAIF is managed by the State Treasurer's Office.

MARKET RISK: Market risk is the risk that investments will change in value based on changes in general market prices.

MARKET VALUE: The price at which a security is trading and could presumably be purchased or sold.

MASTER REPURCHASE AGREEMENT: A written contract which includes provisions specific to the governmental agency that is signed by an authorized officer with each counterparty. A master agreement will often specify details to the nature of transactions, the relationship of the parties to the agreement, parameters pertaining to the ownership and custody of collateral, and remedies in the event of default by either party.

MATURITY: The date upon which the principal or stated value of an investment becomes due and payable.

MEDIUM TERM NOTES (MTN): Unsecured, investment-grade senior debt securities of major corporations that are sold either on a continuous or an intermittent basis. MTNs are highly flexible debt instruments that can be structured to respond to market opportunities or to investor preferences.

MONEY MARKET: The market in which short-term debt instruments (bills, commercial paper, bankers' acceptances, etc.) are issued and traded.

MORTGAGE-BACKED SECURITIES: A debt instrument with a pool of real estate loans as the underlying collateral. The mortgage payments of the real estate assets are used to pay interest and principal on the bonds.

MORTGAGE PASS-THROUGH SECURITIES: A securitized participation in the interest and principal cash flows from a specified pool of mortgages. Principal and interest payments made on the mortgages are passed through to the holder of the security.

MUTUAL FUNDS: An investment company that pools money and can invest in a variety of securities, including equity securities, fixed-income securities and money market instruments. **Money market mutual funds** invest exclusively in short-term (1-day to 1-year) debt obligations such as Treasury bills, certificates of deposit, and commercial paper. The principal objective is the preservation of capital and generation of current income.

OFFER: The price asked by a seller of securities. See Ask Price and Bid Price.

OPTION: A contract that provides the right or obligation, depending on the buyer or seller's position within the contract, to buy or to sell a specific amount of a specific security within a predetermined time period at a specified price. A call option provides the right to buy the underlying security. A put option provides the right to sell the underlying security. The seller of the contracts is called the writer.

PORTFOLIO: A collection of securities held by an investor.

PRIMARY DEALER: A group of government securities dealers who submit daily reports of market activity and positions and monthly financial statements to the Federal Reserve Bank of New York and are subject to its informal oversight. Primary dealers include Securities and Exchange Commission (SEC)-registered securities broker- dealers, banks, and a few unregulated firms.

PRINCIPAL ONLY STRIPS: Securities with cash flow based entirely on the principal payments received from an obligation.

RANGE NOTES: A range note is a bond that pays interest if a specified interest rate remains above or below a certain level and/or remains within a certain range.

RATE OF RETURN: The yield plus capital appreciation/depreciation obtainable on a security based on its purchase price or its current market price.

REPURCHASE AGREEMENT (RP, Repo): A contractual transaction between an investor and an issuing financial institution (bank or securities dealer). The investor exchanges cash for temporary ownership or control of collateral securities, with an agreement between the parties that on a future date, the financial institution will repurchase the securities.

SAFEKEEPING: A service to customers rendered by banks for a fee whereby securities and valuables of all types and descriptions are held by the bank in the customer's name.

SECONDARY MARKET: A market made for the purchase and sale of outstanding issues following the initial distribution.

SECURITIES AND EXCHANGE COMMISSION (SEC): A federal government agency comprised of five commissioners appointed by the President and approved by the Senate. The SEC was established to protect the individual investor from fraud and malpractice in the marketplace. The Commission oversees and regulates the activities of registered investment advisers, stock and bond markets, broker/dealers, and mutual funds.

STATE OBLIGATIONS: Registered treasury notes or bonds of the 50 United States, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any of the 50 United States.

STRIPS: Bonds, usually issued by the U.S. Treasury, whose two components, interest and repayment of principal, are separated and sold individually as zero-coupon bonds. Strips are an acronym for Separate Trading of Registered Interest and Principal of Securities.

SUPRANATIONALS: International financial institutions that are generally established by agreements among nations, with member nations contributing capital and participating in management. Supranational bonds finance economic and infrastructure development and support environmental protection, poverty reduction, and renewable energy around the globe.

TRUSTEE: An individual or organization, which holds or manages and invests assets for the benefit of another. The trustee is legally obliged to make all trust-related decisions with the trustee's interests in mind, and may be liable for damages in the event of not doing so.

U.S. AGENCY OBLIGATIONS: Federal agency or United States government-sponsored enterprise obligations (GSEs), participations, or other instruments. The obligations are issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises. Issuers include: Fannie Mae, Farmer Mac, Federal Farm Credit Banks, Freddie Mac, Federal Home Loan Banks, Financing Corporation, Tennessee Valley Authority, Resolution Trust Funding Corporation, World Bank, Inter-American Development Bank, and PEFCO.

U.S. TREASURY OBLIGATIONS (TREASURIES): Securities issued by the U.S. Treasury and backed by the full faith and credit of the United States. Treasuries are considered to have no credit risk and are the benchmark for interest rates on all other securities in the U.S. and overseas. The Treasury issues both discounted securities and fixed coupon notes and bonds.

Treasury Bills: All securities issued with initial maturities of one year or less are issued as discounted instruments, and are called Treasury Bills (T-bills). The Treasury currently issues 3-month and 6-month T-bills at regular weekly auctions. It also issues "cash management" bills as needed to smooth cash flows.

Treasury Notes: All securities issued with initial maturities of 2- to 10-years are called Treasury Notes (T-notes), and pay interest semi-annually.

Treasury Bonds: All securities issued with initial maturities greater than 10-years are called Treasury Bonds (T-bonds). Like Treasury Notes, they pay interest semi- annually.

YIELD: The rate of annual income return on an investment, expressed as a percentage. Yield does not include capital gain.

Income Yield is obtained by dividing the current dollar income by the current market price for the security.

Net Yield or **Yield to Maturity** is the current income yield minus any premium above par or plus any discount from par in purchase price, with the adjustment spread over the period from the date of purchase to the date of maturity of the bond.

ZERO-COUPON BOND: A bond on which interest is not payable until maturity (or earlier redemption), but compounds periodically to accumulate to a stated maturity amount. Zero-coupon bonds are typically issued at a discount and repaid at par upon maturity.