



Program Budget

FISCAL YEAR 2020-2021

APRIL 2020



May 7, 2020

Blackhawk GHAD Board of Directors
c/o Supervisor Diane Burgis
3361 Walnut Boulevard, Suite 140
Brentwood, California 94513

**SUBJECT: Program Budget for Fiscal Year 2020-2021
Blackhawk Geologic Hazard Abatement District**

Dear Board Members:

Attached please find the proposed program budget for the Blackhawk Geologic Hazard Abatement District (Blackhawk GHAD or GHAD) for fiscal year 2020/2021. The proposed fiscal year budget totals \$1,690,000, which anticipates a \$758,000 surplus and a contribution to the reserve fund. At the time of this publication, it is expected that the fund balance on June 30, 2020 will be approximately \$8,942,000. A fund balance of \$9,700,000 is projected for June 30, 2021.

There are four major annual budget categories; their respective budget expenses break down as follows:

Major Projects	20 percent
Preventive Maintenance and Operations	34 percent
Special Projects	19 percent
Administration, Legal, Accounting	27 percent

As a percentage of the annual budget, the Major Projects Program will utilize a smaller portion of the budget and is projected to contribute to the reserve fund. The heavy rains from the 2016/2017 fiscal-year produced over 30 landslides with damage estimates totaling over \$5,000,000. Through a process of assigning and prioritizing risk, GHAD management was able to conduct repairs over a three-year period, while simultaneously contracting or temporarily suspending other discretionary program work and studies during this term. This allowed sufficient time and finances to replenishing the reserves without enduring additional risk or exposure for new events that may follow.

All of the urgent repairs have been completed and site-stabilization has been accomplished with all of the first phase landslides that have been repaired. Additional Phase 2 landslide repairs have been completed as well. This represents full completion of a comprehensive program and a three-year effort to conduct over \$5,000,000 in repairs that were directly related to the rains of 2016/2017. Given the progress, we are pleased to report that the GHAD is now prepared to contribute a significant allocation to the reserve this term.

As a result of the 2016/2017 rains and subsequent State and Federal declarations of emergency, and all of the Blackhawk GHAD's efforts to stabilize over 30 landslides and 75 Incident Responses, the Blackhawk GHAD timely applied to the Federal Emergency Response Agency (FEMA) for federal and state disaster area funds. FEMA damage and repair estimates included emergency response, cleanup and protective measures, as well as engineering and construction and repair costs. The GHAD previously received denials from FEMA¹, challenging the GHAD's status as a qualified agency and expressing concerns regarding the eligibility of the response and remedial work. The GHAD appealed² on the basis that it believes, in fact, that the agency is eligible, and emergency work qualified as the GHAD is legally responsible for conducting the emergency work operations. The California Office of Emergency Services

¹ FEMA Determination Letter of October 2, 2017; and FEMA Determination Letter of February 6, 2018

² GHAD Appeal and Response for Additional Information, dated August 31, 2018

(CalOES), a participant and pass-through agency to FEMA applications also sided with the GHAD with respect to its eligibility as an agency and as to its work eligibility. Earlier in 2020 the GHAD received final denial from FEMA³ for all of its applications and appeals for assistance. GHAD management and GHAD counsel, in agreement with CalOES, continue to believe in the legitimacy of our submission for relief.

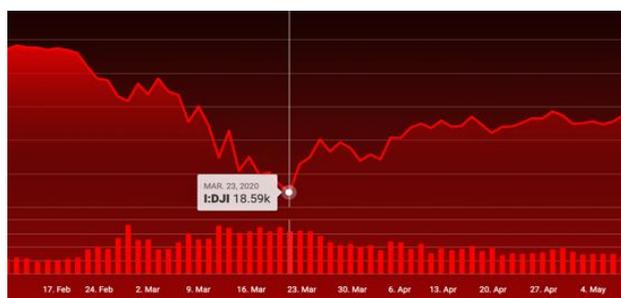
The Preventive Maintenance Program will focus on continued efforts to secure damaged areas and complete asset site restorations. The program will continue to upgrade and analyze these sites and the associated data collection to ensure all predictive features of these instrumentation and asset sites are 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 throughout this period. Deferred study and maintenance programs will be resumed.

The Special Projects Program will be directed at resumed efforts to finalize Amendment 3 to the Plan of Control which seeks to clarify the independent role of the Blackhawk GHAD and further strengthen those areas of the plan that serve to define the scope of the district's responsibilities. It is anticipated that the GHAD will continue to resume existing studies and pursue additional studies in the areas of fiscal policy and geologic risk analyses. Approximately 19% of the annual budget has been set aside for the Special Projects Program. We continue to work to strengthen our communication with district constituents within the Blackhawk community.

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

On March 16, 2020, the Contra Costa County Health Department issued an Order to "Shelter in Place" for all non-essential entities, to help mitigate the spread of the virus COVID-19. The Blackhawk GHAD, although likely considered an essential agency, complied on that day to direct all staff to adhere to the Order.

Fortunately, the Blackhawk GHAD had operated with the pre-existing capacity to work remotely prior to the pandemic and subsequent Orders. Although this has presented a new challenge for GHAD operations, it has not materially inhibited our ability to respond to geologic hazards and to direct and implement much of our operations from remote locations.



Subsequent to the March 16, 2020 Orders, and under the County guidelines, we have continued essential operational and administrative tasks. Needed maintenance and data collection events from instrument sites have continued as county orders have allowed, as well as ongoing processing and assessment of slope stability conditions within the district. Specific slope stability studies have continued uninterrupted.

As managers, we continually monitor and project significant short-term and long-term financial impacts on GHAD reserves and compare such impacts with our 40-year reserve study. This recent and unexpected impact on the annual budget and reserves, as a result of the COVID-19 virus, has been challenging and has represented a reduction in GHAD accumulated reserves⁴. Although the impact has been remarkable, we believe there has been no significant negative short-term or long-term effect on the future ability to provide the full array of services of the GHAD throughout this pandemic⁵.

³ Final Appeal denial from FEMA Jan 10, 2020

⁴ As seen in the illustration above representing DJI activity through the pandemic (Feb 2020-May 2020)

⁵ Observations of the General Manager as of May 7, 2020

Our ability to maintain reserves will provide assurance of our capability to continue services in the future. We will continue to monitor the process and advise you of changed conditions throughout the remainder of this pandemic.

A summary of the expenses is shown on Table 1, pages 4 through 6. A summary of the recent accomplished projects and projected expenses are shown and followed by brief descriptions of each of the budget items on pages 7 through 16.

Respectfully yours,

Blackhawk Geologic Hazard Abatement District

A handwritten signature in blue ink, appearing to read "Michael D. Sands". The signature is fluid and cursive, with the first name "Michael" written in a larger, more prominent script than the last name "Sands".

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

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Upon Execution: The management will post approved Budget at www.blackhawkghad.com

Blackhawk Homeowners Association
4125 Blackhawk Plaza Circle, #105
Danville, CA 94506
Attention: Melissa Manzo

Hidden Oaks at Blackhawk
c/o Community Care Property Management
P.O. Box 269
Oakley, CA 94561

Tennis Villas at Blackhawk
c/o CMJ Associates, Inc.
P.O. Box 190
Pleasanton, CA 94566

Saddleback at Blackhawk
c/o Jean Bates & Associates
70 Railroad Avenue
Danville, CA 94506

Silver Oak Townhomes at Blackhawk
Canyons at Blackhawk
c/o Bridgeport Company
1 Annabel Lane #217
San Ramon, CA 94583
Attention: Bill Bavelas

Blackhawk Country Club
599 Blackhawk Club Drive
Danville, CA 94506
Attention: Kevin Dunne, General Manager

Blackhawk Geologic Hazard Abatement District
Program Budget
Fiscal Year 2020/2021

The following proposed line item program budget (Table 1) summarizes the anticipated expenditures for fiscal year 2020/2021 for the Blackhawk Geologic Hazard Abatement District (Blackhawk GHAD, GHAD, or District). Through an ongoing assessment, the GHAD manager evaluates and addresses geologic 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 \$50,000.

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 Program

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 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 Blackhawk GHAD Plan of Control.

Typical Blackhawk GHAD assets include concrete lined ditches, sub-drainage 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 and 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 instruments 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 Blackhawk 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 ensure financial solvency. Special Projects also include utilizing new technologies to increase the efficiencies of the day-to-day operations. 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 Blackhawk GHAD and implement projects. Administrative expenses include 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 Blackhawk GHAD - The Blackhawk GHAD Board of Directors, through Resolution 2018/01, 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 Jun 30, 2020 was \$260,000; the proposed payment limit through June 30, 2021 is \$205,000. 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 Blackhawk GHAD, the Operations Manager payment limit was set at \$350,000 for a term throughout June 30, 2020; the proposed payment limit through June 30, 2021 is \$319,500. 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. These services include 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 2020-2021 Budget is presented in Table 1 on the following pages.

Settlement Monitoring	20,000	
Incident Response/Community Relations	62,000	
Project Monitoring	30,000	
Subtotal	\$142,000	
Total Preventive Maintenance/Operations	\$575,000	34%

Special Projects		
Plan of Control	50,000	
Reserve Study Update	10,000	
Special Studies	200,000	
Information Technology	40,000	
Accounting Systems Upgrade	5,000	
Procedures Manual	5,000	
Communications Program	2,500	
CA Association of GHADs – Membership/Insurance	13,500	
Total Special Projects	\$326,000	19%

Administration		
Legal fees		
General Counsel	100,000	
Special Counsel		
Litigation/Legal Concerns	40,000	
Legal Matters/Claims	20,000	
Staffing/Administrative Support	156,000	
Accounting/Bookkeeping	100,000	
Training/Education	2,000	
Office – Rent/Supplies/Equipment/Lease	31,000	
Total Administration	\$449,000	27%

TOTAL PROPOSED BUDGET FY2020/2021	\$1,690,000	100%
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Available Funds	
Estimated Beginning Fund Balance – July 1, 2020**	8,942,000
Estimated Contributions from M-23 (M-23 Surplus)	2,318,000
Estimated Interest on Investments	130,000
Other Income	00
Total Available Funds	\$11,390,000
Uses of Funds	
Major Projects	340,000
Preventive Maintenance	575,000
Special Projects	326,000
Administrative	449,000
Total Use of Funds	\$1,690,000
Estimated Reserve Available/Ending Fund Balance June 30, 2021	\$9,700,000

* Pursuant to the Blackhawk GHAD Plan of Control – Section H-1

** Includes estimated accrued true-up revenue payment (Sept 2020) of \$111,814; Projected Fund Balance date of publication

DESCRIPTION OF BUDGET ITEMS

Major Projects

391 Kingswood Lane Landslide Repair Project

The GHAD was contacted during an intense storm and asked to respond to a site that had experienced a significant slope failure that threatened site and structural improvements. The landslide feature that occurred impacted an intensely landscaped portion of the property and potentially threatened structural elements of the home and attached structures. The site was temporarily stabilized and maintained during the ensuing months. Because of the unique and challenging nature of the landslide and surrounding area, the GHAD engineered a stabilization scheme which incorporates the installation of a series of structural subterranean concrete and steel pile walls. Site demolition and structural repairs were completed in FY17/18 and the project site was secured just prior to the winter rains. After a protracted effort to obtain access rights through an adjacent property, the project resumed in October of 2018 and was suspended in November 2018 due to impending rain. The last phase of the project work is planned for July 2019.



COMPLETED

901 Pepperwood Landslide Repair Project



This series of mudflows that occurred on Pepperwood Lane serve as one of the initial responses for The GHAD as the rain events began to aggregate into the record setting rainfall that was experienced in the Danyville area, through the storms of 2017. Initial responses involved a late-night response to protect the downslope properties and re-establish impacted drainage facilities. Further and ongoing action was necessary to maintain temporary stability and functionality of the community drainage systems as further storms produced additional movement in the slides. Robust temporary winterization measures were installed during FY2018/2019, and a permanent repair scheme has been developed. Work to repair this site is expected to occur in FY19/20.

COMPLETED

Deer Meadow Landslides (multiple) Repair Projects



The Deer Meadow corridor experienced numerous and recurring mudflows as the storms of 2017 began to bear down on the Blackhawk community. Efforts ensued immediately to establish emergency response measures and protective measures. However, the storms over a vast hillside presented a continued challenge to mitigate the impact of the intense rainfall. Robust temporary winterization measures were installed during FY2018/2019, and a permanent multi-phased repair scheme has been developed. Phase 1 of the work to repair

this site is expected to begin in FY19/20.

COMPLETED

Silver Oak Townhomes – Bldg. 6
(Slope Stabilization Project)

As a result of continued monitoring of the western slope below Silver Oaks Townhomes, the GHAD has made a determination that it was advisable to install slope stability measures to prevent future movement of the slope. Engineering and construction documents have been completed to define a slope stabilization scheme similar to those utilized in the area. Work will proceed pending additional property owner authorization for the installation. Landowner access to allow the project to move forward was obtained in early 2019. Work is currently scheduled for FY19/20.



COMPLETED

Deer Meadow Drive Storm Debris Catchment



Heavy rain events mobilized off-site debris into several storm drains, causing blockages and flooding. The Deer Meadow Drive Storm Debris Catchment Improvement will consist of a series of upstream debris catchments.

COMPLETED

STUDIES: Studies, as they relate to field conditions, are essential and are designed to analyze specific sets of aggregated empirical data with the intent of assessing condition of infrastructure and efficacy of instrumentation data collection. Through this effort, specific studies inform management about how to tailor programs to capitalize on the most effective preemptive measures as the GHAD implements its preventive maintenance program.

Horizontal Drain Cleaning Efficacy Program

Study: This study analyzes the results of our in-progress Horizontal Drain Cleaning Program. Post-cleaning drain yields will be measured and analyzed compared to pre-cleaning yields. Impact on local groundwater levels will be analyzed and data will be additionally utilized in evaluating the efficacy of the Horizontal Drain Cleaning Program, as well as the impact on regional (district wide) groundwater levels. Data sets from historical above average rain events (2000 through 2018) will be accessed and utilized to further inform the Horizontal Drain Program.

Estimated Cost \$30,000

Groundwater Studies (Regional Sites)

Study: This study is projected to be conducted in multiple phases. It will analyze regional groundwater regimes where groundwater levels have risen over time. Data from piezometer histories will be the primary criterion used, along with collaboration with the Horizontal Drain Study results in the effectiveness of horizontal drains in lowering local groundwater levels.

Estimated Cost \$60,000

Horizontal Drain Cleaning Program



Following a test program, a district-wide Horizontal Drain Cleaning Program commenced in FY18/19. The program continued in phased operations during FY19/20. Phase 3 operations are planned for FY20/21. A follow-up program will be formulated to determine an appropriate frequency interval for cleaning events.

Estimated Cost \$100,000

Other Storm Event Landslides

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 just 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 \$100,000



Landscape Replacement

Typically, remedial landscaping is either included in the scope of work for major projects or eliminated completely from the repair scheme depending on impact from remedial efforts to restore slope stability. 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.

Estimated Cost \$50,000

Preventive Maintenance and Operations

Preventive Maintenance

Preventive 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.

The Preventive Maintenance Program will increase its profile through this fiscal year with those tasks that are essential to maintaining slope instrumentation sites and information; data collection and other measures to ensure slope stability; and resumption of discretionary programs regarding instrument site maintenance and capital expenditures.

Storm Drains

Storm drains associated with B-58 drainage systems occasionally need repair or replacing. Assessments are made during the annual cleaning events in early fall.

Estimated Cost \$10,000

B-58 Drain Systems

Maintenance – Allows for one major annual cleaning and mapping of the B-58 drain systems. In addition, District staff periodically walks the B-58 systems to get a first-hand account of the current conditions and project serviceable life. This information, along with other empirical data, is utilized in our Reserve Study updates.

Estimated Cost \$48,000

Repair and Replacement – As a result of intensified efforts in recent years, a total of over 1650 lineal feet of B-58 was replaced and several-hundred lineal feet of B-58 was repaired. A priority has been established based on the degree of damage and associated risk to improved properties, and a percentage of these replacement projects will be budgeted throughout the upcoming years. This year’s budget will be utilized on repairs to existing B-58s on a site-by-site basis.

Estimated Cost \$35,000

Retention Basins

There are seven retention basins within the District boundaries. Three are unimproved retention basins and are maintained exclusively by the Contra Costa County Flood Control District through CSA M-23. Blackhawk GHAD, as well as the property owners, perform certain periodic maintenance operations at the other four locations. In a collective agreement with the Homeowners Association, the Country Club (landowner), and the GHAD, de-siltation efforts have recently been completed in two retention basins. It is anticipated that the GHAD will participate in additional dredging projects during fiscal year 2020/2021. Currently, planning and engineering efforts are being conducted in anticipation of a multi-year dredging project on the golf course involving the three entities.

Initiated in FY 2017/2018 and ongoing, the GHAD management has continued to engage the Contra Costa County Public Works Department (Public Works) and the Blackhawk Homeowners Association in discussions to develop clarity as to the relative responsibilities for drainage maintenance within the GHAD. These trilateral discussions have produced an agreement and a further understanding when it comes to development of drainage systems and retention basins.

Estimated Cost \$50,000

Subdrain Systems

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

Horizontal Drains

The District Manager has placed a high priority on verifying the condition and restoring as many existing horizontal drains throughout the development as possible. A definitive list of sites requiring maintenance has been determined and work continues on restoring the sites and installing identification markers.

Estimated Cost \$100,000

Subdrain Outlets/Pumps

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

The GHAD maintains a subdrain pumping facility located adjacent to Hole #1 of the Lakes Course Country Club. Periodic site checks for operation are required. In recent years the equipment, instrumentation and electronics have been updated. This year, maintenance will be performed at this site to ensure the continued reliability of this system and facility.

Estimated Cost \$10,000

Piezometers

The District reads and maintains in excess of 100 piezometers measuring ground water elevations. A definitive list of sites requiring repairs has been determined and work begun on restoring the sites and installing identification markers. The work this year has been continued in order to include a greater number of sites and inclusion of the sites into the GIS, and to maintain site locations.

Estimated Cost \$40,000

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. The establishment of new monitoring programs exist in several areas of the District.

Estimated Cost \$30,000

Minor Repairs

A budget is established annually for unanticipated minor projects within the Preventive Maintenance Program.

Estimated Cost \$20,000

Winterization

The District provides an annual budget for procuring and storing an inventory of winterization materials and to provide for the costs of site installation. Winterization materials have been significantly depleted during the last three season's responses. In an effort to replenish materials, this year's winterization measures should again rise above normal expenses. Therefore, the budget has been increased from previous years.

Estimated Cost \$15,000

Emergency Response

During the winter rainy season, the Blackhawk GHAD responds to a range of urgent, active, and threatening landslides, as well as 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 require the initiation of temporary slope stabilization measures in preparation for a major repair.

Estimated Cost \$45,000

Debris Benches

Numerous earthen debris benches exist throughout the district. It is essential that these facilities be inspected to ensure 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 \$30,000

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 for further analysis to establish trends.

Monitoring sites can be established for a variety of uses. Completed repair sites often 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 groundwater 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.

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, have been institutionalized as a role of Blackhawk GHAD management. All incidents are recorded within the GIS and move through the district response mechanisms as is appropriate and consistent with the Blackhawk 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 seasonal heavy rain conditions.

Estimated Cost \$142,000

Special Projects

During fiscal year 2020/2021 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

It is anticipated that Amendment 3 to the Plan of Control will be presented to the Board, which will contain certain minor, but necessary, clarifications in the language.

Estimated Cost \$50,000

Reserve Study Update

The Blackhawk GHAD reserve fund study was originally completed in FY2002/2003. An extensive update to the plan was completed in fiscal year 2012/2013. The reserve study functions as a pro-forma analysis of the financial needs of the Blackhawk GHAD. It serves as a tool to calculate the annual contribution required by the GHAD to build and maintain sufficient funds for emergencies and capital replacement programs based on past weather patterns, landslide repair costs, and general attrition. Historically, as a result of severe winters, draws have been necessary on the reserve fund. Work has been completed on an independent analysis of the fund health and methodologies. This analysis has been used in updating the pro-forma plan and provides instruction to GHAD management as to the necessary reserve demands over time.

Estimated Cost \$10,000

Special Studies

The Blackhawk GHAD intends to continue targeted and site-specific studies in the areas of fiscal policy and geologic risk. The GHAD, now in its 35th 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. The Special Studies program has been substantially expanded this year to account for projected costs incurred to continue site specific studies currently underway.

Estimated Cost \$200,000

Information Systems and Technology

The Blackhawk GHAD has completed an upgrade to its GIS 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 Blackhawk GHAD's information systems conducted in 2012 and again in 2015, the GHAD has modernized its IT systems and security. Additionally, the GHAD website www.blackhawkghad.com has continued to provide a mechanism to 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 the performance and usability of each site.

Estimated Cost \$40,000

Accounting System Upgrade

Periodic upgrades are necessary to enhance accounting system capabilities. The Blackhawk 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 \$5,000

Procedures Manual

The Blackhawk 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
- Standard Form Contracts (Evaluation)
- Administrative Procedures (Evaluation)

Estimated Cost \$5,000

Communications Plan

The Blackhawk 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. Additionally, the General Manager writes periodic articles for the HOA newsletter.

Estimated Cost \$2,500

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 Blackhawk 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 have risen with new, more comprehensive, coverage for the Blackhawk GHAD and are approximately \$11,000⁶. Additionally, the GHAD manager participates in the CAGHADs as the organization pursues other financial instruments that may provide the Blackhawk GHAD 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 \$13,500

Administration

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

Legal

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

Estimated Cost \$100,000

Special Counsel – Blackhawk GHAD management requires the services of special counsel from time to time in the areas of litigation and other legal concerns. Currently special legal counsel is advising the GHAD in a variety of legal areas.

Estimated Cost \$60,000

Staffing/Administrative Support

The Blackhawk GHAD staff includes the General Manager, a Construction Services Manager, an Administration Manager and frequently other support staff and consulting professionals. 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 \$289,000

⁶ A more comprehensive policy was obtained in 2017 with a premium increase