



# **BETHEL ISLAND MAINTENANCE IMPROVEMENT DISTRICT**

**LEVEE AND FLOOD CONTROL FACILITIES MAINTENANCE AND REPAIR  
ASSESSMENT**

## **PRELIMINARY ENGINEER'S REPORT**

MAY 2017

PURSUANT TO CALIFORNIA GOVERNMENT CODE SECTION 53750, 54710 ET SEQ.,  
AND ARTICLE XIII D OF THE CALIFORNIA CONSTITUTION

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## **BETHEL ISLAND MAINTENANCE ASSESSMENT DISTRICT**

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## INTRODUCTION

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Bethel Island Maintenance Improvement District (“BIMID”) is an independent special district, responsible for the maintenance, operation and improvement of the levee system surrounding Bethel Island, California which protects life and property from potential flooding from the Sacramento-San Joaquin River Delta. All of Bethel Island receives critical flood protection from the District’s facilities and services.

BIMID was formed in 1960 to replace Reclamation District 1619 and take over maintenance of the 11.5 miles of levee surrounding Bethel Island. Bethel Island was first reclaimed through levee construction in 1901, and experienced flooding several times between 1907 and 1911. The levees were raised and improved, and the District has continued to operate, maintain and repair the levees for the last 54 years. There have been no levee breaches since the District took control. However, according to the 2007 Geotechnical Levee Study by Hultgren Tillis Engineers, the Bethel Island Flood Protection System “...falls short of providing a generally acceptable level of safety and reliability related to standard consideration for levee safety.” Furthermore, since the 2008 recession, BIMID has been working with a primarily ad valorem property tax budget of approximately \$350,000 to \$400,000 per year. (This budget amount is a decline of approximately one-third from pre-recession levels.) This level of funding has become increasingly inadequate to properly maintain and improve the BIMID levees.

The District is working to improve flood protection to properties within its boundary, and is implementing its present 5-year plan working with the District Engineer. With its limited funding, BIMID has only been able to undertake its current HMP Levee Improvement Project because of an unusually favorable 95%/5% local share split with the Department of Water Resources for this particular project which focuses on completing the final required improvements to achieve the HMP flood protection standard, FEMA’s “short-term, interim” levee standard appropriate for agriculture only. This is necessary for BIMID to remain eligible for FEMA disaster relief funding.

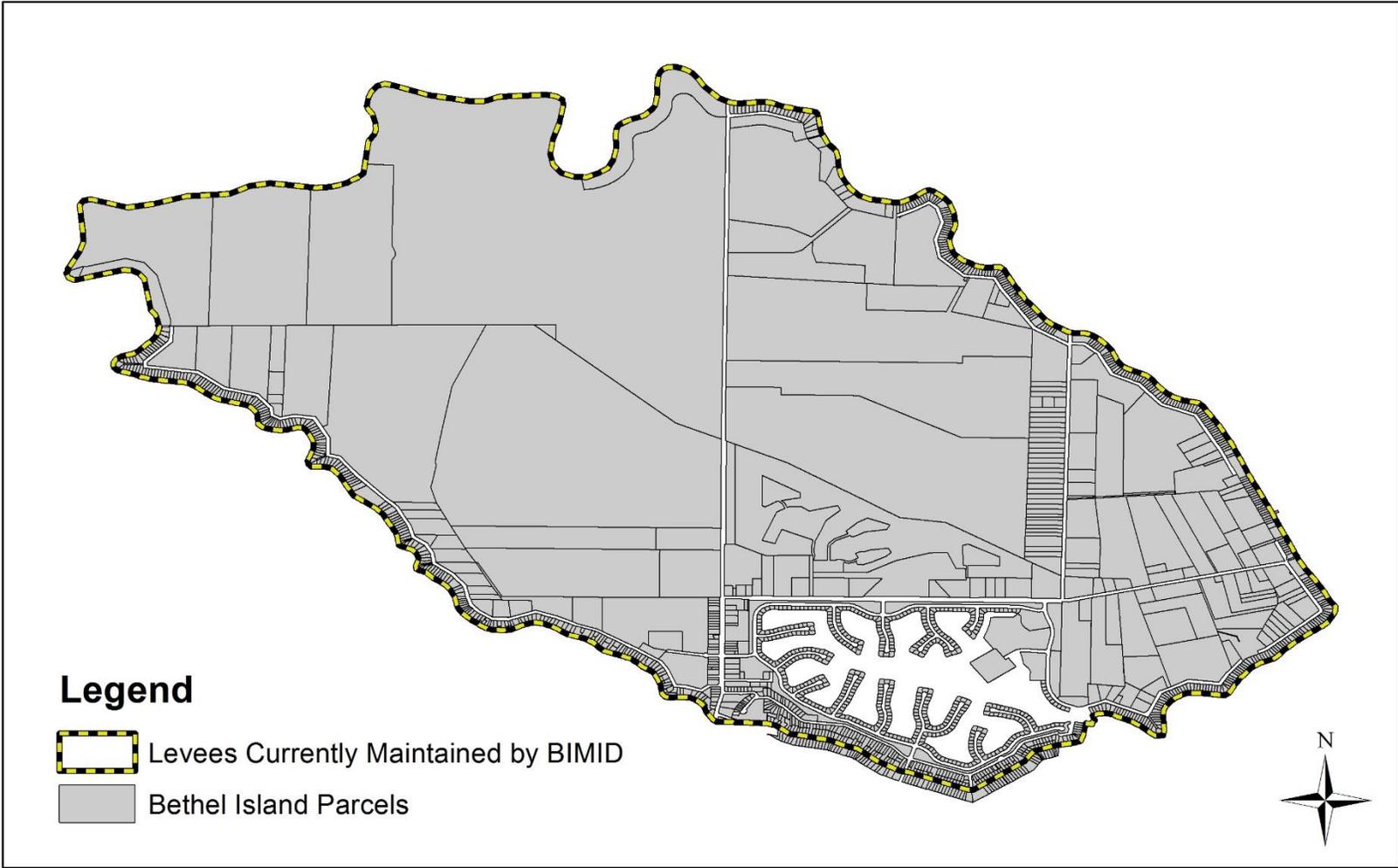
Therefore, the District intends to raise the flood protection on Bethel Island to the desired PL 84-99 flood protection standard by making the required improvements. The PL 84-99 standard is FEMA’s minimum standard for “base level of protection”<sup>1</sup> for all Delta islands with both agricultural and urban residential uses. The engineer’s estimate to achieve the PL 84-99 standard is approximately \$12 million of critical upgrade work plus \$500,000 dedicated maintenance work per year. This proposed assessment would allow the District to provide the required local share (typically from at least 10% to as much as 25% and estimated at 20% in this study) to be eligible for State funds. Moreover, BIMID has recently been selected as a finalist for a Projects Solicitation Package (PSP) that would enable the District to make

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<sup>1</sup> Delta Levees –Types, Uses, and Policy Options, for Delta Vision, Will B. Betchart, P.E. Consulting Water Resources Engineer, August 7, 2008

critical repairs to the Horseshoe Bend Levee while enhancing local habitats and improving water supply reliability – and again, a substantial local share is required. Without this proposed assessment, it is unlikely the District will be able to continue meeting local match requirements for such future state or federal major grant funding opportunities, and as a result would have to forego millions of dollars of State funding that would otherwise be available to BIMID for an ongoing series of substantial future levee improvements over the coming years.

FIGURE 1 – LEVEES CURRENTLY MAINTAINED BY BIMID



Eastern Contra Costa County, as well as neighboring San Joaquin and Sacramento Counties, have a history of significant flooding due to their relatively flat terrain and numerous rivers and creeks fed by potentially intense Sierra snow melt runoff. The Islands within the Delta have experienced several floods due to levee failures and below-sea level elevations. Local flooding events within Bethel Island in recent years have been due to intense rain storms that leave the Island inundated with water, until it is pumped out.

Table 1, below lists several of significant floods that have occurred in the BIMID area:

**TABLE 1 – MAJOR LOCAL FLOODS**

Year	County	Flood	Damage
2004	San Joaquin	Jones Tract	Flooded more than 150,000 acre-feet of water, requiring 5 months of dewatering.
1937	Contra Costa	Franks Tract	Repeated levee failures in the 1930's. After another levee failure that flooded the Island in 1937, Franks Tract was abandoned and never reclaimed.

The BIMID area is at a high risk of flooding due to the following factors:

**Topography and Regional Geography:** The BIMID boundary contains an area with a relatively consistent elevation of -1 to -3 feet below sea level. There are high points within the Island that reach a maximum elevation of 12 feet above sea level, and low points at minimum elevation of -12 feet below sea level. The Island is located at the East end of the Sacramento-San Joaquin River Delta, and is surrounded by Taylor Slough to the West, Piper Slough to the North, Dutch Slough to the South, and Sand Mound Slough to the Southeast.

- Local Soil Conditions and Non-Engineered Levees:** The local levees were traditionally constructed by farmers and other early settlers with readily available local materials. Accordingly, these levees were built of permeable materials common in Contra Costa County. This permeable material allows water from the flood-swollen rivers to seep under the levees. During recent significant high water events adjacent to the BIMID levees, there has been considerable evidence of under-seepage which is often a precursor to levee failure.

## LEGAL ANALYSIS OF PROPOSITION 218

The proposed assessment complies with Proposition 218, The Right to Vote on Taxes Act, which was approved by the voters of California on November 6, 1996, and is now Article

XIIIC and XIID of the California Constitution. Proposition 218 provides for benefit assessments to be levied to fund the cost of providing improvements, as well as maintenance and operation expenses of a public improvement which provides a special benefit to the assessed property.

Proposition 218 imposes a number of important requirements, including property-owner balloting, for the formation and continuation of assessments, and these requirements are satisfied by the process being used to establish this proposed assessment.

**SILICON VALLEY TAXPAYERS ASSOCIATION, INC. V SANTA CLARA COUNTY OPEN SPACE AUTHORITY (2008) 44 CAL.4TH 431**

On July 14, 2008, the California Supreme Court issued its ruling on the *Silicon Valley Taxpayers Association, Inc. v. Santa Clara County Open Space Authority* (“*Silicon Valley*”). Several of the most important elements of the ruling included further emphasis that:

- Benefit assessments are for special, not general benefit
- The services and/or improvements funded by assessments must be clearly defined
- Special benefits are directly received by and provide a direct advantage to property in the Assessment District

**DAHMS V. DOWNTOWN POMONA PROPERTY (2009) 174 CAL.APP.4TH 708**

On June 8, 2009, the 4<sup>th</sup> District Court of Appeal amended its original opinion upholding a benefit assessment for property in the downtown area of the City of Pomona. On July 22, 2009, the California Supreme Court granted review and transferred the case to the Court for Appeal for reconsideration in light of the Supreme Court’s discussion in the above cited *Silicon Valley*. In *Dahms*, the Appellate Court on reconsideration upheld the assessment that was 100% special benefit (i.e. 0% general benefit) on the rationale that the services and improvements funded by the assessments were directly provided to property in the assessment district. The Court also upheld discounts and exemptions from the assessment for certain properties.

**BONANDER V. TOWN OF TIBURON (2009) 46 CAL.4TH 646**

On December 31, 2009, the California Supreme Court overturned a benefit assessment approved by property owners to pay for placing overhead utility lines underground in an area of the Town of Tiburon. The Court invalidated the assessments on the grounds that the assessments had been apportioned to assessed property based in part on relative costs within sub-areas of the assessment district instead of proportional special benefits.

**BEUTZ V. COUNTY OF RIVERSIDE (2010) 184 CAL.APP.4TH 1516**

On May 26, 2010, the 4th District Court of Appeal issued a decision on the *Steven Beutz v. County of Riverside* (“*Beutz*”) appeal. This decision overturned an assessment for park maintenance in Wildomar, California, primarily because the general benefits associated with

improvements and services were not explicitly calculated, quantified and separated from the special benefits.

**GOLDEN HILL NEIGHBORHOOD ASSOCIATION V. CITY OF SAN DIEGO (2011)199 CAL.APP.4TH 416**

On September 22, 2011, the 4th District Court of Appeal issued a decision in *the Golden Hill Neighborhood Association v. City of San Diego*. This decision overturned an assessment for street and landscaping maintenance in the Greater Golden Hill neighborhood of San Diego, California. The court described two primary reasons for its decision. First, as in *Beutz*, the court found the general benefits associated with services were not explicitly calculated, quantified and separated from the special benefits. Second, the court found that the City had failed to document the basis for the assessment on its own parcels.

**COMPLIANCE WITH CURRENT LAW**

This Report is consistent with the requirements of Article XIII C and XIII D of the California Constitution and with the *Silicon Valley* decision because the services to be funded are clearly defined; the services and Improvements are available to and will be directly provided to all benefited property in the Assessment District; the services and Improvements provide a direct advantage to property in the Assessment District that would not be received in absence of the assessment, and are benefits that are over and above general benefits conferred on real property located in the district or to the public at large by other public entities that make up the membership of the District.

This Report is consistent with *Dahms* because, similar to the Downtown Pomona assessment validated in *Dahms*, the services and improvements will be directly provided to property in the Assessment District. More specifically, as discussed hereafter, the services and improvements afford benefits specifically unique and supplied only to property owners within the District with a corresponding effect that is not shared by other parcels outside of the District or real property in general including the public at large.

The Report is also consistent with *Bonander* because the Assessment has been apportioned based on the proportional special benefit to each property. Furthermore, the Assessment is consistent with *Beutz* and *Golden Hill* because the general benefits have been explicitly calculated, quantified, and excluded from the assessment.

**ASSESSMENT PROCESS AND CONTINUATION OF ASSESSMENTS**

In June of 2015, BIMID conducted an assessment ballot proceeding pursuant to the requirements of Article XIII D of the California Constitution ("The Taxpayer's Right to Vote on Taxes Act"), and California Government Code Section 53750 et. seq. (the "Code") and Article XIII D of the California Constitution (the "Article"). During this ballot proceeding, property owners in the District were provided with a notice and ballot for the proposed special assessment. A 45-day period was provided for balloting and a public hearing was conducted on August 6, 2015. At the public hearing, all ballots returned within the 45-day balloting period were tabulated.

It was determined at the public hearing that 68.27% of the weighted ballots returned were in support of the assessment. Since the assessment ballots submitted in opposition to the proposed assessments did not exceed the assessment ballots submitted in favor of the assessments (with each ballot weighted by the proportional financial obligation of the property for which ballot was submitted), BIMID gained the authority to approve the levy of the assessments for fiscal year 2015-16 and to continue to levy them in future years for ten years. The levy and collection of the assessments will continue year-to-year until either terminated by the Board or the assessments expire after the 2024-25 fiscal year.

The authority granted by the ballot proceeding was for a maximum assessment rate of \$110.00 per single family home, increased each subsequent year by the average of the United States Department of Labor Northern California Consumer Price Index (CPI) (also known as the "San Francisco Bay Area CPI") with a maximum annual adjustment not to exceed 3%.

In each subsequent year for which the assessments will be continued, the Board must hold a public meeting to preliminarily approve a budget for the upcoming fiscal year's costs and services, an updated annual Engineer's Report, and an updated assessment roll listing all parcels and their proposed assessments for the upcoming fiscal year. If the assessment amount is enough to fund the preliminarily approved budget, a CPI adjustment will not be included. At this meeting, the Board will also call for the publication in a local newspaper of a legal notice of the intent to continue the assessments for the next fiscal year and set the date for the noticed public hearing. This hearing is currently set for June 15, 2017. At the annual public hearing, members of the public can provide input to the Board prior to the Board's decision on continuing the services and assessments for the next fiscal year.

## DESCRIPTION OF MAINTENANCE, OPERATIONS, REPAIRS AND UPGRADES

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BIMID provides a range of levee construction, repair, maintenance and flood control prevention improvements, activities and services (collectively known as the “Services”) within its boundaries in north eastern Contra Costa County.

The maintenance, operations, repairs and upgrades proposed to be undertaken by BIMID and the cost thereof paid from the levy of the annual assessment provide special benefit to Assessor Parcels within the Assessment District as defined in the Method of Assessment herein. In addition to the definitions provided by the California Government Code Section 54710 et seq., (the “Code”) the maintenance, operations and improvements activities are generally described in the following sections.

This proposed benefit assessment would provide funding for two major areas of service improvement for its operations.

- Improved Maintenance of Flood Protection Facilities
- Critical Upgrades of Flood Protection Facilities

Due to inadequate funding caused by severely decreased revenues, and the corresponding need to substantially reduce operational and staffing costs to minimal, bare-bone levels (but which still, nonetheless, exceed available revenues), the level of flood protection in the Assessment District is below the desired level of service. In other words, the projected baseline level of service for 2017-18, and beyond (without this proposed assessment) would be inadequate to fund the desired service level, and this baseline would diminish over time and become increasingly unsustainable. Even before the recession, Contra Costa County LAFCO’s 2008 Municipal Services Review emphasized that “BIMID faces severe financing constraints,” that “limitations on this funding restrict the District’s ability to rebuild and maintain levees and provide the related drainage services to the island,” and that additional voter approved funding such as an assessment district should be considered. This is also during a time of increasing State and Federal regulation, requirements, and standards; and therefore increased tasks and responsibilities for BIMID exceeding its revenue base. If the proposed assessment is approved, it will fund improved and enhanced Services over and above the baseline level of service.

The formula below describes the relationship between the final level of Services, the baseline level of Service if the assessment is not instituted, and the enhanced level of services funded by the assessment.

<b>Final Level of Service</b>	=	<b>Baseline Level of Service</b>	+	<b>Enhanced Level of Service</b>
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Below is a more detailed description of these improvements that are proposed to be provided for the special benefit of property in the Assessment District.

### **IMPROVED MAINTENANCE**

BIMID has maintenance responsibilities for over 11.5 miles of levees. Specifically, the proposed and enhanced flood control maintenance activities include:

- Increased, regular inspection of levees for signs of erosion, seepage, boils, rodent infestation, slides, or other conditions that could indicate structural levee deficiencies. Inspection of lands adjacent to levee for indications of under-seepage. Inspection and surveying for levee settlement, subsidence, slope slumping, or erosion problems.
- Restore levees to pre-recession Hazard Mitigation Plan (HMP standards) and eventually achieve PL 84-99 standards.
- Regular review and maintenance of vegetation including the removal of excess vegetation using mowing, herbicide or other methods when such growth prevents the accurate inspection of facilities.
- Management and repair of rodent dens and other damage related to problematic creatures found in the Delta, like beavers.
- The remedial repair of levees and foundations with engineered fill, rock rip-rap, and other materials, or other levee repair work, as needed to repair damage, maintain or improve levees and flood control systems.
- Retrofit of one of two pump stations to bring it above the 100 year flood elevation.
- Monitoring of patrol roads to ensure they are clear of obstructions and provide access for emergency vehicles and District maintenance vehicles.
- Routine maintenance of the internal drainage ditches and canals.
- Operations, maintenance and repair of the District's two pump stations.
- Operations, maintenance and repair of all other flood control systems and improvements.
- Other flood control Services.

### **CRITICAL UPGRADES**

BIMID continues to work closely with DWR to address areas in need of critical upgrades to the District's flood protection facilities. Without a local funding match, or "local share" from BIMID, DWR will not provide funding for these upgrades. As previously explained, the Flood System Repair Project ("FSRP") estimates that the critical upgrades will cost approximately \$20 million and BIMID will be required to contribute at least 10% to as much as 25% of the amount from local sources (typically 15% to 20%).

In order to ensure that the portion of the assessment for the critical upgrades is used solely for that purpose, this portion of the funds will be placed in an account separate from that of the maintenance and operational funds. At the point in time when the District has paid off the local share of the cost for critical upgrades and is no longer financing capital levee upgrade projects, the critical upgrades portion of this assessment will cease to be collected.

Note that it is anticipated that significant capital levee upgrade projects will be required for many years into the future.

### **DISTRICT GOALS**

The District intends to complete the flood protection upgrade to the HMP flood protection standard and attain the PL 84-99 standard as soon as possible thereafter. The improved maintenance and upgrades to be funded by this proposed assessment are crucial to this goal. Similarly, BIMID is committed to long-term, continuous and appropriate upgrades, and higher standards of levee protection within its boundaries.

## COST AND BUDGET

In the fall of 2011, BIMID developed a 5 Year Plan which concluded that the appropriate level of flood protection system requires 1.) Approximately \$500,000 dedicated funding for improved maintenance per year, and 2.) Approximately \$12,000,000 for critical upgrades. The financing of the local share of the \$12,000,000 is estimated to require a contribution of at least \$122,446 per year, for 30 years, based upon a 3% interest rate and a 20% required local share.

**TABLE 2 – MAINTENANCE AND UPGRADE COSTS**

<b>Bethel Island Maintenance Improvement District</b>	
<b>Levee and Flood Control Facilities Maintenance and Repair Assessment</b>	
Fiscal Year 2017-18	
	Budget
<b>Costs</b>	
Current Operations (a)	\$735,677
Improved Maintenance (b)	\$59,560
Critical Upgrades (c)	+ \$130,574
Subtotal (a+b+c)	\$925,811
Less Revenue From Other Sources for General Benefits (d)	+ (\$696,734)
<b>Net Maintenance and Repairs to be Funded by Assessment (a+b+c-d)</b>	<b>\$229,077</b>
<b>Total Amount Needed from Assessment</b>	
	<b>\$229,077</b>
Total SFEs	1963.12
Rate per SFE	<b>\$116.69</b>

**Note:**

Current Operations (line (a), above) includes approximately 25% that is not direct levee maintenance work, such as internal drainage work. The proposed assessment includes \$98,503 in new revenue dedicated to improved levee maintenance: \$59,560 as indicated on line (b) above plus \$38,943 balancing from current \$735,677 revenue (d) less \$696,734 current operations (a).

## METHOD OF APPORTIONMENT

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### METHOD OF APPORTIONMENT

This section includes an explanation of the special benefits to be derived from the maintenance, operations and repair activities, the criteria for the expenditure of assessment funds and the methodology used to apportion the total assessments to properties within the proposed Assessment District. The proposed Assessment District area consists of all Assessor Parcels included within the BIMID boundaries.

The method used for apportioning the assessment is based upon the proportional special benefits conferred to the properties over and above the general benefits conferred to real property in the Assessment District, or to the public at large. Special benefit is calculated for each parcel in the District using the following process:

- 1.) Identification of all benefit factors derived from the Improvements
- 2.) Calculation of the proportion of these benefits that are general
- 3.) Determination of the relative special benefit within different areas of the Assessment District
- 4.) Determination of the relative special benefit per property type
- 5.) Calculation of the specific assessment for each individual parcel based upon special vs. general benefit, zones, property type and other supporting attributes

### DISCUSSION OF BENEFIT

California Government Code Section 54710 *et seq.* and California Water Code Section 51200 *et seq.* allow agencies which provide flood control Services, such as BIMID, to levy assessments for flood control Services. Section 54710 states that:

*Any local agency which is authorized by law to provide one or more of the following services may impose a benefit assessment pursuant to this chapter to finance the maintenance and operation costs of these services:*

- (1) Drainage.*
- (2) Flood control.*

Moreover, Government Code Section 54710.5 stipulates that any local agency which is authorized by law to provide drainage Services or flood control Services may, in addition to imposing a benefit assessment for the purposes authorized pursuant to Section 54710, impose such an assessment to finance the cost of installation and improvement of facilities.

In addition, California Government Code Section 53750 defines the terms "flood control" as follows:

*f) "Flood control" means any system of public improvements that is intended to protect property from overflow by water.*

Therefore, the maintenance, operational and improvement activities to be provided by the proposed Assessment District fall within the scope of Services that may be funded by assessments under the Code.

The assessments can be levied based only on the special benefit to property. This benefit is received by property over and above any general benefits. Moreover, such benefit is not based on any one property owner's specific use of the maintenance, operations and improvements activities or a property owner's specific demographic status. With reference to the requirements for assessments, Section 54711 of the California Government Code states:

*"The amount of the assessment imposed on any parcel of property shall be related to the benefit to the parcel which will be derived from the provision of the service."*

Proposition 218, as codified in Article XIID of the California Constitution, has confirmed that assessments must be based on the special benefit to property:

*"No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel."*

Since assessments are levied on the basis of special benefit, they are not a tax and are not governed by Article XIII A of the California Constitution.

### **FLOOD CONTROL IS A SPECIAL BENEFIT TO PROPERTIES**

The Engineer's Report concludes that enhanced flood control is a special benefit directly to the property that is being protected from flooding. The proposed Maintenance Services, which would be over and above the baseline level, will result in the levees being maintained to a much higher standard, and accordingly will reduce the risk of flooding and the associated damage to property.

The following Benefit Factors section describes how and why the Services specially benefit properties. This benefit is particular and distinct from its effect on property in general or to the public at large.

### **BENEFIT FACTORS**

The primary special benefit from the Services is the significantly reduced risk of damage to property from flooding. In addition, this section describes other special benefits conferred to residential, commercial, industrial, institutional and other lots and parcels resulting from the Services that will be provided. These types of special benefit are summarized as follows:

## REDUCED RISK OF DAMAGE TO REAL PROPERTY ASSETS FOR ALL PROPERTY OWNERS WITHIN THE ASSESSMENT DISTRICT

Properties in the Assessment District are currently at higher risk for flood. The proposed Assessments will fund an increase in maintenance, operations and improvement activities to reduce the likelihood of levee failure and reduce the threat from flooding, thereby significantly reducing the risk of property damage potential and loss of life associated with floods. Clearly, levee and flood control maintenance helps to protect and specifically benefits all properties in the Assessment District. The following citations illustrate the importance of the proposed maintenance, operational and improvement activities:

- 1.) *Dams and levees are designed to provide only a certain level of protection and can be overtopped and even fail in large flood events. Also, levees can and do decay over time, and maintenance can become a serious challenge. When levees do fail, or are overtopped, they fail catastrophically. The flood damage after a levee failure can be more significant than if the levee was not there.*<sup>2</sup>
- 2.) *[T]he one flood variable that is always expected to be associated with an increase in flood damages is the depth of flooding or flood stage. As the water gets deeper, damages increase.*<sup>3</sup>
- 3.) *During and after Hurricane Katrina, many of those levees and floodwalls were overtopped and several were breached, allowing billions of gallons of water from the Gulf of Mexico, Lake Borgne, and Lake Pontchartrain to flow into New Orleans and flood major portions of the city. As of August 2, 2006, 1,118 people were confirmed dead in Louisiana as a result of Hurricane Katrina. Another 135 people are still missing and presumed dead. Thousands of homes were destroyed. Direct damage to residential and non-residential property is estimated at \$21 billion, damage to public infrastructure another \$6.7 billion. Nearly half the region's population has not yet returned after evacuating.*<sup>4</sup>

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<sup>2</sup> FEMA FloodSmart web site

([http://www.floodsmart.gov/floodsmart/pages/ask\\_your\\_realestate\\_agent.jsp](http://www.floodsmart.gov/floodsmart/pages/ask_your_realestate_agent.jsp))

<sup>3</sup> US Army Corps of Engineers, National Economic Development (NED) Procedures Manual for Flood Damage Reduction (<http://www.hq.usace.army.mil/nedp/DB%20Pages/Content.asp?ID=17>)

<sup>4</sup> American Society of Civil Engineers, The New Orleans Hurricane Protection System, What Went Wrong and Why (<http://www.asce.org/files/pdf/ERPReport.pdf>)

- 4.) *The flood that followed inundated the town of Olivehurst and 15 square miles of farmland and towns. One man is known dead and two other people are missing, 180 homes and businesses were destroyed and another 480 were damaged, according to the state Office of Emergency Services, which put preliminary damage estimates at \$200 million.*<sup>5</sup>
- 5.) *After natural disasters such as hurricanes, tornadoes, and floods, excess moisture and standing water contribute to the growth of mold in homes and other buildings*<sup>6</sup>.

#### **REDUCED RISK OF LOSS OF LIFE OR HARM TO PROPERTY FROM FLOODING**

The proposed Assessments will fund maintenance, operations and improvement activities to reduce the likelihood of levee failure and reduce the threat from flooding. These services will reduce the loss of life, injuries, and other public health issues associated with flooding. The reduced risk of direct and indirect contact with flood water will increase public safety and will provide positive health benefits in the Assessment District. These are special benefits to property in the Assessment District because property is ultimately more desirable and valuable in areas that are safer and have less risk of harmful flooding.

*Annually, the nation experiences an average of 100 flood-related fatalities*<sup>7</sup>.

*Every effort should be made to limit contact with flood water due to potentially elevated levels of contamination associated with raw sewage and other hazardous substances.*<sup>8</sup>

*Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.*

*A foot of water will float many vehicles.*

*Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUV's) and pick-ups*<sup>9</sup>.

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<sup>5</sup> San Francisco Chronicle, January 12, 1997, Page C 1

<sup>6</sup> Centers for Disease Control and Prevention, "Protect Yourself From Mold" (<http://www.bt.cdc.gov/disasters/mold/protect.asp>)

<sup>7</sup> "'Be Aware And Be Prepared' Weather Service Issues Annual Flood Outlook", National Weather Service Press Release 99-20 (<http://www.publicaffairs.noaa.gov/releases99/mar99/noaa99-20.html>)

<sup>8</sup> US Environmental Protection Agency, "Response to 2005 Hurricanes – Health Precautions" (<http://www.epa.gov/katrina/precautions.html>)

<sup>9</sup> FEMA FloodSmart web site ([http://www.fema.gov/hazard/flood/fl\\_during.shtm](http://www.fema.gov/hazard/flood/fl_during.shtm))

<sup>9</sup> IBID

### **INCREASED SAFETY OF DRINKING WATER SUPPLY TO PROPERTY**

Even a minor flood has the potential to contaminate the drinking water supply if flood water enters the distribution system through wells or appurtenances such as air release valves, especially since there are multiple mutual water companies on the island. Such contamination would render the public water supply unfit for drinking. Property owners and residents in the Assessment District would need to use bottled water for drinking and cooking while the distribution systems are flushed, decontaminated, and tested. In addition, privately-owned wells could be damaged or contaminated by flooding. This is ultimately another special benefit to property because property is more desirable and valuable in areas with safe drinking water supplies.

*Swiftly moving flood water can carry large debris that could loosen well hardware, dislodge well construction materials or distort casing. Coarse sediment in the flood waters could erode pump components. If the well is not tightly capped, sediment and flood water could enter the well and contaminate it. Wells that are more than 10 years old or less than 50 feet deep are likely to be contaminated, even if there is no apparent damage. Floods may cause some wells to collapse.<sup>10</sup>*

### **PROTECTION OF JOBS, ECONOMIC BASE AND TRANSPORTATION SYSTEMS AFFECTING PROPERTY**

The proposed Assessment District will provide funding for maintenance, operational and improvement activities that will reduce the risk of significant disruption and harm to jobs and the economic base in the Assessment District. The maintenance, operations and improvement activities will also better protect the roads and transportation systems in the Assessment District that are crucial for maintaining the local economic base. Without accessible roads and access to jobs, the value of property in the Assessment District would be diminished. Therefore, another special benefit to property is the protection of jobs, the local economic base and local transportation systems.

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<sup>10</sup> US Environmental Protection Agency, "Private Drinking Water Wells – What to Do After the Flood" (<http://www.epa.gov/safewater/privatewells/whatdo.html>)

*Communities affected by deep flooding, especially if the flooding is of long duration, may suffer much larger and much longer term economic impacts. The economic impacts will be particularly severe if flooding is great enough that many residential and commercial buildings are demolished rather than repaired. In such flood events, the impacts may include more or less permanent losses of population, widespread business closures, and substantial long-term reductions in tax revenues. Furthermore, future development and future economic growth may also be significantly curtailed.<sup>11</sup>*

#### **PROTECTION OF PUBLIC SERVICES AND PUBLIC RESOURCES THAT BENEFIT PROPERTY**

The proposed Assessment District will provide funding for maintenance, operational and improvement activities that will reduce the potential for levee failure and flooding to protect public and private resources in the Assessment District. This benefits even those properties that are not directly damaged by flooding by maintaining and improving the aesthetics and attractiveness of public and private resources in the community, as well as ensuring that such resources remain safe and well maintained.

*The habitats of several endangered species were altered by [Hurricane] Katrina<sup>12</sup>.*

The Sacramento River Delta area is home to a wide variety of unique habitats, flora and fauna. The protection of these resources provides special benefit to proximate properties.

#### **GENERAL VERSUS SPECIAL BENEFIT**

As noted previously, the assessment revenue will be used to provide maintenance, operations and improvement activities to reduce the risk of property damage and harm from flooding. This is a special benefit to property in the proposed Assessment District because the reduction in likelihood of flooding confers the special benefit factors described above and these benefits ultimately flow to property in the Assessment District. Moreover, in absence of the proposed Assessments, the annual ongoing revenues available to BIMID are not sufficient to effectively maintain the levees and flood control facilities and will not be sufficient to cover the approximately 20% local share of the funds to make the upgrades to the sections of levee system that have been identified as being in need of “critical” upgrade and/or repair. Therefore, in the absence of the proposed assessment, the potential for flooding in the proposed Assessment District could substantially increase.

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<sup>11</sup> Feather River Levee Repair Project, Alternatives Analysis Report, Appendix VI Inundation Reduction Benefit Analysis, December 2006, Bookman Edmonston/David Ford Consulting Engineers

<sup>12</sup> “The Impact of Hurricane Katrina on Biological Resources”, Pervaze A. Sheikh, October 18, 2005, CRS Report for Congress

Proposition 218 requires any local agency proposing to increase or impose a special assessment to “separate the general benefits conferred on a parcel.”<sup>13</sup> The rationale for separating special and general benefits is to ensure that property owners are not charged a benefit assessment in order to pay for general benefits. Thus, a local agency carrying out a project that provides both special and general benefits may levy an assessment to pay for the special benefits, but must acquire separate funding to pay for the general benefits.<sup>14</sup>

In other words:

<b>Total Benefit</b>	<b>=</b>	<b>General Benefit</b>	<b>+</b>	<b>Special Benefit</b>
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However, flood control operations such as the Services provide only special benefits. Special benefits are benefits that are “peculiar and distinct over and above general benefits located in the district or to the public at large.”<sup>15</sup> Because flood control infrastructure protects particular identifiable parcels (including residents of the parcel and any appurtenant facilities or improvements) from damage due to inundation or force by rising floodwaters, the benefits are provided directly to those parcels, and to none other. By contrast, general benefits provided to the public at large are discussed in terms of general enhanced property values, provision of general public Services such as police and fire protection, and recreational opportunities that are available to people regardless of their location.<sup>16</sup>

The issue of general benefits merits further discussion, however, because flood control Services and improvements have an obvious indirect relationship to the provision of general benefits. For example, the Services may protect restaurant and/or recreation facilities in the Assessment District that may be used by people regardless of whether they own property in the District. But this indirect relationship does not mean that the Services and Improvements themselves will provide any general benefits. Rather, the Services will provide direct special benefits to parcels that may themselves be used in the provision of general benefits.

More to the point, the public at large will be paying for the general benefits provided to benefiting “public use” property, and specially-benefited property owners’ assessments will not be used to subsidize general benefits provided to the public at large or to property outside the Assessment District. All property that is specially benefited by the Services and

<sup>13</sup> California Constitution Article XII D 4

<sup>14</sup> *Silicon Valley Taxpayers’ Association, Inc. v. Santa Clara County Open Space Authority* (2008) 44 Cal 4<sup>th</sup> 431, 450

<sup>15</sup> California Constitution Article XII D 2(i)

<sup>16</sup> *Silicon Valley Taxpayers’ Association, Inc. v. Santa Clara County Open Space Authority* (2008) 44 Cal 4<sup>th</sup> 431, 450-56

Improvements will be assessed, including the parcels used in the provision of general benefits. Thus, the general public will pay for a portion of the provision of the flood control Services and Improvements because the assessed public agencies will use general taxes and other public revenue to pay their Assessments, and privately owned parcels (such as restaurants) will collect revenue from customers to pay for any “general benefits”.

The Assessment Engineer finds that the Services and Improvements are of distinct and direct special benefit to the property within the Assessment District.

The Assessment Engineer conducted a parcel-by-parcel analysis and has developed an approach, described below is the industry standard. In any case, following is a description of the separation of general benefit from special benefit, and the quantification of the general benefit, in the District. In each step of this analysis, conservative assumptions and determinations have been used in order to ensure that the total calculated general benefit is maximized which reduces the special benefit assessed on any one parcel.

A formula to estimate the general benefit is listed below:

General Benefit	=	Benefit to real property outside of improvement district	+	Benefit to real property inside of improvement district	+	Benefit to public at large
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#### **BENEFIT TO PROPERTY OUTSIDE, BUT PROXIMATE, TO THE DISTRICT**

There are parcels that are accessed by water, or by road on Bethel Island, on the “water side” of the levee that are not within the legal boundaries of the District, but do receive some benefit from the District’s Services and Improvements.

The general benefit to property outside of the District is calculated as follows with the parcel and data analysis performed by SCI Consulting Group.

##### **Assumptions:**

217 parcels outside and adjacent to the District

1694 parcels in the Assessment District

##### **Calculation**

General Benefit to Property outside the Improvement District=  
 $(217/(217+1694))= 11\%$

**TOTAL GENERAL BENEFIT TO PROPERTIES OUTSIDE, BUT PROXIMATE, TO THE DISTRICT = 11%**

#### **BENEFIT TO PROPERTY WITHIN THE ASSESSMENT DISTRICT**

The “indirect and derivative” benefit to property within the District is particularly difficult to calculate. A solid argument can be presented that all benefit within the Assessment District is special, because the Improvements are clearly “over and above” and “particular and distinct” when compared with the baseline level of service and the unique proximity and access of the Services and Improvements enjoyed by benefiting properties in the District.

Nevertheless, the *Silicon Valley Taxpayers Association* decision indicates there may be general benefit “conferred on real property located in the district.” A measure of the general benefits to property within the District is the percentage of land area within the District that is publicly owned, open to the public, and used for regional purposes such as major roads, rail lines, hospitals, and other regional facilities because such properties, while physically within the District, are used for regional purposes and could provide indirect benefits to the public at large. In this case, essentially 0% of the land area is used for such regional purposes.

**TOTAL GENERAL BENEFIT TO PROPERTIES WITHIN THE ASSESSMENT DISTRICT = 0%**

**BENEFIT TO THE PUBLIC AT LARGE**

In the *Beutz* case, the Court opined that general benefits from parks and recreation facilities could be quantified by measuring the use of parks and recreation facilities by people who do not live within the assessment boundaries. This Engineer's Report uses this general benefit measure as the third component of the overall general benefit quantification. Therefore, the general benefit to the public at large can be estimated by the proportionate amount of time that the District's water sports facilities are used and enjoyed by individuals who are not residents, employees, customers or property owners in the District. Here, the public at large within the District is primarily made up of non-resident boaters and fisherman.

However, access for boaters and for fisherman who are not residents, employees, customers or property owners in the District is extremely limited – all boat access ramps on the island are within private marinas. Use of Bethel Island by such individuals is not common. Nonetheless, the Engineer has liberally assigned an allowance of a 10% general benefit factor.

**TOTAL GENERAL BENEFIT TO PUBLIC AT LARGE = 10%**

**SPECIAL NOTE ON GENERAL BENEFITS**

In the 2009 *Dahms* case, the court upheld an assessment that was 100% special benefit on the rationale that the Services funded by the assessments were directly provided to property in the assessment district. Similar to the assessments in Pomona that were validated by *Dahms*, the Assessments described in this Engineer's Report fund Flood Control Services that are directly provided to property in the assessment area. Moreover, as noted in this Report, the Services directly reduce flood risk on all property in the assessment area. Therefore, *Dahms* establishes a basis for minimal or zero general benefits from the Assessments. However, in this report, the general benefit is more conservatively estimated and described, and then budgeted so that it is funded by sources other than the assessment.

**TOTAL GENERAL BENEFITS**

Using a sum of these three measures of general benefit, we find that approximately 21% of the benefits conferred by the Improvements may be general in nature and should be funded by sources other than the assessment.

**General Benefit =**

**11 % (Outside the District)**  
**+ 0 % (Property within the District)**  
**+ 10 % (Public at Large)**  
**= 21 % (Total General Benefit)**

BIMID's total budget for 2017-18, including the proposed Assessment District would be \$925,811. Of this total assessment budget amount, the District will contribute at least \$696,734 which is more than 75% of the total budget from sources other than this assessment. This contribution constitutes significantly more than the 21% general benefits that must be paid for by non-assessment sources estimated by the Assessment Engineer.

### **SPECIAL NOTE ON GENERAL BENEFIT TO THE NEARBY LOCAL, STATE AND FEDERAL WATER PROJECTS**

Any additional general benefit from the proposed improvements to the nearby local, State and Federal water projects, is addressed through above-described 21% general benefit allowance, and by the Department of Water Resource's programs which financially support 75% of BIMID's maintenance operations and 75% to 95% of BIMID's major repairs and upgrades.

### **ASSESSMENT APPORTIONMENT**

In the process of determining the appropriate method of assessment, various alternatives were considered. For example, an assessment only for all residential improved property was considered but was determined to be inappropriate because vacant, commercial, industrial and other properties also receive special benefits from the Assessments. Moreover, a fixed or flat assessment for all properties of similar type was deemed to be inappropriate because properties less likely to be affected by flooding would be assessed the same as properties more likely to be affected. Hence, the appropriate method of assessment should be based on the type and use of the property, the relative size of the property, location of the property and the level of potential damage to property. This method is further described below.

### **METHOD OF ASSESSMENT**

The next step in apportioning assessments is to determine the relative special benefit for each property. This process involves determining the relative benefit received by each property in relation to a "benchmark" property, a single family detached dwelling on one parcel of one acre or less (one "Single Family Equivalent Benefit Unit" or "SFE"). This SFE methodology is commonly used to distribute assessments in proportion to estimated special benefits. In this Engineer's Report, all properties are assigned an SFE value, which is each property's relative benefit in relation to a single family home on one parcel.

The relative benefit to properties from maintenance, operational and improvement activities that reduce the potential for levee failure and flooding is described by the following equations:

**TABLE 3 – EQUATIONS**

Equation	
1	$\sum \text{Special Benefit}_{\text{parcel}} = \sum \text{Assessment}_{\text{parcel}}$
2	$\text{Assessment}_{\text{parcel}} = \text{Rate}_{\text{group}} \times \sum (\text{Replacement}_{\text{parcel}} \text{ Factors} \times \text{Parcel Specific Factors})$
3	$\text{Rate}_{\text{group}} = \text{Base Rate} * \text{Relative Group Factor}$
4	$\text{Base Rate} = \frac{\sum \text{Costs}}{\sum \text{SFEs}}$

(The Base Rate is \$110.00)

**TABLE 4 – FACTORS**

Factor	Reference
$\sum \text{Cost}$	Table 2
$\sum \text{SFE}$	Table 2
Parcel Specific Factors:	
I. Flood Risk Factors	Table 5
II. Flood Damage Factors (Groups)	Table 6
III. Shared Facilities Factors	Table 7
Replacement Factors	
	Table 9

That is, the special benefit conferred to property is a function of flood risk factors, flood damage factors, shared facilities factors and land use factors. The derivation of these factors is described in the sections below.

### **FLOOD RISK FACTORS (*PARCEL SPECIFIC FACTOR I*)**

Flood risk factors are typically derived from Annual Exceedance Probabilities (AEPs) contained in an Inundation Reduction Analysis. Each AEP is based on geotechnical and hydraulic data for that location, called an “index point”. This type of analysis has not been exhaustively performed on the BIMID levees. However, recent studies have determined that there is no significant difference in predicted flood depths nor levee condition throughout the District. Moreover, any significant levee breach would cause uniform effect throughout the District. (On the contrary, many larger Sacramento Delta reclamation districts have large variations in predicted flood depth and levee condition associated with various flooding scenarios; and different zones are needed to calculate special benefit). The resulting flood risk factors, which are uniform throughout the District, is shown in the table below. (However, the properties in the Delta Coves development are administered in a separate zone to express, and properly assess differences in shared facilities factors, as described below)

**TABLE 5 – FLOOD RISK FACTORS**

<b>Zone</b>	<b>Flood Risk Factors (%)</b>
BIMID	100.0

### **FLOOD DAMAGE FACTORS (“GROUPS”) (*PARCEL SPECIFIC FACTOR II*)**

Because of the complexities of elevations and structures heights and types, located within BIMID, a system of “groups” is used to describe different parcel-specific attributes as they relate to relative flood damage. The implementation of this Group system required an exhaustive parcel-by-parcel analysis within the practical limitations of access to private properties within the District. For each parcel within the District, two primary attributes were determined:

- At-grade elevation
- Number of floors

The Group system is fully described in this section.

Flood damage is generally a function of the depth of flooding, with greater depth causing greater damage to structures and property.

### Flood Depths and At-Grade Elevation Groups

When evaluating flood depths for BIMID, there are two significant elevations: the Mean High Tide (“MHT”) and the 100 year flood.

- MHT elevation = 5.99 ft. NAVD 88 or ( 3.65ft NGVD 29)
- 100 year flood elevation = 9.34 ft. NAVD 88 or ( 7.0 ft. NGVD 29)

Although the importance of the 100 year flood elevation is self-evident, the importance of the MHT requires additional discussion. First, in the event of a breach caused by a significant (e.g. 100 year) flood event, the water level would likely stabilize at the MHT relatively rapidly. Properties would be impacted by the maximum flood depth for a short time but may be subject to the MHT depth for a long duration during pumping. Secondly, local flooding history indicates that possibility of a “sunny day” flood, such as the one that occurred at Franks Tract where the maximum flood depth would be the MHT elevation.

As a result parcels are divided into three groups based upon parcel-by-parcel analysis of structures:

Group A:	Primary floor elevation below MHT elevation
Group B:	Primary floor elevation between MHT elevation and 100 year flood elevation
Group C:	Primary floor elevation above 100 year flood elevation

(It is important to realize that these groups are used to express relative damage for the purpose of this assessment and should not be used to extrapolate actual field condition damage levels.)

### Structure Height and Type Groups

BIMID contains a wide variety of structure types (although almost all are residential) including traditional manufactured homes and single story homes, as well as “less-traditional” multi-story homes. The multi-story homes are often designed with the primary floor on the second floor “looking” over the levee on to the water, and less intensive use like storage, recreation, garages, etc., is provided on the lower, at-grade floor. Therefore, it is assumed that all structures with at least two stories have the main, primary and most critical use area on the second floor including the kitchen, not on the first floor like most traditional multi-story homes. Since in-depth research cannot be performed within private homes on private property, this assumption is applied to all two or more story structures. Non-standard lower floor heights exist in cases to elevate the primary upper floor above the levee. There are also structures built on stilts or piers, presumably to limit exposure to flooding. Further, some of the structures are elevated above grade by foundation or earthwork. In the case of the Delta Coves development, earthwork re-grading has been used to significantly elevate all structures.

Parcels were again divided into three groups, based upon parcel-by-parcel analysis of structures:

Group 1	Single story structures
Group 2	Multi-story structures
Group 3	Structures on stilts or piers (with less than 50% of lower, at grade, floor enclosed.)

Special Note on Vacant, Agricultural & Rangeland and Golf Course & Cemetery Properties

Unless information is available regarding the planned structure, vacant properties are conservatively included with Group 3. Similarly, since Agricultural & Rangeland and Golf Course & Cemetery properties have few or no structures that would be damaged by flooding, they are included also include in Group 3.

Special Note on Delta Coves Parcels

Parcels within the Delta Coves Development are designated as Group D to more easily administer specific attributes such as shared facility factors, as discussed below.

Calculation of Flood Damage Percentages based upon Group-Combinations

For each "Group-Combination", a relative flood depth with determined based upon predicted flood depth within that Group. Since there may be considerable variation of floor level even within grade, and limited access to structures, a buffer allowance was given to each structure to correct for grade elevation and create an effective elevation. For multi-story, a standard floor height was used with the buffer allowance to account for non-standard floor heights. Based upon the relevant Flood Damage Percent curves (Corp of Engineer's Economic Guidance Memorandum (EGM) 01-03, Generic Depth-Damage Relationships), relative Damage Factors were determined, and normalized, as shown in Table 6, below:

TABLE 6 – FLOOD DAMAGE FACTORS

Group Combination	Effective Flood Depth (ft.)	Flood Damage (%)
A-1	3.35	47.1
B-1	1.68	32.1
C-1	0.00	13.4
A-2	3.35	47.1
B-2	1.68	32.1
C-2	0.00	13.4
A-3	2.35	40.1
B-3	0.68	23.3
C-3	-1.00	2.5
Delta Coves	-1.00	2.5

**SHARED FACILITY FACTORS (PARCEL SPECIFIC FACTOR III)**

Shared facilities factors affect groups of parcels in similar ways. The Delta Coves parcels are served by a power, water and drainage system that is not susceptible to flood damage. A weighted system is used based upon an equal distribution for each of the five primary shared facilities. This component of the special benefit apportionment is summarized in Table 7, below.

TABLE 7 – SHARED FACILITY FACTORS

Group Combination	Water	Power	Sewer	Drainage	Road Access	Total (%)
A-1	20	20	20	20	20	100.0
B-1	20	20	20	20	20	100.0
C-1	20	20	20	20	20	100.0
A-2	20	20	20	20	20	100.0
B-2	20	20	20	20	20	100.0
C-2	20	20	20	20	20	100.0
A-3	20	20	20	20	20	100.0
B-3	20	20	20	20	20	100.0
C-3	20	20	20	20	20	100.0
Delta Coves	15	15	20	20	20	90.0

## WEIGHTED PARCEL FACTOR SUBTOTALS

Within the BIMID boundaries, Flood Risk Factors, Flood Damage Factors and Shared Facility Factors describe the relative benefit to each parcel within a group and are adjusted by their relative importance (weighting). Table 8 below shows the total weighted and normalized flood, Risk, Flood Damage and Shared Facilities factors.

**TABLE 8 – TOTAL RELATIVE PARCEL FACTORS**

Group Combination	Flood Risk Factor	Flood Damage Factor	Shared Facilities Factor	Total Weighted Parcel Factors
Relative Weight(%)	10.0	40.0	40.0	
A-1	100.0	47.1	100.0	68.8
B-1	100.0	32.1	100.0	62.8
C-1	100.0	13.4	100.0	55.4
A-2	100.0	47.1	100.0	68.8
B-2	100.0	32.1	100.0	62.8
C-2	100.0	13.4	100.0	55.4
A-3	100.0	40.1	100.0	66.0
B-3	100.0	23.3	100.0	59.3
C-3	100.0	2.5	100.0	51.0
Delta Coves	100.0	2.5	90.0	47.0

The relative weights were determined with the greatest emphasis on potential flood damage and the conclusion that the potential loss of shared facilities is critical to the use of all property on the Island. They have been given a relative weight of 40% each, based upon engineering judgment. Flood risk factor (i.e. location on the island) and replacement factors are considered less significant and have been given a relative weight of 10% each.

## LAND USE FACTORS

The final step in determining the apportionment is to factor in the land use, or replacement value for each type of use within a Group.

Using the Contra Costa County Assessor's data for land and total value, recent appraisal results, and other regional characteristics, relative land use factors were determined for various property types. These property types and land use factors are described below and summarized in Table 9.

**TABLE 9 – LAND USE FACTORS FOR PROPERTY TYPES**

Land Use	Normalized Replacement Value(%)	Unit
Residential	100.0	each
Multi Family	100.0	each
Commercial/Industrial	171.7	acre
Office	521.9	acre
Institutional	171.7	acre
Storage	39.1	acre
Agricultural & Rangeland	3.1	acre
Golf Course & Cemetery	19.2	acre
Vacant	23.0	acre

**SUMMARY OF RELATIVE SPECIAL BENEFITS FOR EACH GROUP AND LAND USE**

Table 10, below, summarizes the relative benefit for each Group and Replacement Value – calculated with a 10% weight for replacement value. The table has been normalized for the most common property within the District in Group C-2, a typical 2 story house with the primary floor above the 100 year flood elevation.

**TABLE 10 – NORMALIZED SUMMARY OF RELATIVE SPECIAL BENEFIT**

	Residential	Multi Family	Commercial /Industrial	Office	Institutional	Storage	Agricultural & Rangeland	Golf Course & Cemetery	Vacant
A-1	1.206	1.206	1.316	1.852	1.316	1.113	NA	NA	NA
B-1	1.114	1.114	1.224	1.760	1.224	1.021	NA	NA	NA
C-1	1.000	1.000	1.110	1.645	1.110	0.907	NA	NA	NA
A-2	1.206	1.206	1.316	1.852	1.316	1.113	NA	NA	NA
B-2	1.114	1.114	1.224	1.760	1.224	1.021	NA	NA	NA
C-2	1.000	1.000	1.110	1.645	1.110	0.907	NA	NA	NA
A-3	1.163	1.163	1.273	1.809	1.273	1.070	1.015	1.040	1.046
B-3	1.061	1.061	1.170	1.706	1.170	0.967	0.912	0.937	0.943
C-3	0.933	0.933	1.043	1.579	1.043	0.840	0.785	0.810	0.815
Delta Coves	0.872	0.872	0.982	1.518	0.982	0.779	0.724	0.748	0.754

**Special Note on Agricultural & Rangeland and Golf Course & Cemetery Properties**

Agricultural & rangeland, as well as golf course and cemetery properties on Bethel Island do not fundamentally suffer the same intensity of damage as other types of properties. Agricultural & rangeland properties receive only 3.1% of the land use replacement benefit as compared to residential, as shown in the Table above. Golf Course & cemetery properties receive only 19.2% of the land use replacement benefit as compared to residential, as shown in Table 9 above. However, its flood risk, flood damage and shared facilities factors are more similar to other types of properties. Special benefit is calculated for agricultural and

rangeland properties using all four factors for the first acre, and then reduced to the relative land use factor for additional acres.

Special Note on Residential and Vacant Properties

Vacant and residential, including multi-family, are assessed up to 1 acre, and then at the agricultural & rangeland rate beyond 1 acre. Multiple residences on 1 parcel are assessed per residence (i.e. Mobile home parks.)

Special Note on Roadways

The Bethel Island roadways are assessed at the vacant rate.

Special Note on Gas Wells

Gas Wells are assessed at the commercial rate.

Special Note on Pipeline and Utility Rights of Way

Pipeline and utility rights of way are assessed at the commercial rate.

Article XIID, Section 4 of the California Constitution states that publicly owned properties shall not be exempt from assessment unless there is clear and convincing evidence that those properties receive no special benefit. All public properties that are specially benefited are assessed. Publicly owned property that is used for purposes similar to private residential, commercial, industrial or institutional uses is benefited and assessed at the same rate as such privately owned property.

The assessment rate for a specific parcel can be determined by multiplying the base rate by appropriate relative benefit factor in Table 10 above and by the numbers of acres (if it is more than 1 acre.) However, if the parcel is designated as residential, vacant or agricultural & rangeland, the rate after the first acre is 3.1% of the base rate. Similarly, if the parcel is designated as golf course or cemetery, the rate after the first acre is 19.2% of the base rate.

**APPEALS OF ASSESSMENTS LEVIED TO PROPERTY**

Any property owner who feels that the Assessment levied on the subject property is in error as a result of incorrect information being used to apply the foregoing method of assessment may file a written appeal with the Board of Directors of BIMID. Any such appeal is limited to correction of an assessment during the then current fiscal year. Upon the filing of any such appeal, the Board of Directors will promptly review the appeal and any information provided by the property owner. If the Board of Directors find that the Assessment should be modified, the appropriate changes shall be made to the assessment roll. If any such changes are approved after the assessment roll has been filed with the County for collection, the Board of Directors are authorized to refund to the property owner the amount of any approved reduction.

**DURATION OF THE ASSESSMENT**

The Assessments can be levied annually commencing with fiscal year 2015-16. The assessments are to expire in 10 years after the 2024-25 fiscal year, unless renewed and

extended by a Proposition 218-compliant balloting. During this 10-year period, the assessment cannot be increased in future years without approval from property owners in another Proposition 218-compliant assessment ballot proceeding, except for an annual adjustment tied to the change in the U.S. Department of Labor, Bureau of Labor Statistics Consumer Price Index for the San Francisco Bay Area, not to exceed 3% per year.

## ASSESSMENT

**WHEREAS**, the Board of Directors of BIMID is proceeding with the proposed Levee and Flood Control Facilities Maintenance and Repair Assessment District under the California Codes Government Code sections 54710 *et seq.* (the “Code”) and Article XIID of the California Constitution (the “Article”), to proceed with the proposed levy of assessments; and

**WHEREAS**, the undersigned Engineer of Work has prepared and filed a report presenting an estimate of costs, a diagram for the Assessment District and an assessment of the estimated costs of the maintenance, operations and improvements activities upon all assessable parcels within the Assessment District; and

**NOW, THEREFORE**, the undersigned, by virtue of the power vested in me under said Code and Article and the order of said Board of Directors, hereby make the following assessment to cover the portion of the estimated cost of maintenance, operations and improvements activities, and the costs and expenses incidental thereto to be paid by the Assessment District.

The amount to be paid for maintenance, operations and improvements activities and the expense incidental thereto, to be paid by the Assessment District for the fiscal year 2017-18 is generally as follows:

**TABLE 11 – BUDGET SUMMARY**

<b>Bethel Island Maintenance Improvement District Summary Budget 2017-18</b>	
<b>Cost of Services</b>	<b>\$925,811</b>
<b>Contribution from Other Sources for General Benefit</b>	<b>(\$696,734)</b>
<b>Net Amount to Assess</b>	<b>\$229,077</b>

An Assessment Diagram is attached hereto and made a part hereof showing the exterior boundaries of said Assessment District. The distinctive number of each parcel or lot of land in said Assessment district is its Assessor Parcel Number appearing on the Assessment Roll.

I do hereby assess and apportion the net amount of the cost and expenses of the maintenance, operations and improvements activities, including the costs and expenses incident thereto, upon the parcels and lots of land within the Assessment District, in accordance with the special benefits to be received by each parcel or lot, from the maintenance, operations and improvements activities, and more particularly set forth in the

Cost Estimate and Method of Assessment attached hereto and by reference made a part hereof.

The continued assessment is subject to an annual adjustment tied the average of the United States Department of Labor Northern California Consumer Price Index (CPI) (also known as the "San Francisco Bay Area CPI) with a maximum annual adjustment not to exceed 3%.

The monies representing assessments collected shall be deposited in a two separate funds established under the distinctive designation of the 1.) Levee and Flood Control Facilities Maintenance and 2.) Levee and Flood Control Facilities Repair and Improvements and shall be expended only for the specified purpose.

Each parcel or lot of land is described in the Assessment Roll by reference to its parcel number as shown on the Assessor's Maps of the Counties of Contra Costa for the fiscal year 2017-18. For a more particular description of the property, reference is hereby made to the deeds and maps on file and of record in the offices of the County's Recorders of Contra Costa County.

I hereby place opposite the Assessor Parcel Number for each parcel or lot within the Assessment Roll, the amount of the assessment for the fiscal year 2017-18 for each parcel or lot of land within the Assessment District.

Dated: April 25, 2017



Engineer of Work

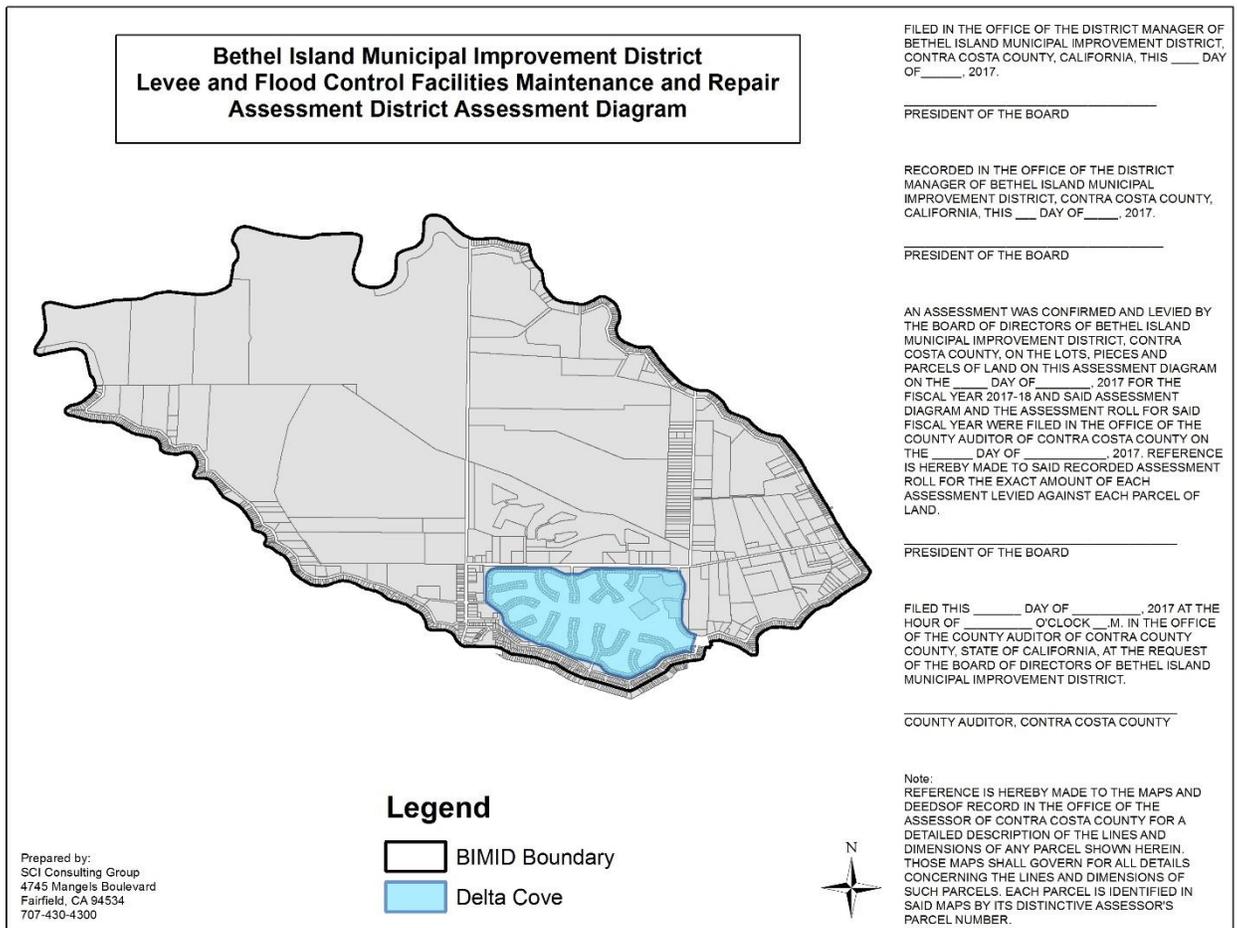
By

  
 John Bliss, License No. C052019

**ASSESSMENT DIAGRAM**

The Assessment District includes all properties within the proposed boundaries of the Levee and Flood Control Facilities Maintenance and Repair Assessment. The boundaries of the Assessment District are displayed on the following Assessment Diagram. The lines and dimensions of each lot or parcel within the Assessment District are those lines and dimensions as shown on the maps of the Assessor of the County of Contra Costa, for fiscal year 2017-18, and are incorporated herein by reference, and made a part of this Diagram and this Report.

**FIGURE 2 - BIMID ASSESSMENT DIAGRAM FY 2017-18**



## APPENDICES

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### APPENDIX A – ASSESSMENT ROLL, FY 2017-18

The Assessment Roll is made part of this report and is available for public inspection during normal office hours. Each lot or parcel listed on the Assessment Roll is shown and illustrated on the latest County Assessor records and these records are, by reference, made part of this report. These records shall govern for all details concerning the description of the lots or parcels.