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# Reclamation District 1608

## **Maintenance and Capital Services Assessment**

*FINAL ENGINEER'S REPORT*

Prepared for: RD 1608  
Submission Date: April 1, 2025

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# 1. INTRODUCTION

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## Background

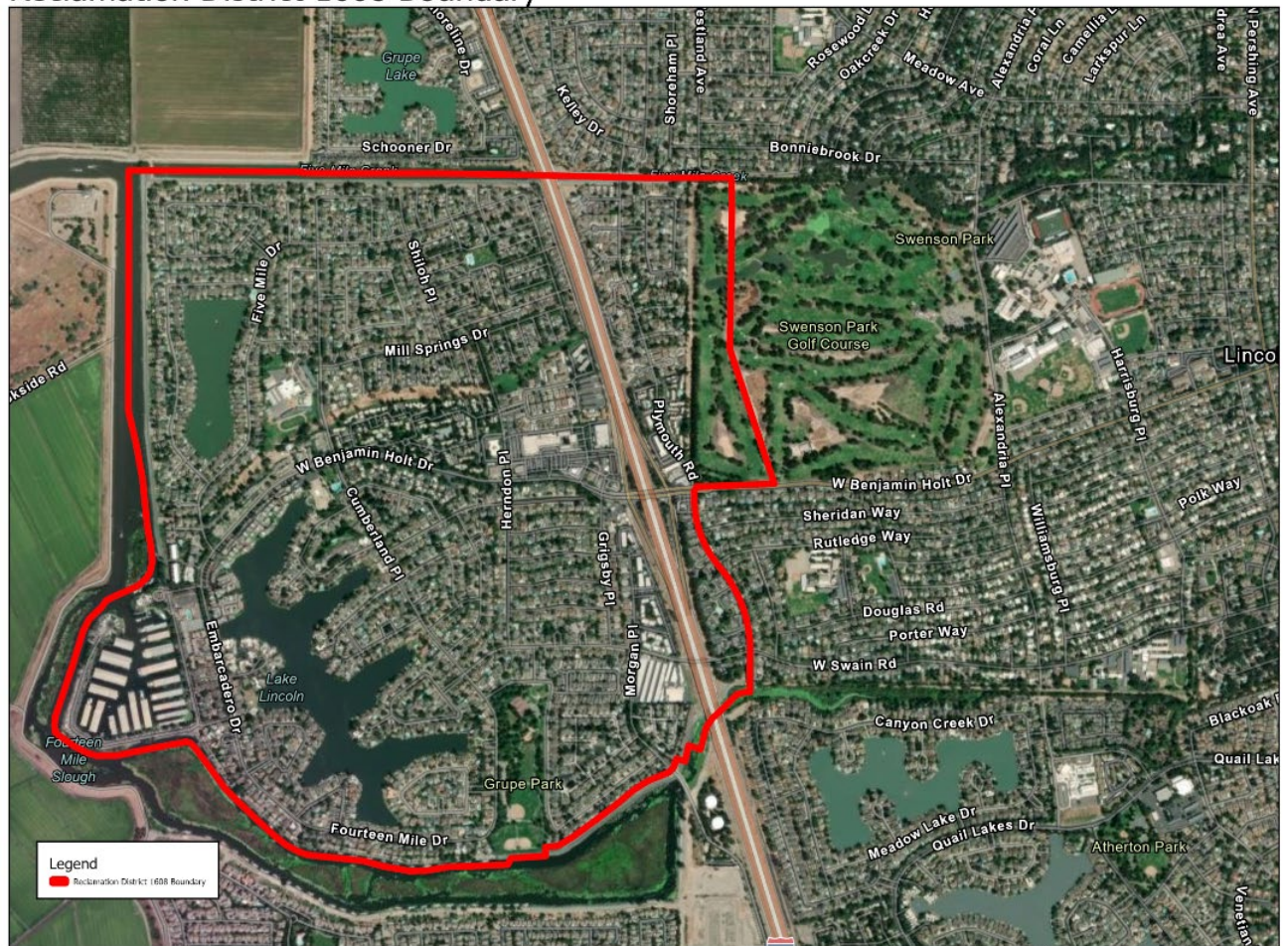
Reclamation District 1608 (RD 1608 or District) was formed in 1914 and is an independent reclamation district which, in general, covers the area of Lincoln Village West in the northwest portion of Stockton, California. RD 1608 is bordered by waterways on three sides. To reduce the chance of flooding, RD 1608 operates and maintains (O&M) three and a half miles of levees along Fourteen Mile and Five Mile Sloughs and various drainage facilities to maintain flood control in Lincoln Village West (**Figure 1**). The District is governed by a three-member Board of Trustees comprised of property owners from within the District.

After a successful Proposition 218 ballot proceeding in 2010, RD 1608 approved a fifteen-year assessment to fund a portion of ongoing operations, maintenance, capital projects, and assessment administration costs (the "2010 Assessment"). The 2010 Assessment totaled \$298,830.64 per year for each of the fifteen years, ending with the final year's levy being fiscal year (FY) 24/25. Property assessments represent a critical revenue source to the District, representing approximately 45% of its total revenue sources (estimated FY24/25). RD 1608 also receives a portion of ad valorem property taxes collected by the County ("Property Taxes") as well as funding from the State of California through its Delta Levees Maintenance Subventions Program ("Subventions Funding").

The purpose of this Engineer's Report is to authorize the levy of a new assessment to replace the sunsetting 2010 Assessment. RD 1608 proposes to levy a new assessment, the RD 1608 Maintenance and Capital Services Assessment, in perpetuity, to fund maintenance and additional capital improvements to the levee system over time (the "MCSA" or "Proposed Assessment").

**Figure 1      Reclamation District 1608 Map**

**Reclamation District 1608 Boundary**



Prepared by Larsen Wurzel & Associates

## **Purpose of this Engineer's Report**

Because the 2010 Assessment sunsets in 2025, RD 1608 must approve a new assessment to collect revenue from property owners within the District for continued operations, maintenance, and capital project services. The 2010 Assessment and the Proposed Assessment represent a significant portion of its annual budget, without which RD 1608 would be unable to provide the same level of flood risk reduction benefits to properties within the District.

This Engineer's Report describes, in detail, the methodology for levying the Proposed Assessment upon parcels that receive special benefit from the services as defined within this Engineer's Report. In combination with its other sources of revenue, Property Taxes and Subventions Funding, the MCSA is intended to provide sufficient funding for annual O&M services necessary to maintain levees and drainage facilities, establish a reserve fund to support routine repairs, rehabilitation, and replacement of the infrastructure, capital improvement projects (Services) within and associated with the District's facilities.

## **Report Organization**

This report is divided into six sections with tables and a section for figures as well as four appendices, all described further below.

**Section 1** provides the background, purpose of this Engineer's Report, and describes the report's organization.

**Section 2** outlines the authorization and process for levying the Proposed Assessment.

**Section 3** details the Services provided and funding plan for those Services.

**Section 4** details the methodology for levying an assessment that is proportional to the special benefits received by each parcel assessed.

**Section 5** describes the annual assessment administration process.

**Section 6** Provides the special benefit findings and certification by the Assessment Engineer as required by Article XIID Section 4 (b) of California Constitution.

**Appendix A** provides a cash flow model for RD 1608 prepared by Larsen Wurzel & Associates.

**Appendix B** provides the reference to *San Joaquin River Delta Base Flood Elevation Refinement Stage Frequency Analysis, Peterson Brustad, Inc, September 2, 2010*.

**Appendix C** provides the proposed assessment district boundary.

**Appendix D** provides the list of the County Assessor's use codes and identifies the assignment of Land Use Categories for use as part of the assessment methodology described herein.



**Appendix E** provides the list of parcels by reference to assessor parcel number (APN) subject to the Proposed Assessment as well as a schedule of the proposed assessment amounts for FY 2025/2026 (the initial maximum annual assessment roll for assessment balloting purposes).<sup>1</sup>

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<sup>1</sup> The proposed Assessment Roll included with **Appendix E** is reflective of the Record Owners of parcels as defined by Government Code 53753 (j) which is based upon the last equalized secured property tax assessment roll. The last equalized secured property tax assessment roll of San Joaquin County prior to the mailing of the notice is the 2024 roll (as of lien date July 1, 2024). The 1<sup>st</sup> year of the assessments collection will be fiscal year 2025/26 and thus reflective of July 1, 2025 equalized secured property tax assessment roll. RD 1608 will be responsible for applying the assessment methodology described in this Engineer's Report to the 2025 roll and updating the roll presented in **Appendix E** for the levy of the assessment in fiscal year 2025/26.

## 2. AUTHORITY AND PROCESS

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RD 1608 would impose the MCSA pursuant to the authority of Government Code §54703 – 54719, the Benefit Assessment Act of 1982 (1982 Act), and consistent with the requirements of Article XIID of the California Constitution<sup>2</sup> (Proposition 218), Government Code §53750 et. seq. (Proposition 218 Omnibus Implementation Act). Specifically, Government Code §54710(a) of the 1982 Act authorizes RD 1608 to levy an assessment to fund the Operations & Maintenance (O&M) costs for levees. Furthermore, under Government Code §54710.5, the assessment may include the cost of installation and improvement of the levees. As further detailed herein, the Proposed Assessment will fund portions of annual O&M services, establish a reserve fund to support routine repairs, rehabilitation, and replacement of the infrastructure, and capital improvement projects.

Government Code §54711, requires that:

1. The amount of the assessment imposed on any parcel be related to the benefit received by the parcel;
2. The aggregate amount of the annual assessment not exceed the estimated annual cost of providing the service; and
3. The revenue derived from the assessment be used only for the services identified as the basis for assessment.

In addition, all special benefit assessments must also comply with Proposition 218 and the Proposition 218 Omnibus Implementation Act. These requirements outline the process for imposing the Proposed Assessment, including the requirement that this Engineer's Report document the special benefits conferred by the service provided, the process for imposing the Assessment, and property owner approval through a balloting process.

This Engineer's Report has been prepared to:

1. Contain the information required pursuant to Government Code §54716(a), including;
  - a. a description of the services proposed to be financed through the revenue derived from the Proposed Assessment;
  - b. a description of each lot or parcel of property to be subject to the Proposed Assessment;
  - c. the amount of the Proposed Assessment for each lot or parcel;
  - d. the basis of the Proposed Assessment; and,
  - e. the schedule of the Proposed Assessment;
2. Determine the special benefits from the services received by benefiting properties; and,
3. Assign a method of apportioning the Proposed Assessment to benefiting parcels.

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<sup>2</sup> Article XIID of the California Constitution is a portion of the California constitution added by Proposition 218 that addresses the requirements of benefit assessments and is applicable here.



Following submittal of this report to the RD 1608 Board of Trustees (Board) for preliminary approval, the Board may, by resolution, call for an assessment ballot proceeding and public hearing on the establishment of the Proposed Assessment.

If the Board approves such a resolution, the RD 1608 staff will initiate the notice, protest, and hearing procedure required by Government Code §54716 and Article XIII D. A notice, voting guide, and assessment ballot will be mailed to all property owners within the Proposed Assessment Boundary. Such notice will include a description of the services to be funded, the total Proposed Assessment amount, the Proposed Assessment amount for each parcel owned, the duration of the Proposed Assessment, an explanation of the method of voting, and the name and telephone number of the person designated by the Board to answer inquiries regarding the Proposed Assessment and ballot proceeding process. Each notice will specify the date, time, and place of the public hearing and a summary of the ballot return procedures. Each notice will include a ballot upon which the property owner can vote for approval or disapproval of the Proposed Assessment and affix his or her signature. Finally, each notice will include an official postage prepaid security envelope in which the ballot must be returned.

The balloting and notice period will extend for a minimum of 45 days. Government Code 53750 (i) deems that notice is given and the 45-day period commences upon the deposit of the notice and ballot with the United States Postal Service. On the last day of the balloting period, the public hearing will be held for the purpose of receiving public testimony from property owners regarding the Proposed Assessment. Property owners will have the opportunity to provide testimony to the Board and submit their ballots at the public hearing, however, in order to be included within the tabulation, all ballots must be submitted prior to the close of the public hearing. At the public hearing, and at any time prior to the close of the public hearing, property owners may also revise previously submitted ballots.

If the votes received in favor of the Proposed Assessment, weighted by the proportional financial obligation of the properties for which the ballots are submitted, outweigh the votes received opposing the Proposed Assessment, then the Board may continue with the formation of the Proposed Assessment district, the process of imposing the Proposed Assessment and its future levy. If the assessments are so confirmed and approved by the Board, the assessment roll will be submitted to the San Joaquin County Auditor Controller for inclusion on the secured property tax rolls or may be directly billed by RD 1608 to the property owner for the assessment pursuant to Government Code §54718. As outlined in Government Code §53739, the Board may levy the Proposed Assessment in future years without conducting a new ballot proceeding so long as the assessment is within the stated inflation-adjusted assessment rate authorized by the original balloting proceeding.

### 3. PROPOSED SERVICES AND FUNDING PLAN

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#### Services Funded by the Proposed Assessment

The services to be funded by the Proposed Assessment include operation, maintenance, and capital project services that are required to ensure that the design level of flood protection is maintained over time. Collectively these services are herein referred to as "Services."

The specific O&M activities may include, but are not limited to levee inspections and evaluations, debris cleanup, spraying for weed control, rodent control, levee patrols during warning and flood stages, encroachment permitting and compliance monitoring, resurfacing of levee roads when required to keep them passable for patrolling and maintenance purposes, replacing erosion protection materials as needed, in-channel vegetation and capacity management, repair of the embankment to ensure levee integrity, and general operations and administration of the agency required to provide flood protection services.

Additionally, Services include capital projects to ensure continued flood risk reduction levels are achieved. The Proposed Assessment, in combination with the District's other revenue sources, will also provide for reserves to support capital projects, for emergency response and preparedness services, routine repair, rehabilitation, and replacement of facilities in order to ensure an adequate level of services over the duration of the Proposed Assessment. The Proposed Assessment would be levied in perpetuity so long as Services are provided.

#### Annual Expenditures for Services

RD 1608 has prepared a summary of costs for the operations, maintenance, repair, capital replacement, rehabilitation, emergency response/repair, and associated reserves of the flood risk reduction system. The estimated annual cost to provide these Services is approximately \$733,000. The RD 1608 annual expenditures are shown for FY 25/26 in **Table 1**. These costs were determined based on historical expenses, previously used financing approaches (i.e. bank warrants), and reserve requirements over the long term, and anticipated changes over time.

General and Administrative, Engineering, Operations and Maintenance, Capital Improvement Projects for repairs, replacements and rehabilitation are anticipated to remain similar over time, adjusted for inflation.

The warrant expenses shown will service new warrant debt issued in FY24/25 and due no later than FY28/29. This expenditure line-item will change over time as debt is retired and new debt is issued. The RD plans to pay down warrant debt sooner if feasible given needs for emergency reserves and ongoing expenses.

Similarly, the emergency reserve set-aside expense is a function of available cash and anticipated future expenses. RD 1608 targets a reserve balance of two times annual expenditures, with annual reserves subject to available cash and anticipated near-term cash flow. Although the FY25/26 budget reflects a contribution of \$40,000, the RD ideally would contribute \$100,000 annually, escalated over time.

Future annual expenses and the approved RD 1608 budget may vary from year to year according to actual anticipated expenses and revenues.

### **Proposed Budget and Assessment Revenue**

Aside from the Proposed Assessment, RD 1608's primary sources of revenues are used to offset its expenses are: 1) subventions reimbursements from the State of California and 2) San Joaquin County Property Tax revenues apportioned to RD 1608.

The State of California subventions reimbursements are estimated to be \$150,000 annually and are provided based on costs incurred to operate and maintain the levee system. Estimated property tax revenue are budgeted at \$253,000 (FY25/26 estimates), after reserving funds for general benefits and special benefit services received by those properties outside of the RD 1608 jurisdictional boundary.

Net revenues from the two sources discussed above can be used for a variety of costs incurred by the District, such as financing capital works, costs associated with the Services under this Proposed Assessment, or for other uses deemed necessary by and within the authority of RD 1608. **Table 2** shows that a Proposed Assessment of \$330,000 is required to provide Services defined in this report. For the purpose of ensuring sufficient revenues to cover costs over time, the Assessment Engineer prepared a cash flow model, which is made available in **Appendix A** for reference.

**Table 1 RD 1608 FY 25/26 Expenditure Estimate**

Budget Item/Category		FY 2025/26 Expenditures [1]
<b>Expenditures</b>		
General & Administrative		\$150,000
Operations and Maintenance	[2]	\$318,000
Capital Projects	[3]	\$57,000
Debt Service Expense	[4]	\$168,000
Emergency Reserve Expense	[5]	\$40,000
<b>Total Expenditures</b>		<b>\$733,000</b>

[1] Expected budget for FY 25/26; Future years may differ; RD will balance cash flow and budget projections into future by: 1) using annual fund balance, 2) accruing/expending emergency reserve balance, 3) making payment on financing (warrant or capital debt service).

[2] Operations, maintenance, inspections, engineering, environmental compliance, planning, subventions administration, small repairs/replacements, emergency operations planning, etc.

[3] Capital requirements for repair, replacement and rehabilitation.

[4] RD historically has utilized bank warrants to cover short term cash flow requirements. RD anticipates utilizing a \$450k warrant in FY 24/25 for this same reason and a payback set-aside budget is shown here over a four year period (assume balloon payment at end of year 4 and no interest savings benefit to early pay-off). Upon retiring debt, budget expense will go to increase emergency reserve set aside or pay-go or future debt needs.

[5] Target fund is two times annual expenditures with an annual set aside based on annual cash-flow availability. As debt is retired, emergency reserve set-aside expense will increase.

Source: RD 1608 and LWA

**Table 2 RD 1608 FY 25/26 Estimated Budget**

<b>Budget Item/Category</b>	<b>FY 2025/26 Budget</b>
<b>Total Expenditures</b>	<b>\$733,000</b>
<b>Revenue</b>	
Estimated Tax Revenue and Interest, net [1]	\$253,000
Subventions Reimbursements [2]	\$150,000
Proposed Assessment [3]	\$330,000
<b>Total Revenue Sources</b>	<b>\$733,000</b>

[1] Net tax apportionment used, after accounting for the general benefit and special benefit services outside of the RD.

[2] The Delta Levee Subventions Program, AB 360, assumes that the program will continue to be funded well into the future for reimbursement of certain portions of Levee related expenses.

[3] Proposed Assessment amount determined based on revenue required to cover expenses.

Source: RD 1608 and LWA

## 4. ASSESSMENT METHODOLOGY

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### General Discussion

#### ***Requirements of Proposition 218***

To levy an assessment for a service that provides a property related benefit such as flood control, Proposition 218 has certain substantive requirements that the local agency must comply with. The local agency must:

- Separate the general benefits provided by service(s) from the special benefits conferred on a parcel;
- Identify the parcels that have special benefits conferred on them by the facility and/or service;
- Calculate the proportionate special benefit for each parcel in relation to the entirety of the benefits provided by services being funded;
- Apportion the costs of services to each parcel that receives special benefit in relation to that proportion; and
- Ensure that the total assessment levied does not exceed the reasonable cost of the proportionate special benefit conferred on each parcel.

#### ***Special Benefits vs. General Benefits***

Proposition 218 requires any local agency proposing to increase or impose a special assessment to “separate the general benefits from the special benefits conferred on a parcel.” (Cal. Const. art. XIII D §4). The rationale for separating special and general benefits is to ensure that property owners are not charged a special benefit assessment in order to pay for general benefits provided to the properties or general public at large. 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>3</sup>

A special benefit is a particular and distinct benefit over and above the general benefits conferred on real property located within the agency’s boundary or to the public at large. The total cost of the services must be apportioned among the properties being assessed based on the proportionate special benefit the properties will receive. Moreover, the governmental agency must demonstrate through a balloting process that the ballots submitted in opposition to the assessment do not exceed the ballots submitted in favor of the assessment, weighted according to the proportional special benefit and financial obligation of the affected properties.

Because flood control work has an obvious indirect relationship to the provision of general benefits and may, upon first blush, appear to be general benefits, the issue of general benefits merits further discussion. For example, the facilities to be funded by the assessment will protect parks that are used by people regardless of whether they own property within the floodplain or not (the general public). But this indirect relationship does not mean that these facilities or services will themselves provide any general

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<sup>3</sup> *Silicon Valley Taxpayers’ Assn., Inc. v. Santa Clara County Open Space Authority*, (2008) 44 Cal. 4th 431, 450.



benefits. Rather, they will provide special benefits to all parcels within the floodplain, including special benefits to public parcels (such as parks) that are themselves used in the provision of general benefits.

More to the point, the public at large will be paying for the special benefits provided to public 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 district. All property that is specially benefited will be assessed, including schools, parks and other parcels used in the provision of general benefits. Assessing agencies are required to assess and levy the assessment on all specially benefited property, including publicly owned property, within the assessment district.<sup>4</sup> Thus, the general public will pay for the provision of flood control services because the assessed public agencies within the assessment district will use general taxes or other revenues to pay their assessments.

In this instance, the Services provide both a general benefit to the public at large and a special benefit to those properties located within the boundaries of the inundation area by virtue of preventing flood waters due to uncontrolled flood from collecting on or flowing over a parcel and causing damages. The special benefits provided by the services have been calculated for all parcels within the boundaries of the benefit area. The boundaries of the benefit area consist of only those parcels within the levee protected area and inundated by floodwaters as modeled herein.

The special benefit provided to each parcel varies based on the relative avoided damage from flooding. The relative avoided flood damages are based on an uncontrolled flood resulting from a breach along the levee system. The avoided flood damages are a function of parcel size, land use and the depth of flooding from the modeled breach scenario.

As noted above, special benefits are those "particular and distinct over and above general benefits conferred on real property located in the district or to the public at large." Cal. Const. art. XIII §2(i). By contrast, general benefits provided to the public at large could be 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 the location of their property. See *e.g.*, Cal. Const. art. XIII §2(i), 6(2)(b)(5); *Silicon Valley Taxpayers*, 44 Cal. 4th 431. 450–56. In this case, general benefits can be identified as the ability to move through and across the benefited area. The following considerations were evaluated to distinguish the general benefits by the Services.

#### Public Property

The Services will protect certain public properties (e.g., government buildings, schools, and parks). While the use of these public properties is a general benefit, the public properties themselves are protected by the flood protection system and receive a special benefit from the Services in the same manner as private property. All public properties have been included in the determination of special benefit, as described in more detail under the Assessment Apportionment Methodology below. With the exception of Federal Properties, there is no general benefit for Non-Federal public properties to be funded by the Proposed

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<sup>4</sup> Reference Cal. Const. art. XIII §4(a) with respect to the requirement to assess and *Manteca Unified School District v. Reclamation District No. 17* (2017) 10 Cal.App.5th 730 with respect to the requirement to levy.

Assessment because the public properties will be assessed based on the special benefit received. Federal properties are exempt from paying an assessment levied by a local agency, but no Federal Properties were found within this benefit area.

#### Local Streets and Collectors

The Services will protect certain local streets and collectors. These roads are primarily used to access properties, as opposed to thoroughfares discussed separately below. The boundary of the Proposed Assessment has been narrowly drawn to include only those properties receiving special benefit from Services. Therefore, the benefit from Services to local streets and collectors is captured by assessing the properties they serve – as these roads have no value but in providing access to the specially benefitted parcels, and protecting these roads is a means to provide special benefit to these parcels.

#### Thoroughfares

The Services will also protect certain thoroughfares within the boundary of the Proposed Assessment. These roads are distinct from local streets and collectors in that these roads serve as primary transit routes within, through and across the community. These roads are used by the public at large regardless of residency, destination, or purpose. Therefore, the protection of these thoroughfares provides a general benefit that must be separated from the special benefit conferred on parcels by the Proposed Assessment and cannot be funded by the Proposed Assessment. Further discussion supporting the quantification and separation of this general benefit from the special benefit is provided below.

### **Assessment Boundary**

#### ***Benefit Area***

The Benefit Area encompasses all properties that receive a special benefit from Services. All of the properties receiving special benefit from the Services were identified through the floodplain analysis results provided by Kjeldsen Sinnock & Neudeck, Inc. (KSN) as discussed below.

#### ***Hydraulic Analyses Performed to Support the Assessment Methodology***

To determine the avoided flood damages as a result of the Services on the RD 1608 levees, KSN utilized an existing stage frequency analysis (*San Joaquin River Delta Base Flood Elevation Refinement Stage Frequency Analysis, Peterson Brustad, Inc, September 2, 2010, **Appendix B***) that evaluated base flood elevations developed from Delta gage data to determine flood depths for the 100-year event along the RD 1608 levee system. Utilizing the referenced report and the hydraulics of the system that results in a pooled floodplain should any of the levees serviced by RD 1608 fail, KSN provided flood depth data based on a floodplain elevation of 9.4' (NAVD '88). This floodplain was overlaid on the San Joaquin County Geographic Information System (GIS) parcel shapefile to determine the average flood depth and area of flooding. The resulting average flood depth was used as one of the inputs to the USACE Depth-Damage functions to calculate avoided flood damage.

The Assessment Engineer considered this floodplain mapping to develop and designate the area receiving benefit from the Services. **Figure 2** superimposes the floodplain mapping and identifies the Benefit Area from the Services.

### ***Proposed Assessment Boundary***

The Benefit Area extends beyond the RD's legal boundary. So, although benefits are calculated for and apportioned to the entire Benefit Area as presented in this report, the RD can only legally impose and collect an assessment from parcels within its jurisdictional area. Because of this, the RD has determined that other revenue sources are sufficient to cover the cost of services apportioned to the General and Special Benefits identified and assessed to those parcels outside of the RD 1608 jurisdictional boundary, as presented in this report. Therefore, the Proposed Assessment Boundary encompasses all properties that 1) receive a Special Benefit from Services **and** 2) are within the RD 1608 jurisdictional boundary.

The Benefit Area from this floodplain mapping and the RD 1608 legal boundary have been combined to identify the overall area of Proposed Assessment, shown in **Figure 3** and in **Appendix C**.

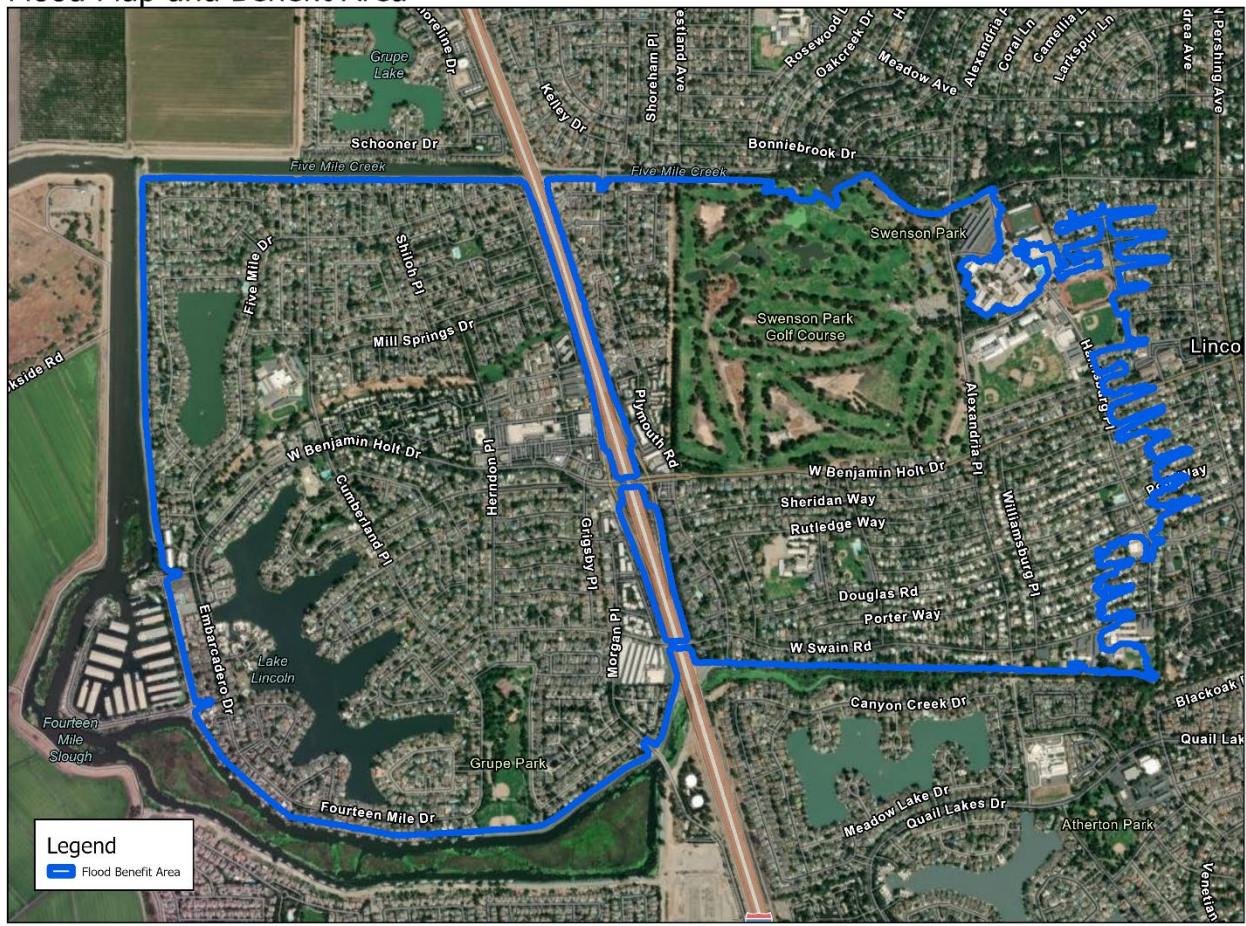
Because parcel boundaries can change over time, a process for regularly determining those parcels within the Proposed Boundary subject to the assessment is warranted. This is discussed further in a subsequent section of this report.

### ***Assessment Apportionment Methodology***

The methodology for apportioning the Proposed Assessment to each parcel in the overall benefit area is based first on quantifying the total benefits received, in terms of benefit units, from the Services. Then, second, separating the General Benefits from the Special Benefits by each parcel, and then third, determining each parcel's proportionate share of total benefits received, again in terms of benefits units, and finally allocating the Proposed Assessment, in terms of dollars to each parcel based upon its proportionate share of total benefit units. Through this approach, each parcel's share of the total Proposed Assessment would be equivalent to its proportionate share of benefit received from the Services. Because the General Benefits have been separated from the Special Benefits and only the Special Benefits are assessed to parcels the requirement of Proposition 218 has been met.

**Figure 2      Floodplain Map and Benefit Area**

Flood Map and Benefit Area

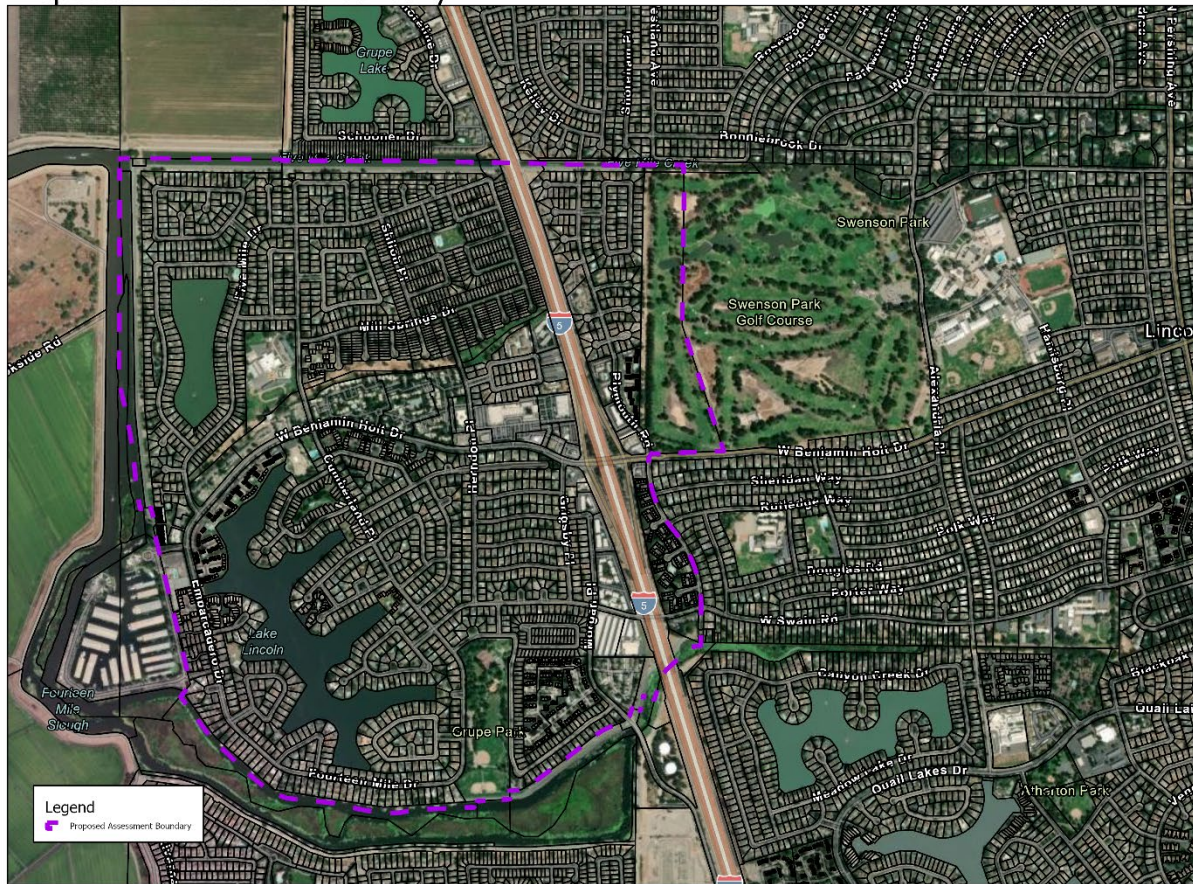


Prepared by Larsen Wurzel & Associates



**Figure 3**      **Proposed Assessment Boundary**

Proposed Assessment Boundary



Prepared by Larsen Wurzel & Associates

The special benefit conveyed to a parcel from the Services (in terms of Equivalent Benefit Units [EBU]) is based on the flood damage reduction received by the parcel due to the decreased likelihood of flooding caused by a levee failure.

The methodology for calculating Equivalent Benefit Units for each parcel utilizes the following property characteristics:

1. The size (acreage) of each parcel;
2. The Land Use Category assigned to each parcel;
3. The structure size (square footage) from the County Parcel Data;
4. The depth of flooding affecting the parcel;
5. The Relative Land Damage Rate per acre; and
6. The Structure Damage Rate per square foot.

A minimum flood damage reduction benefit was determined for all parcels with more than 50% of their area included within the Boundary. The minimum benefit was applied in the event a parcel's calculated flood damages was less than the minimum calculated benefit. This approach accounts for uncertainty in the model where a parcel's resulting inundation was nominal. This minimum benefit calculation is described further below.

### ***Property Characteristics***

The following property characteristics were developed for apportioning benefit. A summary of the property characteristics data is provided in **Table 3**.

### ***Land Use Categories***

Multiple land use codes are used by the San Joaquin County Assessor to categorize the properties within the boundaries. Each land use code was evaluated and assigned to a generalized Land Use Category (e.g.: Agricultural, Single-Family Residential, Commercial, etc.) by the Assessment Engineer for the purpose of identifying characteristics of each category for use in apportioning special benefit (**Appendix D**). A random sample of parcels for each County land use code was analyzed by reviewing aerial photographs to ensure that it had been assigned to the appropriate Land Use Category. The generalized Land Use Categories are described as follows:

**Agricultural** land was characterized as large productive or unproductive land outside the urban area. No differentiation was made to differentiate between the crop types or use for livestock grazing.

**Commercial** is characterized by properties with office, retail or public service buildings. This Land Use Category includes hotels, shopping centers, restaurants, offices, hospitals, etc. Some parcels within this Land Use Category have been assigned to a sub-category of Commercial Building Only. Parcels in this sub-category are commercial parcels with minimal acreage dedicated to parking and common areas within a larger commercial development. Parcels in this sub-category have adjacent parcels dedicated to supporting parking and other common areas associated with commercial uses.



**Industrial** is characterized by manufacturing, storage and processing facilities. This Land Use Category includes warehouses, manufacturing, processing, distribution, and public utilities.

**Mobile Home Park** is exclusively properties designed specifically for multiple mobile home structures. This category also includes individual parcels with Mobile Home Residential structures.

**Multi-Family Residential** is characterized as four or more dwelling units on a parcel. This Land Use Category includes apartments, condominiums, and townhouses.

**Open Space** is characterized by properties with limited hardscape, without structures, that have been developed for their ultimate use. This Land Use Category includes parks, sports fields, bike paths, common areas, etc.

**Open Space Developed** is characterized by properties that do not have a structure, however, are generally ready to be built on. This Land Use Category includes parcels in developed areas that have been prepared for construction, parcels that are generically described as “vacant”, and parcels that are entirely used as a parking lot.

**Rural Residential** are large lots with a Single-Family Residential structure outside the urban areas with limited amount of hardscape.

**School** properties are characterized as educational campuses, but do not include conversion of other land use categories for education activities (i.e. a commercial parcel utilized by a trade school). School properties can be public or private.

**Single-Family Residential** properties are characterized by three or fewer single-family dwelling structures on a parcel. This Land Use Category includes land with duplex and triplex buildings as they generally have the same physical characteristics as other single-family residences.

**Table 3**  
**Summary of Assessed Property Characteristics**

Land Use Category	Total Number of Parcels	Total Parcel Acreage	Total Structure Square Footage [1]
Agriculture	0	0	0
Commercial	26	68	203,716
Industrial	2	6	119,730
Multi-Family Residential	935	95	1,982,813
Mobile Home Parks	0	0	0
Rural Residential	0	0	0
Single-Family Residential	2,618	493	4,725,526
School	2	22	110,051
Open Space	16	203	0
Open Space - Developed	90	81	0
<b>Totals</b>	<b>3,689</b>	<b>968</b>	<b>7,141,836</b>

1] Determined using San Joaquin County Assessor's data via Parcelquest.

### ***Parcel Size***

The size of the parcel is used to appropriately apportion the special benefit from the Services. Parcel attribute data including parcel size was obtained from San Joaquin County Assessor's data acquired through ParcelQuest. Parcel attribute data was also obtained from the San Joaquin County Community Development Department GIS group shapefiles. Where any significant discrepancy existed between the two sources, satellite imagery was used to measure and identify the more reliable source.

### ***Flooded Acres and Average Flood Depth***

The hydraulic analysis applied to delineate the Benefit Area was utilized to determine the extent of flooding or flooded acres, and the average flood depth for each parcel within the boundary of the assessment district.

The hydraulic analysis is assumed to have some level of uncertainty in the reporting of the average flood depths due to the accuracy of the ground elevation data and model. To eliminate this uncertainty, the average flood depths were rounded down to the nearest foot prior to the calculation of avoided damages. The average flood depth was only calculated for the flooded acreage and was used to determine structure damages which vary based on the depth of flooding.

The following thresholds were applied to the flooded acres to determine when to calculate damages for parcels located along the edge of the floodplain:

- If less than 50% of the property is flooded, land damages are not calculated. This condition typically exists where the delineated street flooding partially encroaches along the front of the parcel and damages are expected to be de minimis.
- If less than 50% of the property is flooded, structure damages are not calculated. This condition is typical of properties along the fringe of the floodplain with flooding in the front of the property, but the structure footprint does not encroach into the floodplain.

### ***Structure Footprint***

The assessment methodology uses the structure size (square-footage) to assess the special benefit. Structure sizes were obtained from San Joaquin County Assessor's data acquired through ParcelQuest. Additionally, aerial photographs were analyzed to verify the existence of structures and determine the size of any structures with no available San Joaquin County Assessor's data.

### **Equivalent Benefit Units Calculation**

Equivalent Benefit Units are the measure of special benefit received by the properties from the RD 1608 Services. Avoided flood damages to land and structures were based on the flooded areas and average flood depth from the hydraulic analysis.

The EBU for each property is calculated using the following equations:

Equivalent Benefit Units are the measure of special benefit received by properties from the RD 1608 Services. Avoided flood damages to land and structures were based on the flooded acres and average flood depth from the hydraulic analysis.

The EBU for each property is calculated using the following equation:

$$\text{Equivalent Benefit Unit (EBU)} = \left[ \left( \frac{\text{Avoided Land}}{\text{Damages}} \right) + \left( \frac{\text{Avoided Structure + Content}}{\text{Damages}} \right) \right]$$

Where:

$$\frac{\text{Avoided Land}}{\text{Damages}} = \left( \frac{\text{Flooded Acreage}}{\text{Land}} \right) \times \left( \frac{\text{Land Damage Rate}}{\text{Damage Rate}} \right)$$

$$\frac{\text{Avoided Structure}}{\text{Damages}} = \left( \frac{\text{Structure Footprint}}{\text{Footprint}} \right) \times \left( \frac{\text{Replacement Value}}{\text{Value}} \right) \times \left( \frac{\text{Structure Damage Rate}}{\text{Damage Rate}} \right)$$

$$\frac{\text{Avoided Content}}{\text{Damages}} = \left( \frac{\text{Structure Footprint}}{\text{Footprint}} \right) \times \left( \frac{\text{Structure Replacement Value}}{\text{Value}} \right)$$

$$\times \left( \frac{\text{Contents to Structure Ratio}}{\text{Structure Ratio}} \right) \times \left( \frac{\text{Contents Damage Rate}}{\text{Damage Rate}} \right)$$

### **Relative Land Damage Rate per Acre**

The Relative Land Damage Rate per Acre represents the relative damage to site improvements (e.g. landscaping, utilities, etc.) that occurs as a result of inundation and deposition of material (i.e., sediment and contaminants) carried in floodwaters. The Relative Land Damage Rate per Acre was determined by assigning a Relative Land Value per Acre to each land use category and applying a 10% damage factor to the Relative Land Value per Acre. **Table 4** summarizes the Relative Land Damage Rate for each Land Use Category.

### **Structure Damage Rate**

The Structure Damage Rate is calculated based on the methodology used in the USACE Flood Damage Analysis (FDA) program. The FDA program assigns a relative Structure Replacement Value according to type of structure and estimates the percent structure damage based on the depth of flooding. Similarly, the FDA program assigns a relative Contents Replacement Value according to type of structure and estimates the percent of contents damage based on the depth of flooding (**Table 5 & Table 6**). **Table 7** summarizes the EBU's by Land Use Category. When calculating the flood depth to a finished floor, a finish floor height elevation was assumed at 1' for all structures and 2' for mobile homes.

**Table 4**  
**Relative Land Damage Rate**

Land Use Category	Percent Land Damage	Relative Land Value per Acre [1] <i>B</i>	Relative Land Damage per Acre <i>C = A * B</i>
	<i>A</i>		
<b>Agriculture</b>	10%	\$25,000	\$2,500
<b>Commercial</b>	10%	\$70,000	\$7,000
<b>Industrial</b>	10%	\$70,000	\$7,000
<b>Multi-Family Residential</b>	10%	\$70,000	\$7,000
<b>Mobile Home Parks</b>	10%	\$50,000	\$5,000
<b>Rural Residential</b>	10%	\$25,000	\$2,500
<b>School</b>	10%	\$41,000	\$4,100
<b>Single-Family Residential</b>	10%	\$50,000	\$5,000
<b>Open Space</b>	10%	\$10,000	\$1,000
<b>Open Space - Developed</b>	10%	\$15,000	\$1,500

[1] Relative land value based on previous Engineer's Reports prepared in the region

Table 5  
Structure Replacement Value and Depth Damage

Land Use	Structure Replacement Value per SF	Contents to Structure Ratio	Structure Percent Damage										Structure Percent Damage					
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agricultural [1]	\$111.67	50.0%	0.0%	23.3%	32.1%	40.1%	47.1%	53.3%	58.6%	63.2%	67.2%	70.5%	73.2%	75.4%	77.2%	78.5%	79.5%	80.2%
Commercial [2]	\$85.56	51.0%	0.0%	12.8%	18.4%	25.6%	25.6%	30.6%	36.7%	45.3%	56.8%	62.4%	62.4%	62.4%	62.4%	62.4%	62.4%	62.4%
Industrial [4]	\$54.51	31.0%	0.0%	11.5%	17.9%	24.4%	26.5%	32.4%	38.8%	40.9%	51.8%	56.2%	56.2%	56.2%	56.2%	56.2%	56.2%	56.2%
Mobile Home [5]	\$45.85	50.0%	0.0%	50.0%	71.0%	82.0%	87.0%	89.0%	91.0%	91.0%	91.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Multi-Family Residential [6]	\$84.40	50.0%	0.0%	23.3%	32.1%	40.1%	47.1%	53.3%	58.6%	63.2%	67.2%	70.5%	73.2%	75.4%	77.2%	78.5%	79.5%	80.2%
School [3]	\$144.46	38.0%	7.0%	21.7%	30.2%	31.2%	32.4%	32.4%	39.8%	42.8%	51.7%	53.1%	54.1%	61.8%	64.8%	64.8%	65.5%	86.1%
Single-Family Residential [1]	\$111.67	50.0%	0.0%	23.3%	32.1%	40.1%	47.1%	53.3%	58.6%	63.2%	67.2%	70.5%	73.2%	75.4%	77.2%	78.5%	79.5%	80.2%
Rural Residential [1]	\$111.67	50.0%	0.0%	23.3%	32.1%	40.1%	47.1%	53.3%	58.6%	63.2%	67.2%	70.5%	73.2%	75.4%	77.2%	78.5%	79.5%	80.2%
Open Space	\$0.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Open Space - Developed	\$0.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source Data: 2012 CVFPP HEC\_FDA Structure and Damage Functions – CVFPP Attachment 8F Flood Damage Analysis, Table C-1

- [1] Source: Table B-33 - Good Status for Single Family Residential
- [2] Source: Table B-9 - Good Status for Commercial Retail
- [3] Source: Table B-29 Good Status for Public and Private Schools
- [4] Source: Table B-21 - Good Status for Industrial Light
- [5] Source: Table B-25 - Good Status for Mobile Home
- [6] Source: Table B-26 - Good Status Construction Class and Quality for Multi-Family Residential



Table 6  
Contents Replacement Value and Depth Damage

Land Use	Structure Replacement Value per SF	Contents to Structure Ratio	Contents Percent Damage										Contents Percent Damage					
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Agricultural [1]	\$111.67	50.0%	0.0%	13.3%	15.6%	17.9%	22.0%	25.7%	28.8%	31.5%	33.8%	35.7%	37.2%	38.4%	38.4%	38.4%	38.4%	38.4%
Commercial [2]	\$85.56	51.0%	0.0%	20.0%	25.0%	30.0%	40.0%	57.5%	70.0%	81.0%	95.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Industrial [4]	\$54.51	31.0%	0.0%	19.3%	26.6%	31.0%	42.3%	52.3%	60.7%	72.0%	82.1%	90.7%	94.3%	95.0%	95.0%	95.0%	95.0%	95.0%
Mobile Home [5]	\$45.85	50.0%	0.0%	35.0%	43.0%	56.0%	72.0%	79.0%	84.0%	87.0%	88.0%	90.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Multi-Family Residential [6]	\$84.40	50.0%	0.0%	13.3%	15.6%	17.9%	22.0%	25.7%	28.8%	31.5%	33.8%	35.7%	37.2%	38.4%	38.4%	38.4%	38.4%	38.4%
School [3]	\$144.46	38.0%	0.0%	87.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Single-Family Residential [1]	\$111.67	50.0%	0.0%	13.3%	15.6%	17.9%	22.0%	25.7%	28.8%	31.5%	33.8%	35.7%	37.2%	38.4%	38.4%	38.4%	38.4%	38.4%
Rural Residential [1]	\$111.67	50.0%	0.0%	13.3%	15.6%	17.9%	22.0%	25.7%	28.8%	31.5%	33.8%	35.7%	37.2%	38.4%	38.4%	38.4%	38.4%	38.4%
Open Space	\$0.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Open Space - Developed	\$0.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source Data: 2012 CVFPP HEC\_FDA Structure and Damage Functions – CVFPP Attachment 8F Flood Damage Analysis, Table C-1

- [1] Source: Table B-33 - Good Status for Single Family Residential
- [2] Source: Table B-9 - Good Status for Commercial Retail
- [3] Source: Table B-29 Good Status for Public and Private Schools
- [4] Source: Table B-21 - Good Status for Industrial Light
- [5] Source: Table B-25 - Good Status for Mobile Home
- [6] Source: Table B-26 - Good Status Construction Class and Quality for Multi-Family Residential

**Table 7**  
**Summary of Resulting Equivalent Benefit Units**

Land Use Category	Land Damages	Structure Damages	Content Damages	Total Damages
[1]				
<b>Agriculture</b>	0	0	0	0
<b>Commercial</b>	450,905	4,888,719	4,337,482	9,677,106
<b>Industrial</b>	42,658	2,114,580	1,058,139	3,215,377
<b>Multi-Family Residential</b>	659,974	90,253,851	21,820,825	112,734,649
<b>Mobile Home Parks</b>	0	0	0	0
<b>Rural Residential</b>	0	0	0	0
<b>Single-Family Residential</b>	1,740,225	216,644,988	52,269,441	270,654,654
<b>School</b>	47,277	3,767,790	3,345,234	7,160,301
<b>Open Space</b>	23,162	0	0	23,162
<b>Open Space - Developed</b>	108,228	0	0	108,228
<b>Outside</b>	906,149	30,951,443	9,866,712	41,724,304
<b>Total</b>	<b>3,978,578</b>	<b>348,621,371</b>	<b>92,697,833</b>	<b>445,297,781</b>

[1] This table does not contain general benefits, but general benefits are utilized in the determination of equivalent benefit units.

## General Benefits

### *Thoroughfare Damages Calculation*

As described above, the Services provide a general benefit to the public at large by protecting thoroughfares within the boundary of the Proposed Assessment from flood damages. The amount of general benefit associated with each thoroughfare was quantified by identifying the cost to repair the road because of the flood damages. San Joaquin County indicated that the average cost to repair flood damages for an entire reach of thoroughfare is approximately \$5.00 per square-foot.

**Table 8** lists the reaches of thoroughfares protected against flood damages by the Services; identifies the cross-street limits, reach length, and typical road width; calculates the general benefit from protecting thoroughfares by multiplying the area of thoroughfare pavement by the estimated cost to repair flood damages. The general benefit from protecting all thoroughfares was calculated to be 3,715,000 Equivalent Benefit Units.

**Table 8**  
**Protected Throughfares and General Benefit Calculations**

Throughfare	Reach Description	Reach Length (ft) A	Width (ft) B	Total SQFT C = A X B	Total General Benefit @\$5/sqft D = \$5 X C [1]
Benjamin Holt Dr	West of I-5	5,300	60	318,000	1,590,000
Benjamin Holt Dr	East of I-5 To Harrisburg Pl	4,700	50	235,000	1,175,000
Alexandria Place	W Lincoln Road to Swain Rd	4,750	40	190,000	950,000
<b>Total</b>				<b>743,000</b>	<b>3,715,000</b>

[1] Based on input from San Joaquin County Public Works

Source: GIS Imagery

### ***Evaluation of Funding Sources for General Benefit***

The thoroughfares amount to 3.715 M Equivalent Benefit Units in general benefit. Using the special benefit assessment calculation steps described in the next section and the \$/EBU, the total revenue required to fund the total general benefit is \$2,730.

Available San Joaquin County property tax revenues can be used to fund the general benefits provided by the Services. In short, this funding source is sufficient to fund the general benefit provided by the Services.

### **Proposed Special Benefit Assessment Calculation**

To determine the proposed assessment for an individual parcel, the amount of Equivalent Benefit Units for the parcel is calculated and multiplied by the assessment rate per EBU. The proposed assessment rate per EBU is equal to the required annual revenue divided by the total quantity of EBU's as shown on **Table 9**. All factors required to calculate each Parcel's EBU have been described above and can be found in the provided tables and appendices. The proposed assessment rate per EBU is **\$0.0007349 / EBU**.

### ***Special Benefit Considerations for Parcels outside of RD 1608 Legal Boundary***

As previously discussed, the Benefit Area encompasses the entire mapped floodplain area. This results in special benefit being received by parcels outside of the RD 1608 boundary. By law, RD 1608 cannot levy assessments on parcels outside of its legal boundary. This lost revenue cannot be reapportioned or assessed to property owners within RD 1608 but must be funded by other revenue sources. Funding is available and sufficient from the property tax revenues received from San Joaquin County by RD 1608 for this purpose. When determining the assessment per EBU, all special benefit areas, including those outside of the RD 1608 boundary were used, so that the benefits are apportioned to all parcels receiving special benefit. Of the total equivalent benefit units, 41,724,304 (or 9.3%) are outside of the legal boundary of the District. After funding General Benefits from estimated property tax revenues, RD 1608 has an additional \$280,000 in estimated property tax revenue available to fund Special Benefits received outside of its legal boundary. Given the EBU in the areas outside of the legal boundary and the \$/EBU, the amount of other available revenue needs to be at least \$31,000. The property tax revenue is more than sufficient to cover these and the general benefits, even in years where costs may fluctuate.

### ***Example Parcel Assessment***

Using the proposed parcel assessment equation and supporting EBU equations as well as parcel attributes including parcel size, structure size, relative land damage rate per acre, structure damage rate per square foot, and finally the proposed assessment rate, an individual parcel's assessment can be calculated.

Assessments are rounded down to the closest multiple of \$0.02 as required by the San Joaquin County Assessor's office for submission of the special assessment roll for collection on County Property Tax Bills.

The following list of steps are taken to calculate a parcel's assessment:

Step 1 – Determine the Parcel Size, Structure Size, and Land Use.

Step 2 – Using **Table 4**, determine the Relative Land Damage Rate per Acre.

Step 3 – Using **Table 5**, determine the Structure Damage Rate per Square Foot.

Step 4 – Using **Table 6**, determine the Contents Damage Rate per Square Foot.

Step 5 – Calculate the Parcel **EBU** using **Equation 1**: Equivalent Benefit Units

Step 7 – Calculate the parcel assessment using **Equation 2**.

Step 8 – Round down to the closest multiple of \$0.02. Raise up to \$2.00 if it is less than the minimum<sup>5</sup>

A detailed example parcel assessment calculation is included at the end of this report on **Table 11**.

### ***Summary of Assessments***

A detailed listing by Assessor's parcel number of the assessments is included in **Appendix E**. The proposed assessments are summarized by Land Use Category in **Table 10**.

### **Table 9**

#### **Initial Proposed Assessment Rate Calculation – FY 2025/26**

<b>Total Budget</b>		\$330,000
<b>Total EBU</b>	[1]	449,012,781
<b>\$/EBU</b>		\$0.0007349

[1] Includes general benefit units

<sup>5</sup> Reference Minimum Assessment Amount discussion below.



**Table 10**  
**Summary of Proposed FY 2025/26 Assessments by Land Use Category**

Land Use Category	Total Assessment	Total Parcel Acreage	Total EBU	% of Total Assessment
Agriculture	\$0	0	0	0.00%
Commercial	\$7,112	65	9,677,106	2.16%
Industrial	\$2,363	6	3,215,377	0.72%
Multi-Family Residential	\$82,854	95	112,734,649	25.11%
Mobile Home Parks	\$0	0	0	0.00%
Rural Residential	\$0	0	0	0.00%
School	\$5,262	11	7,160,301	1.59%
Single-Family Residential	\$198,916	354	270,654,654	60.28%
Open Space	\$17	25	23,162	0.01%
Open Space - Developed	\$80	78	108,228	0.02%
Outside	\$30,665	333	41,724,304	9.29%
General Benefit	\$2,730		3,715,000	0.83%
<b>Totals</b>	<b>\$330,000</b>	<b>968</b>	<b>449,012,781</b>	<b>100.00%</b>

## 5. ASSESSMENT ADMINISTRATION

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### **Schedule for Collection**

If property owners approve the Proposed Assessment, RD 1608 intends to commence collection of the assessments in FY 2025/26. The assessment would be collected annually on the secured property tax rolls of San Joaquin County or via direct bills where not collected through the property tax rolls, as described further below under “Duration of the Assessment”.

The annual administrative expenses would also be funded through the annual levy of assessments. Ongoing administrative expenses would include the annual calculation and preparation of the assessment roll, the actual costs of collecting the annual assessments and the costs of responding to inquiries including the review and processing of any appeals.

### **Appeals of Assessments Levied to Property**

Any property owner who believes his or her property should be reclassified and the assessment adjusted may file a written appeal with the RD 1608 Board of Trustees. Any such appeal is limited to correction of an assessment during the then-current fiscal year and future years.

All appeals must include a statement of reasons why the property should be reclassified and may include supporting evidence. On the filing of any such appeal, RD 1608 Board of Trustees will direct staff to promptly review the appeal and any information provided by the property owner and may investigate and assemble additional evidence necessary to evaluate the appeal. If the RD 1608 Board of Trustees finds that the assessment should be modified, the appropriate changes will be made to the assessment roll for the following fiscal year. Any such changes approved after the assessment roll has been filed with the County for collection, will not result in a refund of the current or any prior year's assessments paid before the appeal was filed unless so directed by the RD 1608 Board of Trustees.

### **Impact of Appeals**

The majority of the data being used to generate the assessment rates for specific parcels comes from the San Joaquin County Assessor. Because the main purpose of the Assessor in compiling this data is not to support this and other Special Benefit Assessment efforts but rather to determine Assessed Value for the purpose of administering the County's Secured Tax Roll, the Assessment Engineer has worked to refine the Assessor's data so it properly reflects the conditions present in the physical benefit area. However, throughout the formation period (and indeed even after the formation of the assessment), data errors and discrepancies with the San Joaquin County Assessor data may surface and require modification of the assessment calculation for various parcels. Changes in the data without a corresponding change in the Assessment Rate established by this report will, by definition, change the total amount of assessments levied and collected in any one year. For example, if the data assumes the existence of a house that has since been destroyed and not been reconstructed, once the database is corrected the rates will generate a smaller total assessment. On the other hand, if the data assumes an empty lot where a house has since been constructed, once the database is corrected the rates will generate a larger total assessment. Due to the database being constantly refined (either through internal review or an external appeal process), it

is infeasible to fine-tune the rates between the Preliminary Engineer's Report and the Final Engineer's Report. In addition, because changes to the database will either increase or decrease the total amount assessed, it is presumed that these amounts will roughly offset each other. Therefore, although minor changes to the database will continue to be made during the formation period, the rates proposed in this Report are not being fine-tuned, even though that will result in a total assessment which may be slightly less than or slightly more than the amount determined for the development of this report.

### **Duration of the Assessment**

If approved by property owners in an assessment ballot proceeding conducted pursuant to Article XIIID Section 4 of the State Constitution and Government Code § 53750, *et. seq.*, and subsequently approved by the RD 1608 Board of Trustees, the assessment can be levied annually commencing FY 2025/26. The RD 1608 Board of Trustees will establish the assessment rate each year and while the assessment is only effective for that year, the assessment may be continued each year without another ballot proceeding with approval of the RD 1608 Board of Trustees. The budget for RD 1608 Services will be collected each year that Services are provided, which is expected to be in perpetuity. On-going annual assessments cannot be increased without property owner approval, except for the annual escalation as described below.

### **Annual Escalation of the Assessments**

To ensure that RD 1608 can provide the needed services over time, it is important to allow for an increase of the assessment over time to address the rising costs of labor, supplies, and materials. The Assessment Engineer has determined that an appropriate escalation factor is a factor that is reflective of rising labor costs and goods over time. Therefore, beginning in FY 2026/27, the maximum authorized assessment may be increased subject to an annual inflationary escalator pursuant to Government Code § 53739 (b), based on the annual change in the Consumer Price Index February to February CPI-W for San Francisco-Oakland-Hayward all Items, with Base Period 1982-84 = 100, published by the U.S. Department of Labor, Bureau of Labor Statistics, subject to a minimum of zero percent and a maximum of 4% in any given year. The adjustment to the maximum authorized assessment would be applied to the prior year's annual assessment rate.

### **Special Considerations**

#### ***Property Tax Revenue Uses***

RD 1608's property tax apportionment revenue that it receives from San Joaquin County makes up an important element of the District's overall budget. Several District expenditures draw on this revenue source, which can fluctuate over time. RD 1608 anticipates that the property tax revenue will fund the general benefit and the special benefits attributed to those outside of its legal jurisdiction. The cost for these items is approximately \$35,000, and the estimated current property tax and interest revenue of \$288,000 is sufficient to cover these costs. The remainder will go toward servicing other debt (e.g. any outstanding warrant debt), funding emergency repairs requirements to its infrastructure, funding the reserve set-aside expenditure line-item, and other District costs.

### ***Public Parcels***

Consistent with the requirements of Proposition 218, all publicly owned parcels are assessed proportionately based upon the special benefits they receive from services provided by the proposed assessment. That is, public parcels are treated the same as privately owned parcels for assessment calculation purposes. To calculate assessments for these parcels, a land use category was assigned to each public parcel based on its current use.

### ***Parcels Outside of RD 1608 Boundary***

As noted previously, the special benefits received by parcels outside of RD 1608 are calculated but cannot be assessed and levied. Instead, RD 1608 will utilize a portion of the San Joaquin County property tax revenue to fund this portion of the costs, so they are not absorbed by other beneficiaries.

### ***Minimum Assessment Amount***

RD 1608 has determined that the collection of very small annual assessments can result in a net loss to RD 1608 due to the costs of processing. In light of the legal obligation to ensure that property owners pay assessments in proportion to the special benefit they receive, RD 1608 has determined that waiving those very small assessments is not legally permissible. RD 1608 has therefore set a minimum assessment at \$2.00. The minimum annual assessment will be \$2.00 per parcel to reflect the cost to administer the Assessment Roll. All annual assessments calculated to be less than \$2.00 will be raised to the \$2.00 minimum. If the additional revenue collected by RD 1608 due to the minimum assessment exceeds the cost to administer the Assessment Roll, the funds will be added to the reserve fund for RD 1608's Services.

### ***Application of the Assessment Boundary to Parcels***

The Assessment Boundary described above represents a boundary driven by the hydraulics associated with flooding and RD 1608 existing boundary. The hydraulic floodplain does not align with the parcel boundaries as they are configured, assessed, and taxed by the County. The Assessment Engineer has determined that those parcels with 50% of their land area located within the Assessment Boundary will be subject to the Assessment. While the hydraulics are not expected to change significantly over time, parcel boundaries can and do change occasionally. As a result, the area subject to the collection of the assessment will not align with the boundary of the assessment. The application of the Assessment Boundary to the then current set of parcels will take place every five years as part of the assessment administration process.

### ***Updating the Annual Assessment Roll***

Recalculating individual property assessments will accommodate changes within benefit area over time. These changes can result from development activity such as recordation of subdivision maps, zoning changes, conditional use permits, and lot splits or mergers. Placement of a structure on an undeveloped parcel or other changes to improvements on a parcel may trigger a recalculation of the assessment if there is a change in the land use category.


It is recognized that when compiling data for the parcels within the assessment boundary, the data<sup>6</sup> used to derive individual parcel characteristics may not be accurate and may not precisely fit the intent of the Assessment Engineer thus leading to errors and/or circumstances that result in inaccurate assessment calculations on an annual basis. Where such circumstances are discovered, either by the persons administering the assessment district or by the owners of the properties affected, RD 1608 staff shall review such circumstances and determine if corrections or adjustments are appropriate. Any such corrections or adjustments are to be consistent with the concept, intent, and parameters of the methodology for the assessment as set forth within this Engineer's Report without formal approval. Unless such proposed changes are appealed to the RD 1608 Board of Trustees and determined not to be acceptable, they will be incorporated into the Assessment Roll.

---

<sup>6</sup> The Assessment Engineer has utilized data compiled from the San Joaquin County Assessor to determine the individual property characteristics used as the basis for assessing and apportioning special benefit. While the data from the San Joaquin County Assessor is assumed to be accurate, its primary purpose is for use by the San Joaquin County Assessor and is subject to the Assessor's standards for accuracy and update. As a result, the information may be inaccurate and not reflect the actual property characteristics of every parcel.

## 6. CONCLUSIONS

It is concluded that the proposed assessments do not exceed the reasonable cost of the proportional special benefit conferred on each property assessed.

  
Adam Riley, P.E.

**Table 11**

**Assessment Parcel Equations and Example Calculations**

**Equation 1: Equivalent Benefit Units**

$$\text{EBU} = \{(\text{Parcel Size [2]} \times \text{Relative Land Damage Per Acre [3]}) + (\text{Structure Sq. Ft. [2]} \times \text{Structure Replacement Value [4]} \times \text{Structure Depth Damage [4]} + (\text{Structure Sq. Ft. [2]} \times \text{Structure Replacement Value [4]} \times \text{Contents to Structure Ratio [5]} \times \text{Contents Depth Damage [5]}))\}$$

[2] Assessor's Data

[3] Table 4

[4] Table 5

[5] Table 6

**Equation 2: Proposed Parcel Assessment**

$$\text{Calculated Parcel Assessment} = \text{Parcel EBU} \times \text{Assessment Rate per EBU [6]}$$

[6] Table 9; **Assessment Rate per EBU** = \$0.0007349

### **Example Assessment Calculations**

The following examples illustrate the application of the assessment equation to determine the annual assessment for several hypothetical properties.

#### **Example 1**

Consider a 0.23-acre single-family residential property the following property characteristics.

Structure Size (Sqft)	Depth (ft)
2,000	6

#### **EBU Calculation**

Land Use Category – Single-Family

From assessor data, Structure Sq. Ft. – 2,000 sq ft per acre

From **Table 4**, the Relative Damage per Acre - \$5,000 per acre

From **Table 5** and **Table 6**, the Structure Replacement Value - \$111.67 per square foot; Structure Depth Damage 58.60% for 8 ft; Structure to Contents Ratio of 50.00%; Contents Depth Damage of 28.8% for 8ft

$$EBU = \{(0.23 \text{ acres} \times \$5,000 \text{ per acre}) + (2,000 \text{ sq ft} \times \$111.67 \times (58.60\% + 50.0\% \times 28.8\%))\} = 164,188$$

$$\text{Total EBU} = 164,188$$

#### **Assessment Calculation**

$$\text{Calculated Parcel Assessment} = (164,188 \times 0.0007349) = 120.67$$

$$[\text{Proposed Assessment}] = \$120.67$$

#### **Example 2**

Assume a 0.21-acre Multi-Family property the following property characteristics:

Structure Size (Sqft)	Depth (ft)
4,425	5

#### **EBU Calculation**

Land Use Category - Commercial

From assessor data, Structure Size – 4,425 sqft



From **Table 4**, the Relative Damage per Acre - \$7,000 per acre

From **Table 5** and **Table 6**, the Structure Replacement Value - \$84.40 per square foot; Structure Depth Damage 53.3% for 5 ft; Structure to Contents Ratio of 50.00%; Contents Depth Damage of 25.7% for 5ft.

$$\begin{aligned} EBU &= \{(0.21 \text{ acres} \times \$7,000 \text{ per acre}) \\ &\quad + (4,425 \text{ sqft} \times \$84.40 \times (53.3\% + 50\% \times 25.7\%))\} = 248,520 \end{aligned}$$

#### **Assessment Calculation**

$$\text{Calculated Proposed Assessment} = (248,520 \times 0.0007349) = \$182.64$$

$$[\text{Proposed Assessment}] = \$182.64$$

**Appendix A**  
**RD 1608 Cash Flow Model**

Appendix A  
Proposition 218 Assessment  
RD 1608 Service Cash Flow Model

Budget Item/Category		FY 2025-2026	FY 2026-2027	FY 2027-2028	FY 2028-2029	FY 2029-2030	FY 2030-2031	FY 2031-2032	FY 2032-2033	FY 2033-2034	FY 2034-2035	FY 2035-2036	FY 2036-2037	FY 2037-2038	FY 2038-2039	FY 2039-2040
Revenues																
Estimated Tax and Interest, Net	[1]	\$ 252,850	\$ 254,714	\$ 256,576	\$ 258,438	\$ 260,298	\$ 262,155	\$ 264,010	\$ 265,860	\$ 267,707	\$ 269,548	\$ 271,383	\$ 273,212	\$ 275,033	\$ 276,846	\$ 278,651
Subventions Reimbursements	[2]	\$ 149,986	\$ 155,104	\$ 159,218	\$ 165,968	\$ 170,430	\$ 176,342	\$ 182,434	\$ 188,793	\$ 194,047	\$ 202,139	\$ 207,843	\$ 213,627	\$ 219,573	\$ 225,684	\$ 231,965
Financing Proceeds	[3]										\$ 1,000,000					
New Direct Assessment	[4]	\$ 330,000	\$ 339,570	\$ 349,418	\$ 359,551	\$ 369,978	\$ 380,707	\$ 391,747	\$ 403,108	\$ 414,798	\$ 426,827	\$ 439,205	\$ 451,942	\$ 465,049	\$ 478,535	\$ 492,413
Total Revenues		\$ 732,836	\$ 749,388	\$ 765,212	\$ 783,956	\$ 800,705	\$ 819,205	\$ 838,191	\$ 857,761	\$ 876,552	\$ 1,898,514	\$ 918,431	\$ 938,782	\$ 959,655	\$ 981,066	\$ 1,003,028
Expenditures																
General & Administrative		\$ 150,294	\$ 121,835	\$ 156,476	\$ 128,222	\$ 163,075	\$ 135,039	\$ 170,118	\$ 142,316	\$ 177,638	\$ 150,086	\$ 185,667	\$ 156,870	\$ 194,059	\$ 163,961	\$ 202,831
Engineering, Planning, Environmental		\$ 76,672	\$ 78,972	\$ 81,341	\$ 83,781	\$ 86,295	\$ 88,883	\$ 91,550	\$ 94,296	\$ 97,125	\$ 100,039	\$ 103,040	\$ 106,584	\$ 110,250	\$ 114,041	\$ 117,963
Operations and Maintenance		\$ 240,833	\$ 250,770	\$ 256,268	\$ 266,878	\$ 272,883	\$ 284,217	\$ 290,774	\$ 302,886	\$ 310,045	\$ 322,995	\$ 330,809	\$ 343,168	\$ 355,989	\$ 369,289	\$ 383,086
CIP (Design and Construction)	[5]	\$ 57,132	\$ 58,245	\$ 59,393	\$ 62,241	\$ 63,458	\$ 64,712	\$ 67,670	\$ 69,000	\$ 70,370	\$ 73,448	\$ 74,902	\$ 77,700	\$ 80,603	\$ 83,614	\$ 86,738
Dredge Project		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 71,765	\$ 662,448	\$ 1,656,121	\$ -	\$ -	\$ -	\$ -
New Warrant Debt Expense	[6]	\$ 168,000	\$ 151,000	\$ 130,000	\$ 73,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Financing Expense	[7]	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 109,795	\$ 109,795	\$ 109,795	\$ 109,795
Emergency Reserve Expense	[8]	\$ 40,000	\$ 60,000	\$ 60,000	\$ 80,000	\$ 100,000	\$ 102,000	\$ 104,040	\$ 106,121	\$ 108,243	\$ 110,408	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expenditures		\$ 732,930	\$ 720,822	\$ 743,478	\$ 694,122	\$ 685,711	\$ 674,851	\$ 724,153	\$ 714,620	\$ 835,187	\$ 1,419,425	\$ 2,350,539	\$ 794,117	\$ 850,696	\$ 840,701	\$ 900,413
Net Fund Balance Change		\$ (94)	\$ 28,566	\$ 21,733	\$ 89,834	\$ 114,994	\$ 144,353	\$ 114,039	\$ 143,141	\$ 41,365	\$ 479,089	\$ (1,432,108)	\$ 144,664	\$ 108,959	\$ 140,365	\$ 102,615
Beginning Balance		\$ 351,178	\$ 351,085	\$ 379,651	\$ 401,384	\$ 491,218	\$ 606,212	\$ 750,565	\$ 864,604	\$ 1,007,745	\$ 1,049,111	\$ 1,528,200	\$ 96,092	\$ 240,756	\$ 349,715	\$ 490,080
Ending Balance		\$ 351,085	\$ 379,651	\$ 401,384	\$ 491,218	\$ 606,212	\$ 750,565	\$ 864,604	\$ 1,007,745	\$ 1,049,111	\$ 1,528,200	\$ 96,092	\$ 240,756	\$ 349,715	\$ 490,080	\$ 592,695
Emergency Reserve Balance	[9]	\$ 95,000	\$ 155,000	\$ 215,000	\$ 295,000	\$ 395,000	\$ 497,000	\$ 601,040	\$ 707,161	\$ 815,404	\$ 925,812	\$ 925,812	\$ 925,812	\$ 925,812	\$ 925,812	\$ 925,812
Target Emergency Reserve	[10]	\$ 1,000,000	\$ 1,000,000	\$ 1,100,000	\$ 1,100,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 1,300,000	\$ 1,300,000	\$ 1,400,000	\$ 1,400,000	\$ 1,500,000	\$ 1,500,000	\$ 1,600,000

[1] Net revenue after account for funding the general benefit and special benefit for properties outside of RD; assumed grows at 1% annually

[2] The Delta Levee Subventions Program, AB 360, assumes that the program will continue to be funded well into the future for reimbursment of certain portions of Levee related expenses.

[3] New financing proceeds and expense for payback of 15-year term loan at 7% to fund Dredging Project; RD will balance emergency reserve contributions, available cash, and debt requirements upon project initiation.

[4] Assume 2.9% annual growth average.

[5] Capital requirements for repair, replacement and rehabilitation; not inclusive of Dredge Project.

[6] RD historically has utilized bank warrants to cover short term cash flow requirements. RD anticipates utlizing a \$450k warrant in FY 24/25 for this same reason and a payback set-aside budget is shown here over a four year period (assume baloon payment at end of year 4 and no interest savings benefit to early pay-off). Upon retiring debt, budget expense will go to increase emergency reserve set aside or pay-go for future Dredging Project.

[7] Finance cost to repay \$1.5M loan for Dredging Project

[8] Target fund is two times annual expenditures with an annual set aside of ~\$100,000.

[9] Emergency Reserve Balance is in addition to cash flow end balance.

[10] Target emergency reserve balance is ~2x expenditures.

## **Appendix B**

**Reference: *San Joaquin River Delta Base Flood Elevation Refinement Stage  
Frequency Analysis, Peterson Brustad, Inc, September 2, 2010***



# **San Joaquin River Delta Base Flood Elevation Refinement Stage Frequency Analysis**

**Rindge Pump Gage Station (B95620)  
Burns Cutoff Gage Station (B95660)**

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September 2, 2010

Prepared By



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## Appendices

Appendix A: HEC-SSP Analytical Plot & Stage Frequency Analysis Report for Rindge Pump Gage Station

Appendix B: HEC-SSP Analytical Plot & Stage Frequency Analysis Report for Burns Cutoff Gage Station

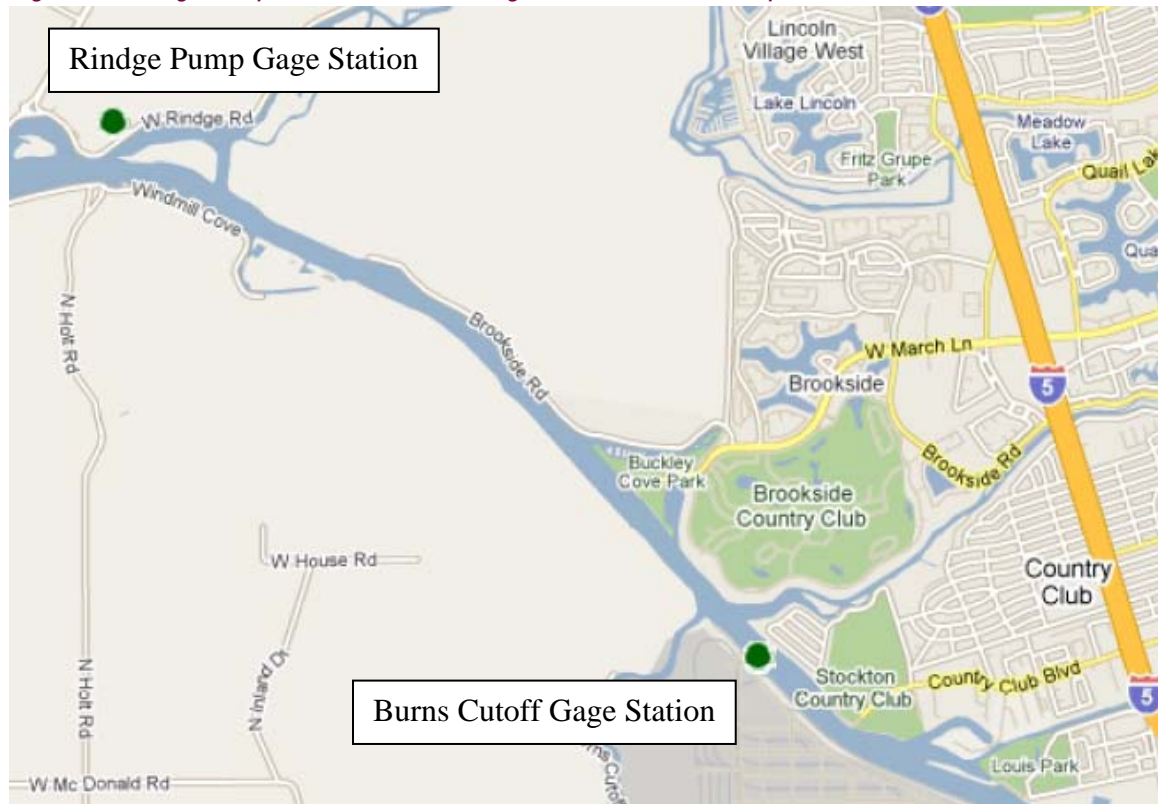


## 1.0 Introduction

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the Stockton Metropolitan Area reflect base flood elevations (BFEs) developed in 1978 by the United States Army Corps of Engineers (USACE). The BFEs were developed from stage frequency analyses from tidal gage data collected from the Delta. The USACE updated these analyses in 1982 and 1992, but FEMA mapping remains tied to the 1978 study. This study updates the 1992 stage-frequency analysis at two gage stations near the City of Stockton: San Joaquin River at Rindge Pump (Rindge Pump) and Stockton Ship Channel at Burns Cutoff (Burns Cutoff). Figure 1 presents the location of these two gage stations. The updates for these gage stations presented in this study include the following changes from the previous study:

- ◆ **Datum** – all previous studies were prepared using the National Geodetic Vertical Datum of 1929 (NGVD29). This study converts the raw data into the North American Vertical Datum 1988 (NAVD88).
- ◆ **Period of Record** – this study extends the period of record through water year 2009 and includes a total of 57 years for each gage station; the 1992 study included 43 years of data for Rindge Pump and only 30 years of data for Burns Cutoff.
- ◆ **Tide Cycles** – astronomic tides follow a 19-year epoch cycle, requiring analysis of an entire 19-year epoch cycle to eliminate effects of the tide cycle on the measured river stage; the period of record for this study includes the data from three complete 19-year epoch cycles.
- ◆ **Lower-Low Tide Analysis** – Since the annual lower-low tide has minimal hydraulic affects, the trend in the lower-low tide level over time represents the combined impact of gage station subsidence and sea level rise at the gage station; the average annual lower-low tide over 19-year epoch cycles was used to determine this combined impact at each gage station; changes in stage readings due to subsidence were based on historical survey information when available; the historical sea level rise at San Francisco was used to estimate subsidence in the absence of historical survey information.
- ◆ **Climate Change Impacts** – the results of the stage frequency analysis will be impacted over time by climate change in the form of future sea level rise; this study projects a range of climate change impacts on the stage frequency results through the year 2100.

Figure 1 - Rindge Pump and Burns Cutoff Gage Station Location Map



## 1.1 Gage Stations

The Rindge Pump gage station, California Department of Water Resources (DWR) No. B95620, was installed on July 27, 1939. The station consists of a gage housing unit and a staff gage located in 14 Mile Slough (see Figure 2). Stage data was collected from DWR for water year (WY) 1939 through WY 2009. Note that the stage data prior to WY 1945 was not used in previous stage frequency analysis studies because Shasta Dam was not in operation.

Figure 2 - Rindge Pump Gage Station



The stage data for the Rindge Pump gage station was evaluated to determine the annual higher-high and lower-low tide from the following sources:

- ◆ Weekly chart graphs for WY 1939 through WY 1960
- ◆ Monthly and/or annual summaries for WY 1957 through WY 1982
- ◆ Daily data for WY 1983 through WY 2009

The Burns Cutoff gage station, DWR No. B95660, was installed in 1940. The gage station is located within the ship channel for the Port of Stockton (see Figure 3). Stage data was collected from DWR for WY 1958 through WY 2009. Note that even though the gage station was installed in 1940, no data prior to WY 1958 can be located.

*Figure 3 - Burns Cutoff Gage Station*



The stage data for the Burns Cutoff gage station was evaluated to determine the annual higher-high and lower-low tide from the following sources:

- ◆ Monthly and/or annual summaries for WY 1957 through WY 1975
- ◆ Daily data for WY 1975 through WY 2009

Stage records for each gage station from WY 1983 to WY 2009 were collected from the DWR's online Water Data Library. Prior to WY 1983, hardcopies of stage data were used for analysis.

## 2.0 Data Adjustments

The raw data collected was adjusted to address the following issues:

- ◆ **Missing Data** – In some cases, one of the two gages was out of service or no data was available during the annual higher-high and/or lower-low tide event.
- ◆ **“Zero on Gage” Corrections** – Both gage stations were adjusted for “zero on gage,” which were documented through WY 1964; these adjustments were considered to be corrections for subsidence by this study.

- ◆ **Datum Conversion** – The raw data was collected in four different datums that need to be converted to the current datum, NAVD88.
- ◆ **Subsidence/Sea Level Rise** – The combined effect of subsidence and sea level rise was determined from the 19-year running average of the annual lower-low tide data; separation of the combined impact of subsidence from sea level rise was based on the quality of the data available.

## 2.1 Missing Data

From WY 1983 through WY 2009, nearly all of the annual higher-high tides occurred on the same day (26 out of 27) at the Rindge Pump and Burns Cutoff gage stations. The difference between the annual higher-high tides on different days was less than 0.05 ft. During the same period, most of the annual lower-low tides occurred on the same day (21 out of 27) at the two gage stations. The greatest difference between the annual lower-low tides on different days was 0.16 ft.

### 2.1.1 Gages Out of Service

Assuming that the annual higher-high tide events occur on the same day for the two gage stations, missing data was identified during periods when one gage was out of service during the other gage's higher-high tide event. This was observed twice during WY 1986 and WY 2006 when the Burns Cutoff gage station was out of service during the higher-high tide event for the Rindge Pump gage station.

Similarly, assuming the annual lower-low tide events occur on the same day at the two gage stations, missing data was identified during periods when one gage was out of service during the other gage's lower-low tide event. This was observed during WY 1984 when the Burns Cutoff gage station was out of service during the lower-low tide event for the Rindge Pump gage station. This was also observed during WY 1965 when the Rindge Pump gage station was out of service during the lower-low tide event for the Burns Cutoff gage station.

Missing data was replaced for the four instances discussed above where one gage was out of service during the other gage's high/low tide event. The new data was generated by averaging the difference between the two gages for the 7-days around the second highest/lowest tide event for that water year when both gages were operational and adding/subtracting the difference from the operating gage reading.

### 2.1.2 No Data Available

Data for the Burns Cutoff gage station prior to WY 1958 was not available from DWR. Data prior to WY 1958 was not used in any of the previous stage frequency analyses performed by the USACE in 1978, 1982, and 1992. In order to evaluate three complete 19-year epoch periods, data is required for both gage stations from WY 1953 through WY 2009. Therefore, data was missing for both annual higher-high and lower-low tide events for the Burns Cutoff gage station for WY 1953 through WY 1957.

The missing data was estimated from the average difference between the two gages over the remainder of the 19-year epoch period (ending in WY 1971). For annual higher-high tide events, the Burns Cutoff gage station was 0.14 ft NGVD29 higher than the Rindge Pump gage station. For annual lower-low tide events, the Burns Cutoff gage station was 0.02 ft NGVD29 higher than the Rindge Pump gage station. The resulting equations used to generate the missing data for WY 1953 through WY 1957 are presented below:

Higher-High Tide: Burns Cutoff = Rindge Pump + 0.14 ft NGVD29

Lower-Low Tide: Burns Cutoff = Rindge Pump + 0.02 ft NGVD29

## 2.2 “Zero on Gage” Correction

The annual data summaries collected from WY 1961 through WY 1975 include a table to present the “zero on gage” measurement along with the datum used. These summaries show that in 1964 the gage reading was corrected for 0.52 ft of subsidence between 1940 and 1964 at the Rindge Pump gage station. These summaries also show that in 1964 the gage reading was corrected for 0.52 ft of subsidence between 1951 and 1964 at the Burns Cutoff gage station.

For the Rindge Pump gage station, the difference between the “zero on gage” measurements between WY 1940 and WY 1964 was assumed to be a linear correction. This results in an average rate of correction of 0.022 ft/yr (6.7 mm/yr) over this period of time.

Similarly, for the Burns Cutoff gage station, the difference between the “zero on gage” measurements between WY 1951 and WY 1964 was assumed to be a linear correction. This results in an average rate of correction of 0.039 ft/yr (11.9 mm/yr) over this period of time.

These “zero on gage” were assumed to be subsidence corrections and were made on a linear basis from WY 1953 through WY 1964 for each of the gage stations.

## 2.3 Datum Conversion

Four vertical datums were used to record the raw stage data:

- ◆ USED – United States Engineering Datum
- ◆ USCGS – United States Coast and Geodetic Survey
- ◆ NGVD29 – National Geodetic Vertical Datum of 1929, and in some cases the datum NGVD29+3ft was used to avoid negative stage values
- ◆ NAVD88 – North American Vertical Datum 1988

The datum conversions between USED, USCGS, and NGVD29 are straightforward. Per the stage data summaries, 3.0 ft USED equals 0.0 ft USCGS. The USCGS datum became the NGVD29 datum with a general change to the determination of the combined mean sea level used as its basis. Therefore, the USCGS and NGVD29 datums are assumed to be equal.

The conversion between NGVD29 and NAVD88 is site specific. The adjustment can be estimated using the VERTCON conversion program developed by the National Oceanographic and Atmospheric Administration's (NOAA's) National Geodetic Survey (NGS). The calculated adjustment for each gage station per the VERTCON conversion program is as follows:

$$\text{Rindge Pump: NGVD29} + 2.14 \text{ ft} = \text{NAVD88}$$

$$\text{Burns Cutoff: NGVD29} + 2.06 \text{ ft} = \text{NAVD88}$$

In 2002, the DWR in association with the NGS, conducted a global positioning system (GPS) survey of the Sacramento-San Joaquin Delta to establish new NAVD88 elevations at over 100 bench marks throughout the area. This survey resulted in adjustments to the calculated conversion from NGVD29 to NAVD88. The resulting conversion for NGVD29 to NAVD88 for each gage station is as follows (+/- 0.07 ft):

$$\begin{aligned} \text{Rindge Pump: NAVD88} &= \text{NGVD29} + 2.50 \text{ ft} \\ &= (\text{NGVD29} + 3 \text{ ft}) - 0.5 \text{ ft} \end{aligned}$$

$$\begin{aligned} \text{Burns Cutoff: NAVD88} &= \text{NGVD29} + 2.13 \text{ ft} \\ &= (\text{NGVD29} + 3 \text{ ft}) - 0.87 \text{ ft} \end{aligned}$$

Note that the conversion is presented in both NGVD29 and NGVD29+3ft datums. The NGVD29+3ft datum was in use at both gage stations just prior to the conversion to NAVD88 in WY 2006. Therefore, the adjustments listed by DWR were to the NGVD29+3ft datum.

The NAVD88 adjustment used in this study is based on the 2002 DWR survey adjustment factors. Figure 4 and Figure 5 present the data for the Rindge Pump and Burns Cutoff gage station in the NAVD88 datum with no correction for subsidence or sea level rise other than the "zero on gage" corrections made prior to WY 1965.

Figure 4 - Rindge Pump Gage Station Data, Converted to NAVD88

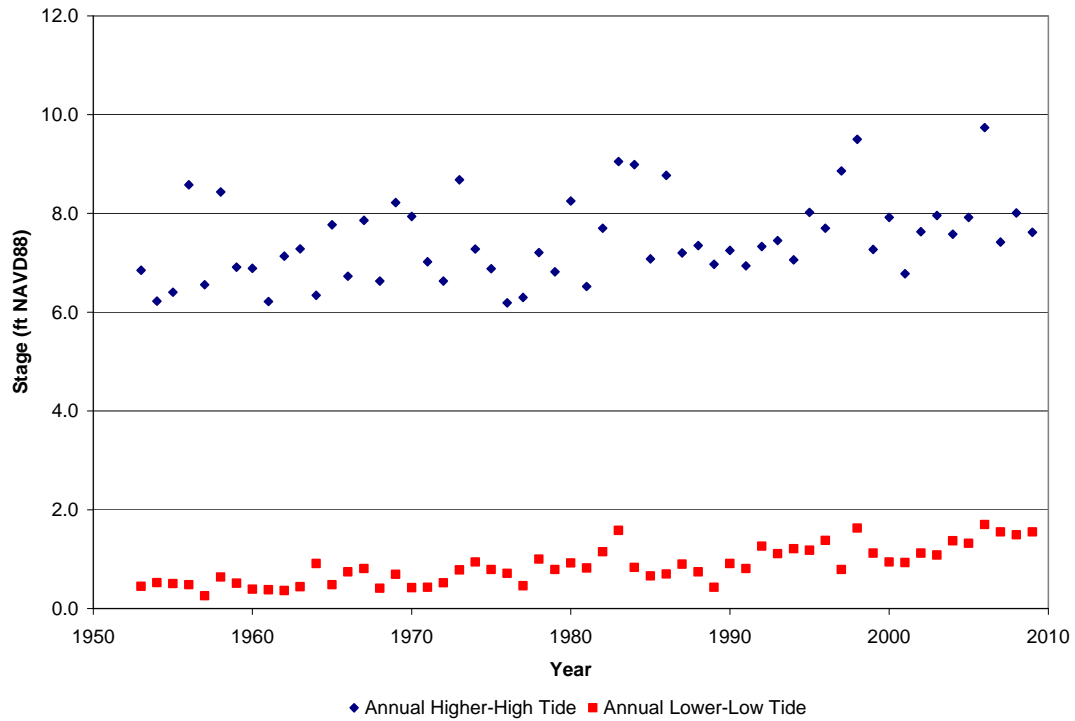
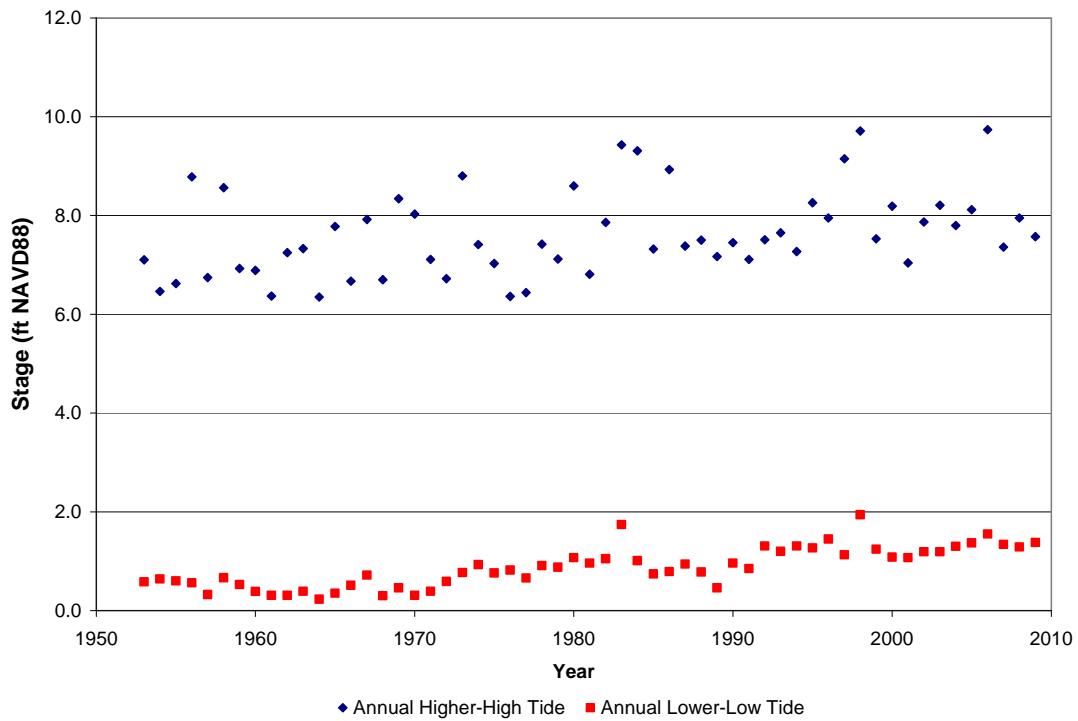


Figure 5 - Burns Cutoff Gage Station Data, Converted to NAVD88





## 2.4 Lower-Low Tide Analysis

The annual lower-low tide data can be used to estimate the combined impact of subsidence and sea level rise over time. Lower-low tide data is used because hydraulic impacts on the stage data are minimized. The annual lower-low tide data is evaluated for three 19-year epoch periods, to eliminate variability due to the astronomic tide cycle:

- ▲ Period 1: WY 1953 to WY 1971
- ▲ Period 2: WY 1972 to WY 1990
- ▲ Period 3: WY 1991 to WY 2009

Figure 6 and Figure 7 present the running 19-year average of the annual lower-low tide data for the Rindge Pump and Burns Cutoff gage stations. Note that the averages are presented at the mid-point of the 19-year period (e.g. the 19-year average for WY 1972 through WY 1990 is presented in WY 1981).

*Figure 6 - Rindge Pump Gage Station 19-Year Running Average of Annual Lower-Low Tides*

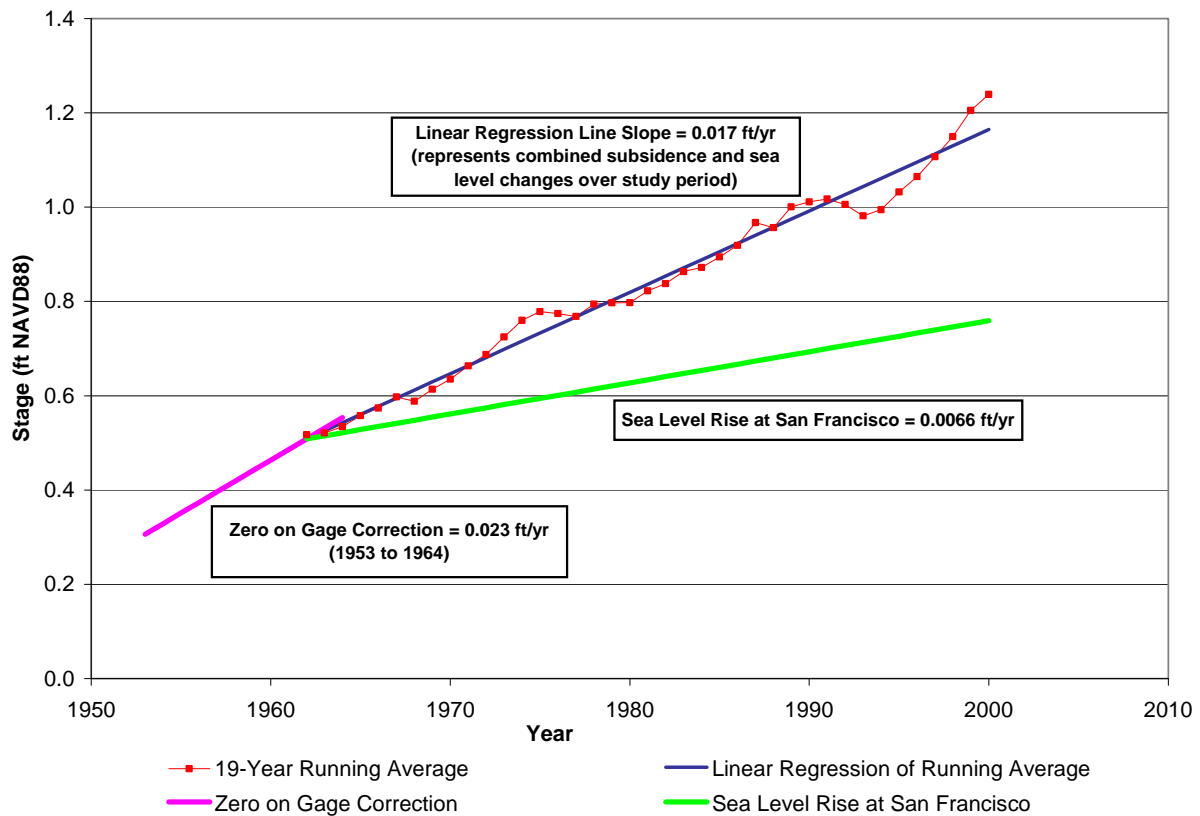
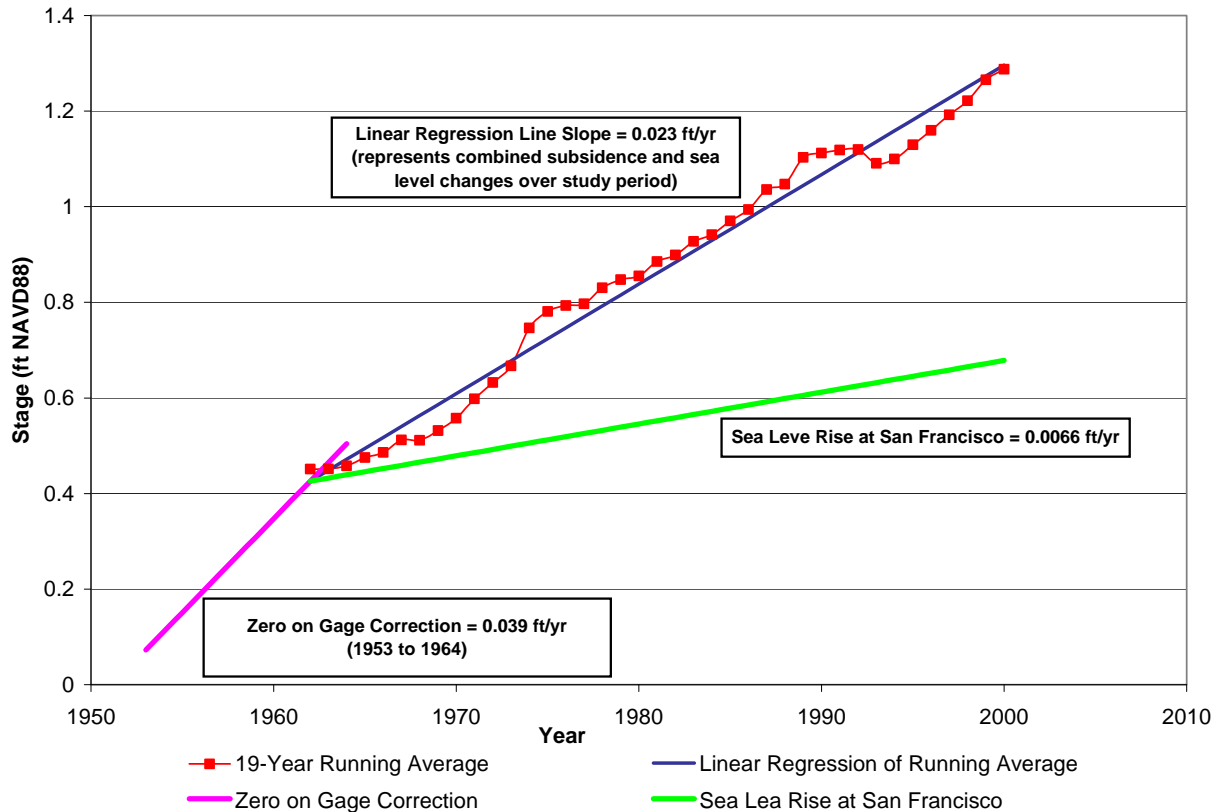


Figure 7 - Burns Cutoff Gage Station 19-Year Running Average of Annual Lower-Low Tides



Each of these figures includes a line representing the linear regression that was performed on the 19-year running average annual lower-low tide data. The slope of this line represents the combined rate of subsidence and sea level rise at each gage station. These results show that the combined impact of subsidence and sea level rise is greater at the Burns Cutoff gage station. Since the sea level rise should be the same at both gage stations (Figure 6 and Figure 7 present the sea level rise at San Francisco for comparison), the impact of subsidence is greater at the Burns Cutoff gage station when compared to the Rindge Pump gage station. For reference, these figures also show the “zero on gage” corrections from the early years of the study relative to the combined impact of subsidence and sea level rise over the entire study period.

#### 2.4.1 Subsidence

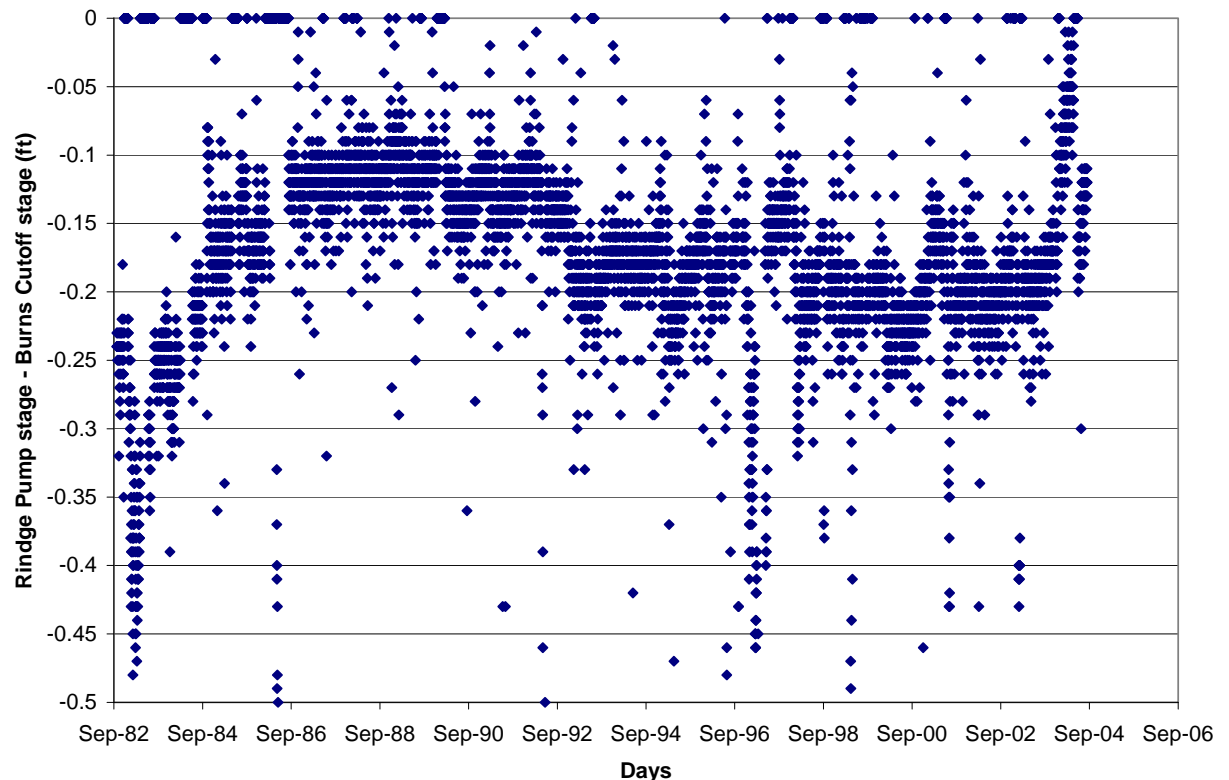
Recall that the “zero on gage” corrections prior to WY 1965 were used to account for subsidence up to WY 1964 in Section 2.2 above. These rates of subsidence are much greater than the combined impact of subsidence and sea level rise shown by the data in Figure 6 and Figure 7. These differences could indicate several possible scenarios:

- ◆ The rate of subsidence decreased over time

- ◆ The 1964 “zero on gage” correction was not a correction for subsidence only
- ◆ The 1964 “zero on gage” correction was made to faulty benchmarks due to land subsidence in the delta region

Figure 8 presents the daily difference between the Rindge Pump and Burns Cutoff gage station lower-low tide since WY 1983 (the first year data is available electronically). Days when the difference equals zero represent days when one of the two gage stations was out of service. The difference between the daily gage readings at the two gage stations would remain constant over time if there was no difference in rates of subsidence at the two gage station. A difference in subsidence rates, suggested by the 1964 “zero on gage” corrections, should result in an overall trend that increases/decreases the daily difference between the lower-low tide levels over time. Note the Figure 8 shows both increasing and decreasing trends in the difference between the lower-low tide levels at the two gage stations. Note also that there appear to be shifts in the data presented in Figure 8 following each time one of the gages is out of service. These shifts could represent undocumented corrections for subsidence over time.

*Figure 8 - Daily Lower-Low Tide Gage Reading Differences between the Rindge Pump and Burns Cutoff Gage Stations (WY 1983 through WY 2005)*



Subsidence should be separated from sea level rise first using survey data over the entire period of record. There is no documented data to record subsidence rates after WY 1964. Data from

the 2002 DWR GPS survey is only a single point with nothing to use for comparison. Due to the lack of reliable subsidence data and documentation, subsidence is estimated using two methods – depending on the period of record:

- ◆ **WY 1953 through WY 1964** – Use the 1964 “zero on gage” correction as the linear representation of the rate of subsidence. Note that the data has already been corrected for “zero on gage” during the datum conversion.
- ◆ **WY 1965 through WY 2009** - Use the known sea level rise at San Francisco (0.0066 ft/yr) to determine the rate of subsidence on a linear basis. This results in an estimated subsidence of 0.5 ft (0.011 ft/yr) at the Rindge Pump gage station and 0.8 ft (0.017 ft/yr) at the Burns Cutoff gage station.

#### 2.4.2 Sea Level Rise

Theoretically, the subsidence correction would have been based on actual survey data over the entire period of record. This would allow the calculation of the local sea level rise at each of the gage stations. Since this survey data was not available over the entire period of record, the sea level rise at the Rindge Pump and Burns Drive gage stations was assumed to be equal to the historic sea level rise at San Francisco – 0.0066 ft/yr (2.0 mm/yr). All data was adjusted using a linear rate of sea level rise to raise all values over the period of record to the 2009 sea level.

## 3.0 Stage Frequency Analysis

### 3.1 Data Used

Prior to performing the stage frequency analysis, the annual higher-high tide data was adjusted to address the following issues discussed previously in this report:

- ◆ Conversion to NAVD88 Datum
- ◆ Subsidence
- ◆ Sea Level Rise

Table 1 and Table 2 present the data used in the stage frequency analysis for the Rindge Pump and Burns Cutoff gage stations. Figure 9 presents the annual higher-high tide data for both gage stations in graphical form for comparison.

**Table 1 - Rindge Pump Gage Station Adjusted Annual Higher-High Tide Data**

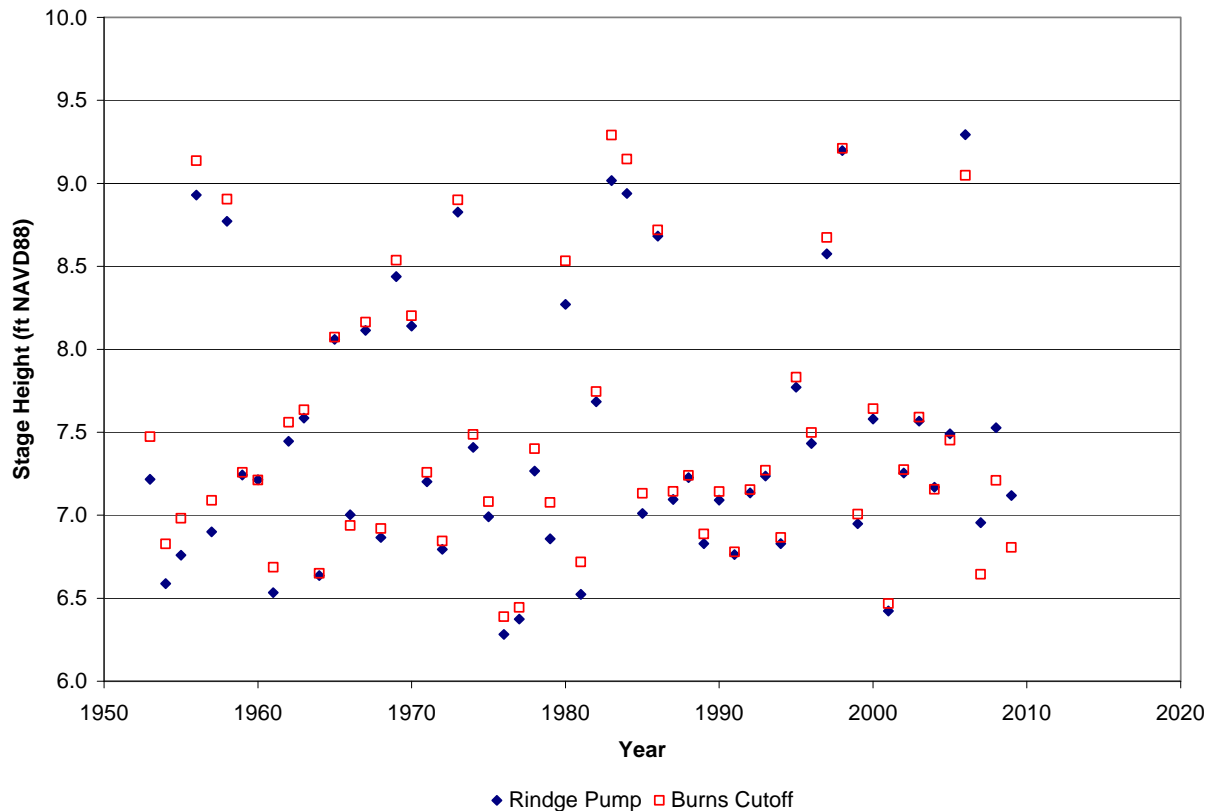
19-Year Epoch Period 1		19-Year Epoch Period 2		19-Year Epoch Period 3	
Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)
1953	7.2 <sup>(1)</sup>	1972	6.79	1991	6.76
1954	6.6 <sup>(1)</sup>	1973	8.83	1992	7.13
1955	6.8 <sup>(1)</sup>	1974	7.41	1993	7.24
1956	8.9 <sup>(1)</sup>	1975	6.99	1994	6.83
1957	6.9 <sup>(1)</sup>	1976	6.28	1995	7.77
1958	8.8 <sup>(1)</sup>	1977	6.37	1996	7.43
1959	7.2 <sup>(1)</sup>	1978	7.27	1997	8.57
1960	7.21	1979	6.86	1998	9.20
1961	6.53	1980	8.27	1999	6.95
1962	7.45	1981	6.52	2000	7.58
1963	7.59	1982	7.68	2001	6.42
1964	6.64	1983	9.02	2002	7.25
1965	8.06	1984	8.94	2003	7.57
1966	7.00	1985	7.01	2004	7.17
1967	8.11	1986	8.68	2005	7.49
1968	6.87	1987	7.09	2006	9.29
1969	8.44	1988	7.23	2007	6.95
1970	8.14	1989	6.83	2008	7.53
1971	7.20	1990	7.09	2009	7.12
Notes: <sup>(1)</sup> Tide Stage Data recorded prior to 1960 was recorded to the tenths of a foot. Therefore, the precision of the adjusted annual higher-high tide data is presented only to the tenths of a foot. Tide Stage Data recorded in 1960 and later was recorded to the hundredths of a foot.					

**Table 2 - Burns Cutoff Gage Station Adjusted Annual Higher-High Tide Data**

19-Year Epoch Period 1		19-Year Epoch Period 2		19-Year Epoch Period 3	
Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)
1953	7.5 <sup>(1)</sup>	1972	6.84	1991	6.78
1954	6.8 <sup>(1)</sup>	1973	8.90	1992	7.15
1955	7.0 <sup>(1)</sup>	1974	7.49	1993	7.27
1956	9.1 <sup>(1)</sup>	1975	7.08	1994	6.87
1957	7.1 <sup>(1)</sup>	1976	6.39	1995	7.83
1958	8.9 <sup>(1)</sup>	1977	6.44	1996	7.50
1959	7.3 <sup>(1)</sup>	1978	7.40	1997	8.67
1960	7.21	1979	7.08	1998	9.21
1961	6.69	1980	8.53	1999	7.01
1962	7.56	1981	6.72	2000	7.64
1963	7.64	1982	7.74	2001	6.47
1964	6.65	1983	9.29	2002	7.27
1965	8.07	1984	9.15	2003	7.59
1966	6.94	1985	7.13	2004	7.16

<i>Table 2 - Burns Cutoff Gage Station Adjusted Annual Higher-High Tide Data</i>					
19-Year Epoch Period 1		19-Year Epoch Period 2		19-Year Epoch Period 3	
Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)	Water Year	Stage (ft NAVD88)
1967	8.16	1986	8.72	2005	7.45
1968	6.92	1987	7.14	2006	9.05
1969	8.54	1988	7.24	2007	6.64
1970	8.20	1989	6.89	2008	7.21
1971	7.26	1990	7.14	2009	6.81
Notes:					
(1) Tide Stage Data recorded prior to 1960 was recorded to the tenths of a foot. Therefore, the precision of the adjusted annual higher-high tide data is presented only to the tenths of a foot. Tide Stage Data recorded in 1960 and later was recorded to the hundredths of a foot.					

*Figure 9 - Adjusted Annual Higher-High Tide Gage Station Data*



### 3.2 Stage Frequency Analysis Results

The data presented in Table 1 and Table 2 was analyzed using the USACE Hydrologic Engineering Center Statistical Software Package (HEC-SSP). The data analyses were

performed using the generalized frequency analysis with a Weibull plotting position and a normal probability distribution. Table 3 presents the stage frequency analysis results for the Rindge Pump and Burns Cutoff gage stations using the graphical method to address the S-shaped curve that passes through the data. The graphical method acknowledges that the higher stage events are dependent on higher flows, which in turn can be impacted by channel geometry as well as upstream and downstream overall system operation (e.g. levee failures and dam releases). Appendices A and B present the HEC-SSP analytical plots and stage frequency analysis reports for the Rindge Pump and Burns Cutoff gage stations.

<i>Table 3 - Stage Frequency Analysis Results (WY 2009 Sea Level Conditions)</i>			
Annual Exceedance Probability	Confidence Limit <sup>(1)</sup>	Rindge Pump (ft NAVD88)	Burns Cutoff (ft NAVD88)
1/50	95%	8.9	9.0
	<b>50%</b>	<b>9.3</b>	<b>9.3</b>
	5%	9.7	9.6
1/100	95%	9.1	9.0
	<b>50%</b>	<b>9.4</b>	<b>9.4</b>
	5%	9.8	9.8
1/200	95%	9.2	9.1
	<b>50%</b>	<b>9.6</b>	<b>9.5</b>
	5%	10.0	9.9
(1) The confidence limit represents the percent confidence the stage will be exceeded. For example, there is a 95% confidence that a 1/50 flood stage of 8.9 ft would be exceeded and a 5% confidence that a 1/50 flood stage of 9.7 ft would be exceeded at the Rindge Pump gage station. Note that the range of values between the 95% and 5% confidence limits represents the 90% confidence interval – meaning that there is 90% confidence that the given flood stage will occur between the two values.			

### 3.2.1 Comparison to Previous Studies

Table 4 presents the stage frequency analysis results from the previous USACE studies in 1976, 1982, and 1992. The results were converted from NGVD29 datum to NAVD88 datum using the 2002 DWR GPS survey correction factors for comparison.

<i>Table 4 - Stage Frequency Analysis Results from Previous USACE Studies</i>					
USACE Report Year	Annual Exceedance Probability	Rindge Pump		Burns Cutoff	
		ft NGVD29	ft NAVD88	ft NGVD29	ft NAVD88
1976	1/50	7.1	9.6	7.2	9.3
	1/100	7.4	9.9	7.5	9.6
1982	1/50	7.1	9.6	7.2	9.3
	1/100	7.4	9.9	7.5	9.6
1992	1/50	7.2	9.7	7.4	9.5
	1/100	7.4	9.9	7.6	9.7



Because the previous study results presented in Table 4 do not address subsidence and sea level rise, the results of the two studies cannot be compared quantitatively. However, the previous studies showed that the higher-high tide stage was 0.1 to 0.2 ft higher in NGVD29 datum at Burns Cutoff gage station than at Rindge Pump gage station. Since the Burns Cutoff gage station is upstream of the Rindge Pump gages station, this difference is reasonable at the higher-high tide. Without any correction for subsidence and sea level rise, the conversion from NGVD29 to NAVD88 datum for the previous studies shows that the Burns Cutoff higher-high tide stage is 0.2 to 0.3 ft lower than at the Rindge Pump gage station. The results of this study (see Table 3), which take subsidence and sea level rise into account, show that the higher-high tide stage is approximately the same in NAVD88 datum at Burns Cutoff gage station as it is at Rindge Pump gage station – which is consistent with the previous studies and as expected due to their close proximity.

## 4.0 Climate Change Impacts

Future sea level rise will increase the stage frequency results calculated for WY 2009. USACE Circular No. 1165-2-211, “Water Resources Policies and Authorities Incorporating Sea-Level Change Considerations in Civil Works Programs,” states that planning studies and engineering designs should consider alternatives that are developed and assessed for the entire range of possible future rates of sea level rise. Alternatives should be analyzed using “low,” “intermediate,” and “high” rates of future sea level rise, based on the following:

- ◆ **Low** – use local historic rate of sea level rise; assumed to be 0.66 ft/100-yr (2.0 mm/yr) per the value measured at San Francisco
- ◆ **Intermediate** - use the modified National Research Council (NRC) Curve I for estimating future sea level rise
- ◆ **High** - use the modified NRC Curve III for estimating future sea level rise

The equation for the modified NRC curves to determine the change in sea level since 1986 is presented below:

$$E(t_2) - E(t_1) = 0.0017(t_2 - t_1) + b(t_2^2 - t_1^2), \text{ where}$$

$E(t_2) - E(t_1)$  = represents sea level rise between current and future years

$E(t_1)$  = current sea level rise relative to the 1986 sea level, meters

$E(t_2)$  = sea level rise in the future relative to the 1986 sea level, meters

$t_1$  = current year – 1986

$t_2$  = future year – 1986

$b$  = constant = 2.360E-05 for NRC Curve I

1.005E-04 for NRC Curve III

Table 5 presents the estimated sea level rise at the Rindge Pump and Burns Cutoff gage stations. Note that all three rates of sea level rise are identical for the two gage stations.

<i>Table 5 - Estimated Future Sea Level Rise from 2009</i>			
Year	Sea Level Rise, ft		
	Low	Intermediate	High
2030	0.1	0.2	0.6
2050	0.3	0.5	1.4
2080	0.5	1.1	3.2
2100	0.6	1.5	4.7

#### 4.1 Estimated Future Stage Frequency

To estimate the future stage frequencies for the Rindge Pump and Burns Cutoff gage stations, the stage frequency analysis results from Table 3 were combined with the estimated sea level rise presented in Table 5. The combination of this information results in a series of figures for each gage station presenting the estimated stage (including the 90% confidence interval) for a given exceedance probability and the three sea level rise scenarios. A description of these figures is presented below:

- ◆ Rindge Pump Gage Station –
  - ◆ Figure 10, estimated stage with a 1/200 annual exceedance probability
  - ◆ Figure 11, estimated stage with a 1/100 annual exceedance probability
  - ◆ Figure 12, estimated stage with a 1/50 annual exceedance probability
- ◆ Burns Cutoff Gage Station –
  - ◆ Figure 13, estimated stage with a 1/200 annual exceedance probability
  - ◆ Figure 14, estimated stage with a 1/100 annual exceedance probability
  - ◆ Figure 15, estimated stage with a 1/50 annual exceedance probability

For reference, the minimum levee height in the area near each gage station is shown on each of these figures. Note that the stage projections into the future are based on an assumption that the levee height will be increased in the future to accommodate sea level rise.

Figure 10 - Rindge Pump Gage Station Estimated Stage with 1/200 Annual Exceedance Probability, 2010 through 2100

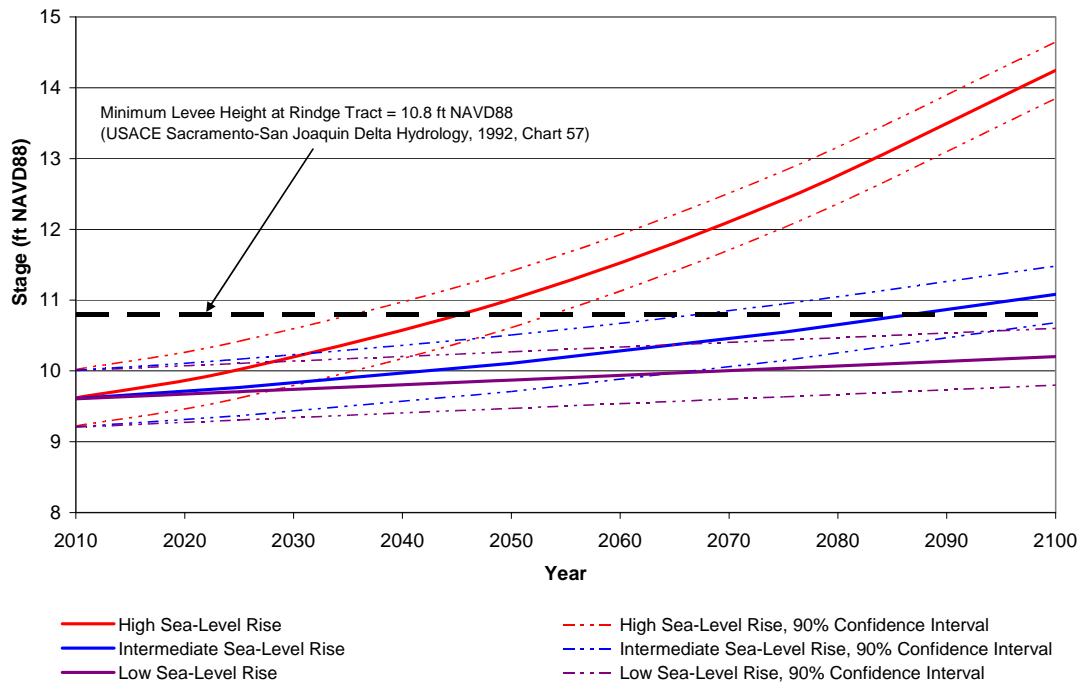


Figure 11 - Rindge Pump Gage Station Estimated Stage with 1/100 Annual Exceedance Probability, 2010 through 2100

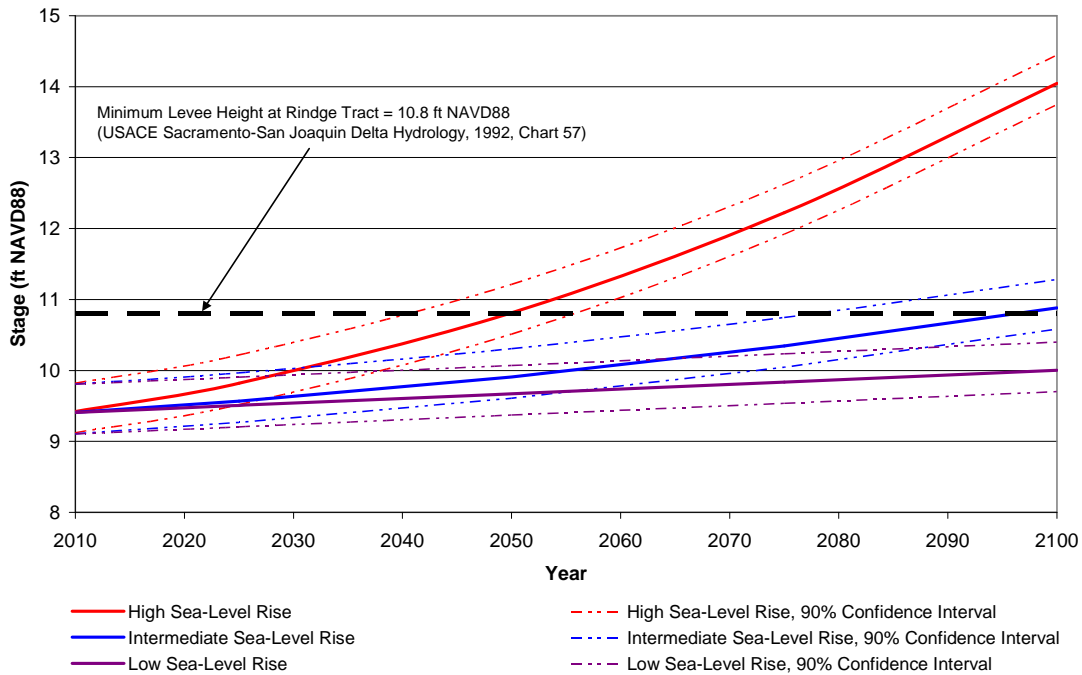


Figure 12 - Rindge Pump Gage Station Estimated Stage with 1/50 Annual Exceedance Probability, 2010 through 2100

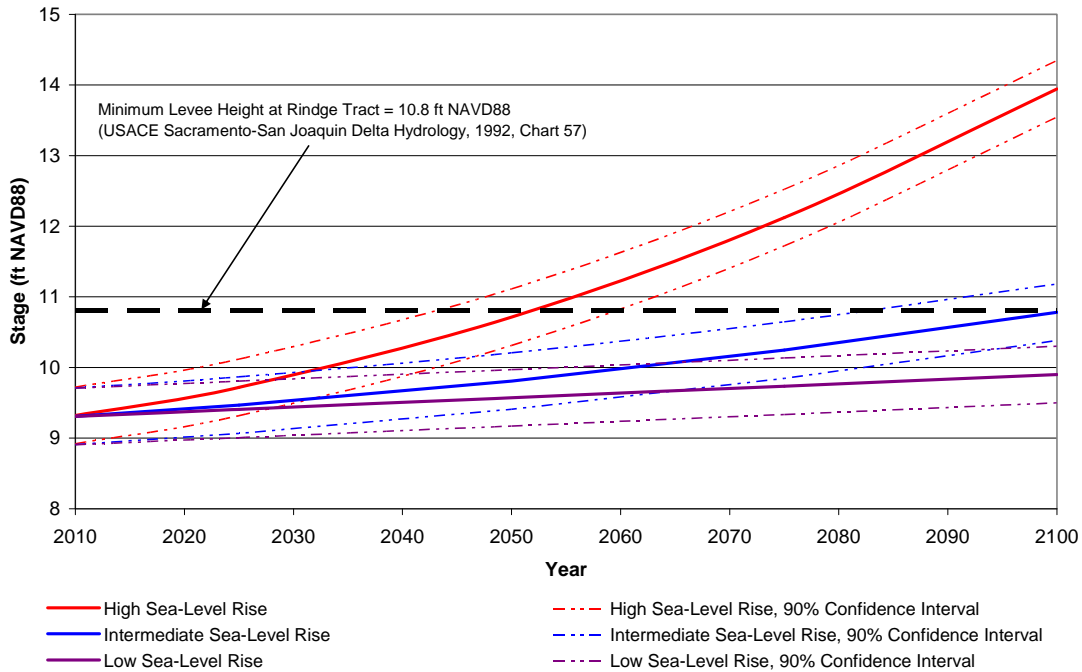


Figure 13 - Burns Cutoff Gage Station Estimated Stage with 1/200 Annual Exceedance Probability, 2010 through 2100

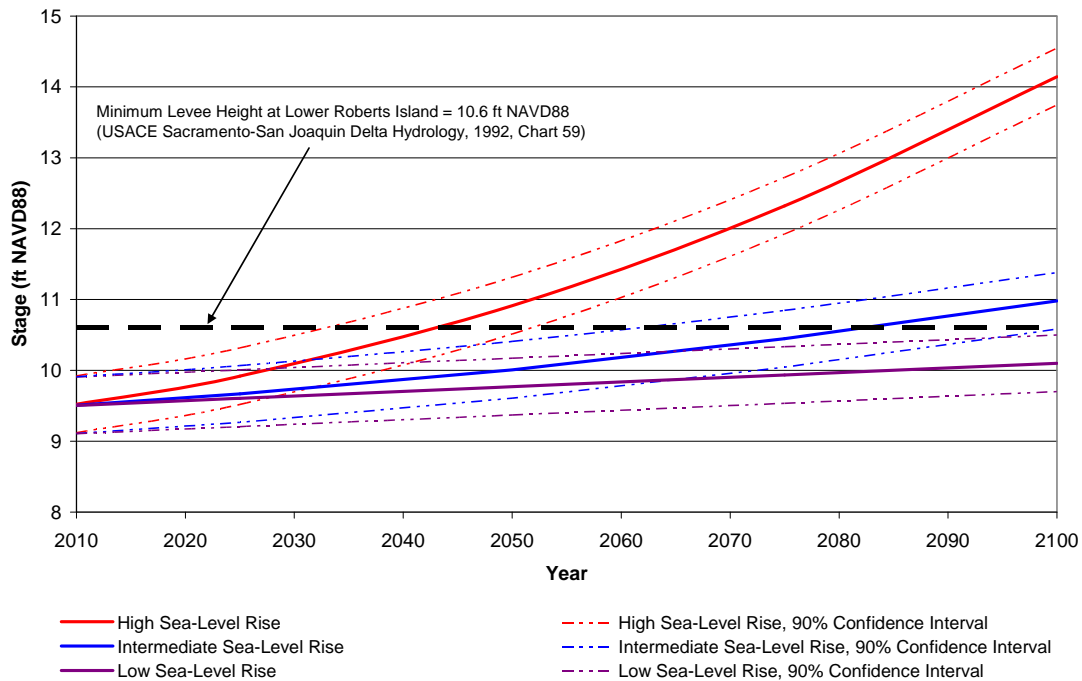


Figure 14 - Burns Cutoff Gage Station Estimated Stage with 1/100 Annual Exceedance Probability, 2010 through 2100

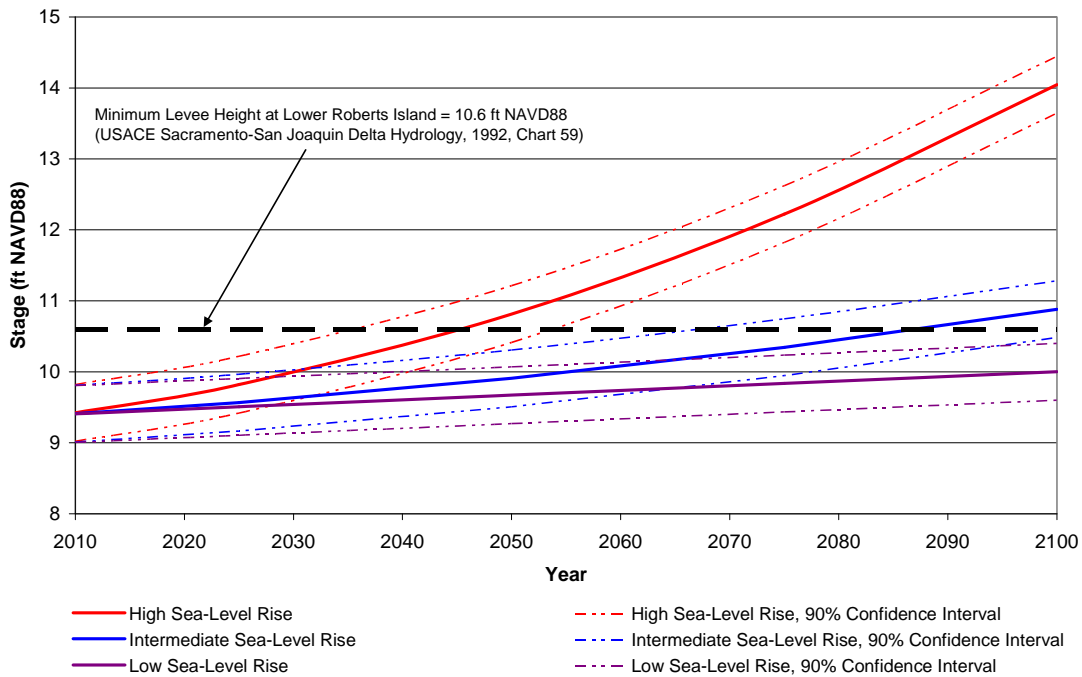
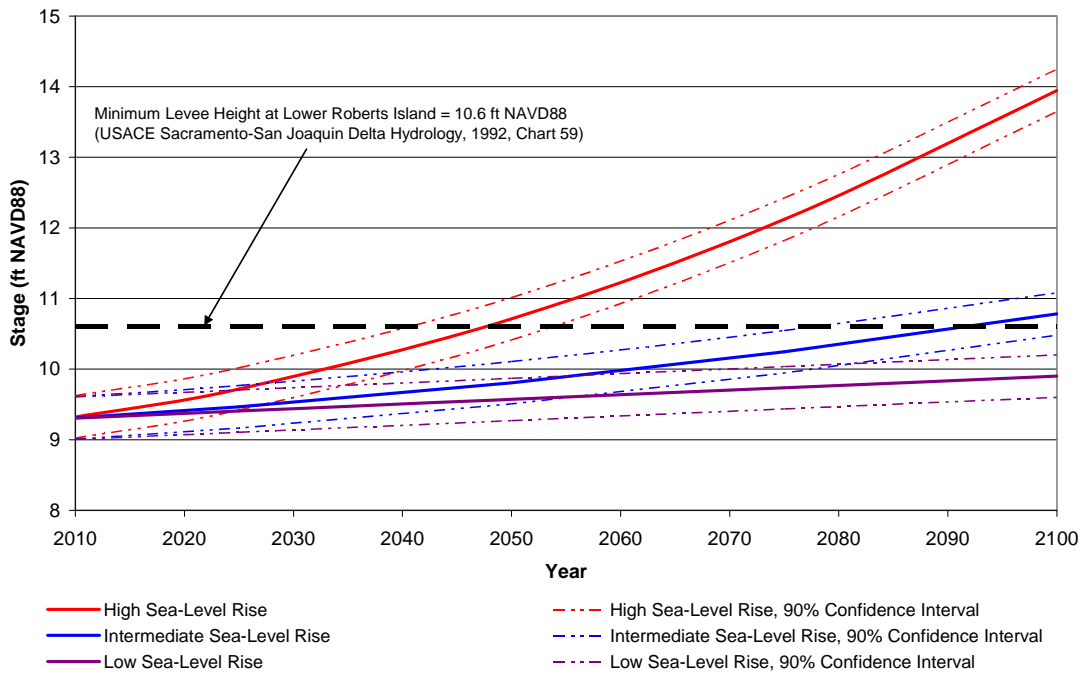


Figure 15 - Burns Cutoff Gage Station Estimated Stage with 1/50 Annual Exceedance Probability, 2010 through 2100



# **Appendix A**

## **HEC-SSP Analytical Plot and Stage Frequency Analysis Report for Rindge Pump Gage Station**

-----  
General Frequency Analysis  
02 Aug 2010 10:05 AM  
-----

--- Input Data ---

Analysis Name: Rindge Pump SFA  
Description:

Data Set Name: RP Final Report  
DSS File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\Rindge\_Pump\_051010\  
Rindge\_Pump\_051010.dss  
DSS Pathname: /STAGE////IR-CENTURY//

Start Date: 01 Oct 1952  
End Date: 30 Sep 2009

Project Path: C:\Documents and Settings\dmurbach\My Documents\HEC\Rindge\_Pump\_051010  
Report File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\Rindge\_Pump\_051010\  
GeneralFrequencyResults\Rindge\_Pump\_SFA\Rindge\_Pump\_SFA.rpt  
Result File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\Rindge\_Pump\_051010\  
GeneralFrequencyResults\Rindge\_Pump\_SFA\Rindge\_Pump\_SFA.xml

Plotting Position Type: Weibull

Probability Distribution Type: Normal  
Compute Expected Probability Curve

Upper Confidence Level: 0.05  
Lower Confidence Level: 0.95

!Gfa.Input.UseNonStandardFrequency.label!

Frequency: 0.2  
Frequency: 0.5  
Frequency: 1.0  
Frequency: 2.0  
Frequency: 13.0  
Frequency: 31.0  
Frequency: 99.0

Display ordinate values using 2 digits in fraction part of value

--- End of Input Data ---

-----  
 << High Outlier Test >>  
 -----

Based on 57 events, 10 percent outlier test deviate  $K(N) = 2.818$   
 Computed high outlier test value = 9.678

0 high outlier(s) identified above test value of 9.678

-----  
 << Low Outlier Test >>  
 -----

Based on 57 events, 10 percent outlier test deviate  $K(N) = 2.818$   
 Computed low outlier test value = 5.237

0 low outlier(s) identified below test value of 5.237

--- Final Results ---

<< Plotting Positions >>

RP Final Report

Events Analyzed			Ordered Events				
			Water		Weibull		
Day	Mon	Year	FT	Rank	Year	FT	Plot Pos
-----			-----	-----	-----	-----	-----
01	Dec	1952	7.22	1	2006	9.29	1.72
17	Jan	1954	6.59	2	1998	9.20	3.45
09	Dec	1954	6.76	3	1983	9.02	5.17
26	Jan	1956	8.93	4	1984	8.94	6.90
29	Jun	1957	6.90	5	1956	8.93	8.62
06	Apr	1958	8.77	6	1973	8.83	10.34
16	Feb	1959	7.24	7	1958	8.77	12.07
09	Feb	1960	7.21	8	1986	8.68	13.79
01	Dec	1960	6.53	9	1997	8.57	15.52
15	Feb	1962	7.45	10	1969	8.44	17.24
04	Feb	1963	7.59	11	1980	8.27	18.97
05	Nov	1963	6.64	12	1970	8.14	20.69
27	Dec	1964	8.06	13	1967	8.11	22.41
04	Feb	1966	7.00	14	1965	8.06	24.14
24	Jan	1967	8.11	15	1995	7.77	25.86



08 Jul 1968	6.87	16	1982	7.68	27.59	
15 Feb 1969	8.44	17	1963	7.59	29.31	
23 Jan 1970	8.14	18	2000	7.58	31.03	
30 Nov 1970	7.20	19	2003	7.57	32.76	
02 Dec 1971	6.79	20	2008	7.53	34.48	
18 Jan 1973	8.83	21	2005	7.49	36.21	
08 Jan 1974	7.41	22	1962	7.45	37.93	
11 Jun 1975	6.99	23	1996	7.43	39.66	
05 Nov 1975	6.28	24	1974	7.41	41.38	
30 Jun 1977	6.37	25	1978	7.27	43.10	
16 Jan 1978	7.27	26	2002	7.25	44.83	
23 Feb 1979	6.86	27	1993	7.24	46.55	
18 Jan 1980	8.27	28	1959	7.24	48.28	
29 Jul 1981	6.52	29	1988	7.23	50.00	
05 Jan 1982	7.68	30	1953	7.22	51.72	
29 Jan 1983	9.02	31	1960	7.21	53.45	
03 Dec 1983	8.94	32	1971	7.20	55.17	
24 Nov 1984	7.01	33	2004	7.17	56.90	
21 Feb 1986	8.68	34	1992	7.13	58.62	
11 Jul 1987	7.09	35	2009	7.12	60.34	
06 Dec 1987	7.23	36	1990	7.09	62.07	
04 Jun 1989	6.83	37	1987	7.09	63.79	
22 Jun 1990	7.09	38	1985	7.01	65.52	
09 Jul 1991	6.76	39	1966	7.00	67.24	
15 Feb 1992	7.13	40	1975	6.99	68.97	
19 Feb 1993	7.24	41	2007	6.95	70.69	
11 Dec 1993	6.83	42	1999	6.95	72.41	
21 Mar 1995	7.77	43	1957	6.90	74.14	
21 Feb 1996	7.43	44	1968	6.87	75.86	
05 Jan 1997	8.57	45	1979	6.86	77.59	
06 Feb 1998	9.20	46	1994	6.83	79.31	
09 Feb 1999	6.95	47	1989	6.83	81.03	
14 Feb 2000	7.58	48	1972	6.79	82.76	
06 Mar 2001	6.42	49	1991	6.76	84.48	
02 Dec 2001	7.25	50	1955	6.76	86.21	
16 Dec 2002	7.57	51	1964	6.64	87.93	
24 Dec 2003	7.17	52	1954	6.59	89.66	
08 Jan 2005	7.49	53	1961	6.53	91.38	
31 Dec 2005	9.29	54	1981	6.52	93.10	
11 Jul 2007	6.95	55	2001	6.42	94.83	
04 Jan 2008	7.53	56	1977	6.37	96.55	
25 Dec 2008	7.12	57	1976	6.28	98.28	
----- -----						

<< Frequency Curve >>

RP Final Report

Computed		Expected	Percent		Confidence Limits	
Curve	Probability		Chance		0.05	0.95
STAGE, FT NAVD88		Exceedance		STAGE, FT NAVD88		
-----		-----		-----		
9.73	9.84	0.2		10.18	9.38	
9.49	9.58	0.5		9.90	9.17	
9.29	9.36	1.0		9.68	9.00	
9.08	9.13	2.0		9.43	8.80	
8.34	8.36	13.0		8.59	8.14	
7.85	7.85	31.0		8.04	7.67	
5.62	5.55	99.0		5.92	5.24	
-----		-----		-----		

<< Systematic Statistics >>

RP Final Report

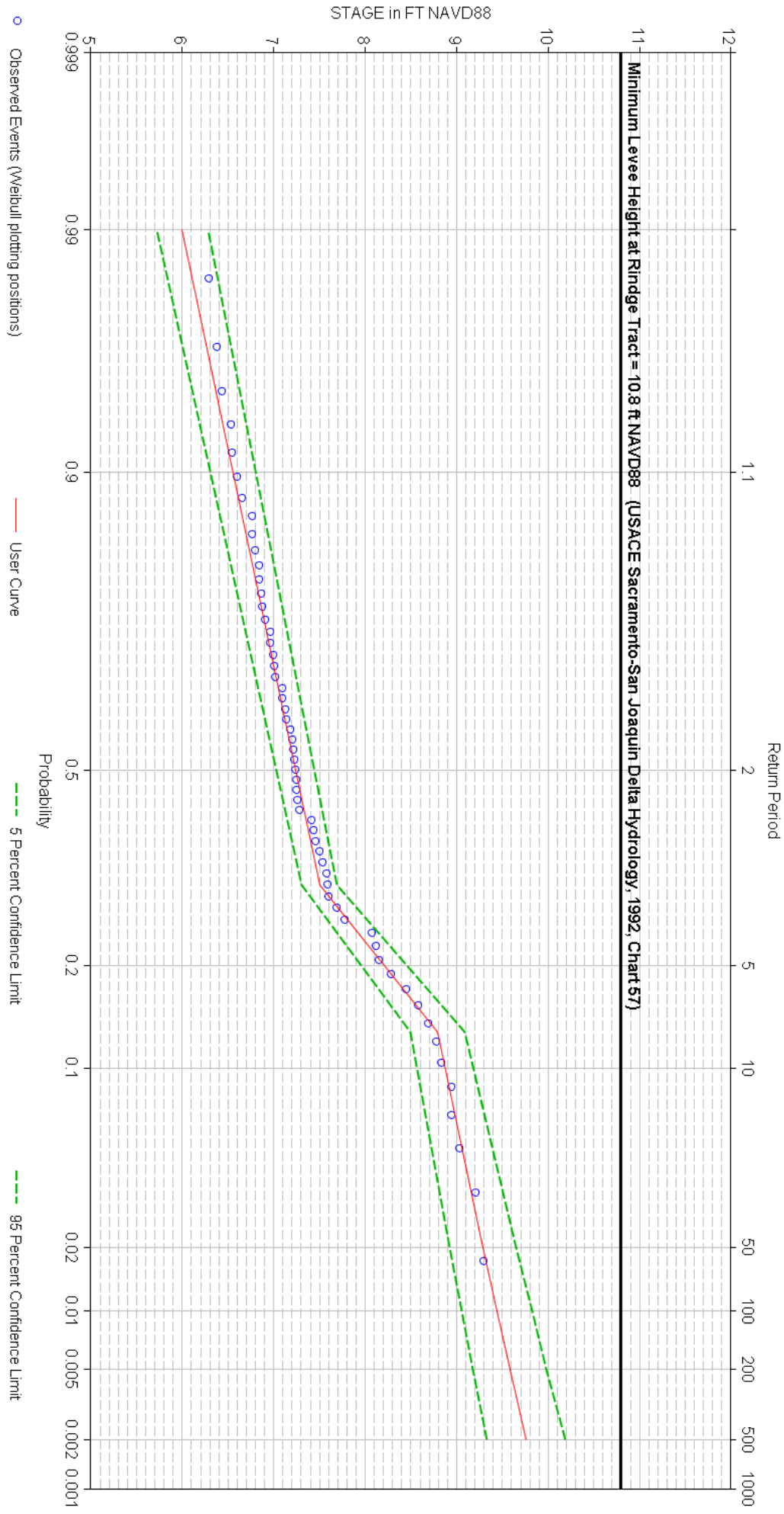
STAGE, FT NAVD88		Number of Events	
----- -----			
Mean	7.46	Historic Events	0
Standard Dev	0.79	High Outliers	0
Station Skew	0.85	Low Outliers	0
Regional Skew	---	Zero Events	0
Weighted Skew	---	Missing Events	0
Adopted Skew	0.00	Systematic Events	57
----- -----			

<< User-Defined Graphical Frequency Curve >>

RP Final Report

Computed    Expected   Percent      Confidence Limits		
Curve    Probability   Chance         0.05    0.95		
STAGE, FT NAVD88      Exceedance   STAGE, FT NAVD88		
----- ----- -----		
9.76    ---	0.2	10.19    9.33
9.58    ---	0.5	9.98    9.18
9.44    ---	1.0	9.82    9.06
9.29    ---	2.0	9.65    8.93
8.79    ---	13.0	9.09    8.49
7.50    ---	31.0	7.69    7.31
6.00    ---	99.0	6.28    5.72
----- ----- -----		

# General Frequency Graphical Plot for Rindge Pump Stage Frequency Analysis



# **Appendix B**

## **HEC-SSP Analytical Plot and Stage Frequency Analysis Report for Burns Cutoff Gage Station**

-----  
General Frequency Analysis  
02 Aug 2010 10:54 AM  
-----

--- Input Data ---

Analysis Name: Burns Cutoff Stage Frequency Analysis  
Description:

Data Set Name: Final Report with Dates  
DSS File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\Burns\_Cutoff\_051110\  
Burns\_Cutoff\_051110.dss  
DSS Pathname: /STAGE////IR-CENTURY//

Start Date: 01 Oct 1952  
End Date: 30 Sep 2009

Project Path: C:\Documents and Settings\dmurbach\My Documents\HEC\Burns\_Cutoff\_051110  
Report File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\Burns\_Cutoff\_051110\  
GeneralFrequencyResults\Burns\_Cutoff\_Stage\_Frequency\_Analysis\  
Burns\_Cutoff\_Stage\_Frequency\_Analysis.rpt  
Result File Name: C:\Documents and Settings\dmurbach\My Documents\HEC\  
Burns\_Cutoff\_051110\GeneralFrequencyResults\Burns\_Cutoff\_Stage\_Frequency\_Analysis\Burns\_Cutoff\_  
Stage\_Frequency\_Analysis.xml

Plotting Position Type: Weibull

Probability Distribution Type: Normal  
Compute Expected Probability Curve

Upper Confidence Level: 0.05  
Lower Confidence Level: 0.95

Use Low Outlier Threshold  
Low Outlier Threshold: 5.0

!Gfa.Input.UseNonStandardFrequency.label!

Frequency: 0.2  
Frequency: 0.5  
Frequency: 1.0  
Frequency: 2.0  
Frequency: 9.0  
Frequency: 18.0  
Frequency: 28.0  
Frequency: 45.0

Frequency: 99.0

Display ordinate values using 2 digits in fraction part of value

--- End of Input Data ---

-----  
<< High Outlier Test >>  
-----

Based on 57 events, 10 percent outlier test deviate  $K(N) = 2.818$   
Computed high outlier test value = 9.772

0 high outlier(s) identified above test value of 9.772

-----  
<< Low Outlier Test >>  
-----

Based on 57 events, 10 percent outlier test deviate  $K(N) = 2.818$   
Computed low outlier test value = 5.26

0 low outlier(s) identified below input threshold of 5

--- Final Results ---

<< Plotting Positions >>  
Final Report with Dates

-----  
| Events Analyzed | Ordered Events |  
| | Water Weibull |  
Day Mon Year FT	Rank Year FT Plot Pos
01 Dec 1952 7.47	1 1983 9.29 1.72
17 Jan 1954 6.83	2 1998 9.21 3.45
09 Dec 1954 6.98	3 1984 9.15 5.17
26 Jan 1956 9.14	4 1956 9.14 6.90
29 Jun 1957 7.09	5 2006 9.05 8.62
04 Apr 1958 8.90	6 1973 8.90 10.34
21 Feb 1959 7.26	7 1958 8.90 12.07
09 Feb 1960 7.21	8 1986 8.72 13.79
-----

01 Dec 1960	6.69	9	1997	8.67	15.52	
15 Feb 1962	7.56	10	1969	8.54	17.24	
04 Feb 1963	7.64	11	1980	8.53	18.97	
05 Nov 1963	6.65	12	1970	8.20	20.69	
27 Dec 1964	8.07	13	1967	8.16	22.41	
10 Dec 1965	6.94	14	1965	8.07	24.14	
24 Jan 1967	8.16	15	1995	7.83	25.86	
08 Jul 1968	6.92	16	1982	7.74	27.59	
15 Feb 1969	8.54	17	2000	7.64	29.31	
23 Jan 1970	8.20	18	1963	7.64	31.03	
30 Nov 1970	7.26	19	2003	7.59	32.76	
02 Dec 1971	6.84	20	1962	7.56	34.48	
18 Jan 1973	8.90	21	1996	7.50	36.21	
08 Jan 1974	7.49	22	1974	7.49	37.93	
11 Jun 1975	7.08	23	1953	7.47	39.66	
05 Nov 1975	6.39	24	2005	7.45	41.38	
30 Jun 1977	6.44	25	1978	7.40	43.10	
16 Jan 1978	7.40	26	2002	7.27	44.83	
23 Feb 1979	7.08	27	1993	7.27	46.55	
21 Feb 1980	8.53	28	1971	7.26	48.28	
29 Jul 1981	6.72	29	1959	7.26	50.00	
05 Jan 1982	7.74	30	1988	7.24	51.72	
29 Jan 1983	9.29	31	2008	7.21	53.45	
03 Dec 1983	9.15	32	1960	7.21	55.17	
24 Nov 1984	7.13	33	2004	7.16	56.90	
10 Mar 1986	8.72	34	1992	7.15	58.62	
11 Jul 1987	7.14	35	1990	7.14	60.34	
06 Dec 1987	7.24	36	1987	7.14	62.07	
04 Jun 1989	6.89	37	1985	7.13	63.79	
22 Jun 1990	7.14	38	1957	7.09	65.52	
09 Jul 1991	6.78	39	1979	7.08	67.24	
15 Feb 1992	7.15	40	1975	7.08	68.97	
07 Jan 1993	7.27	41	1999	7.01	70.69	
11 Dec 1993	6.87	42	1955	6.98	72.41	
21 Mar 1995	7.83	43	1966	6.94	74.14	
21 Feb 1996	7.50	44	1968	6.92	75.86	
05 Jan 1997	8.67	45	1989	6.89	77.59	
06 Feb 1998	9.21	46	1994	6.87	79.31	
09 Feb 1999	7.01	47	1972	6.84	81.03	
14 Feb 2000	7.64	48	1954	6.83	82.76	
08 Jan 2001	6.47	49	2009	6.81	84.48	
02 Dec 2001	7.27	50	1991	6.78	86.21	
16 Dec 2002	7.59	51	1981	6.72	87.93	
24 Dec 2003	7.16	52	1961	6.69	89.66	
08 Jan 2005	7.45	53	1964	6.65	91.38	
03 Jan 2006	9.05	54	2007	6.64	93.10	

11 Jul 2007	6.64	55	2001	6.47	94.83	
04 Jan 2008	7.21	56	1977	6.44	96.55	
25 Dec 2008	6.81	57	1976	6.39	98.28	
----- -----						

<< Frequency Curve >>  
Final Report with Dates

Computed		Expected	Percent	Confidence Limits	
Curve	Probability	Chance		0.05	0.95
STAGE, FT NAVD88		Exceedance	STAGE, FT NAVD88		
----- ----- -----					
9.82	9.94	0.2	10.28	9.47	
9.58	9.67	0.5	10.00	9.26	
9.38	9.45	1.0	9.77	9.08	
9.16	9.21	2.0	9.52	8.88	
8.59	8.61	9.0	8.86	8.37	
8.25	8.26	18.0	8.48	8.06	
7.98	7.99	28.0	8.19	7.80	
7.62	7.62	45.0	7.80	7.44	
5.65	5.58	99.0	5.95	5.26	
----- ----- -----					

<< Systematic Statistics >>  
Final Report with Dates

STAGE, FT NAVD88		Number of Events	
----- -----			
Mean	7.52	Historic Events	0
Standard Dev	0.80	High Outliers	0
Station Skew	0.89	Low Outliers	0
Regional Skew	---	Zero Events	0
Weighted Skew	---	Missing Events	0
Adopted Skew	0.00	Systematic Events	57
----- -----			

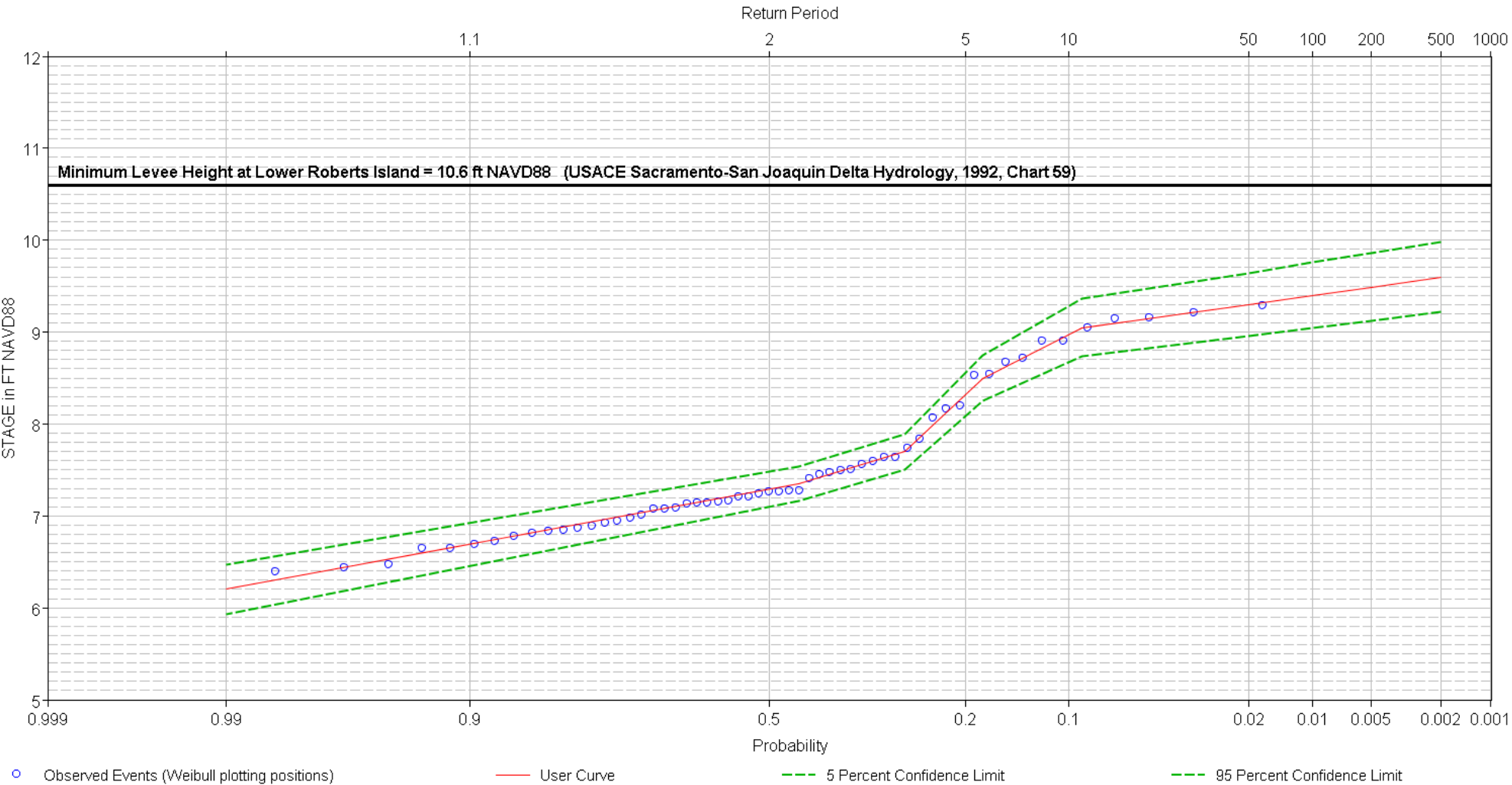
<< User-Defined Graphical Frequency Curve >>  
Final Report with Dates

Computed		Expected	Percent	Confidence Limits	
Curve	Probability	Chance		0.05	0.95
STAGE, FT NAVD88		Exceedance	STAGE, FT NAVD88		



-----			-----		-----	
	9.60	---		0.2		9.98 9.22
	9.49	---		0.5		9.86 9.12
	9.40	---		1.0		9.76 9.04
	9.30	---		2.0		9.64 8.96
	9.05	---		9.0		9.36 8.74
	8.50	---		18.0		8.75 8.25
	7.70	---		28.0		7.89 7.51
	7.35	---		45.0		7.54 7.16
	6.20	---		99.0		6.47 5.93
-----			-----		-----	

General Frequency Graphical Plot for Burns Cutoff Stage Frequency Analysis



**Appendix C**

**Assessment District Boundary Diagram**





**Legend**

-  Proposed Assessment District Boundary
-  Proposed Assessment Parcels

Proposed Boundaries of the  
RECLAMATION DISTRICT 1608  
MAINTENANCE AND CAPITAL SERVICES  
ASSESSMENT DISTRICT

COUNTY OF SAN JOAQUIN  
STATE OF CALIFORNIA

FILED IN THE OFFICE OF THE SECRETARY OF  
RECLAMATION DISTRICT 1608 THIS \_\_\_\_ DAY OF  
\_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
SECRETARY OF THE  
RECLAMATION DISTRICT 1608

I HEREBY CERTIFY THAT THE WITHIN MAP SHOWING  
PROPOSED BOUNDARIES OF THE MAINTENANCE AND  
CAPITAL SERVICES ASSESSMENT OF THE COUNTY OF  
SAN JOAQUIN, STATE OF CALIFORNIA, WAS APPROVED  
BY THE BOARD OF TRUSTEES OF THE RECLAMATION  
DISTRICT 1608 AT A REGULAR MEETING THEREOF, HELD  
ON \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, BY ITS RESOLUTION  
NO. \_\_\_\_\_

\_\_\_\_\_  
SECRETARY OF THE  
RECLAMATION DISTRICT 1608

FILED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, AT THE  
HOUR OF \_\_\_\_\_ O'CLOCK \_\_\_\_ M. IN BOOK \_\_\_\_\_ OF  
MAPS OF ASSESSMENT AND COMMUNITY FACILITIES  
DISTRICTS AT PAGE \_\_\_\_\_, IN THE OFFICE OF THE  
COUNTY RECORDER IN THE COUNTY OF SAN JOAQUIN,  
STATE OF CALIFORNIA

\_\_\_\_\_  
COUNTY RECORDER OF  
SAN JOAQUIN COUNTY

**LWA**

LARSEN WURZEL  
& Associates, Inc.



**Appendix D**  
**San Joaquin County Use Codes**

<b>County Use Code</b>	<b>County Description</b>	<b>Land Use Category / Sub- Category</b>
001	Vacant Residential Lot – Development with Utilities	Open Space - Developed
002	Vacant Lot with PROB. W/C Precludes Building A RE	Open Space
003	Vacant Lot – Totally Unusable (incurable)	Open Space
004	Vacant Residential Lot with miscellaneous Residential IMPRS (garage)	Open Space - Developed
005	Vacant Residential Subdivision Site	Open Space
006	Vacant Residential Lot- Undeveloped	Open Space
007	Potential Residential Subdivision	Open Space
010	Single-Family Dwelling (SFD)	Single-Family Residential
011	Condominium Unit	Multi-Family Residential
012	Planned Unit Residential Development (PURD)	Multi-Family Residential
013	Single-Family Residence with Secondary Residential Square Footage	Single-Family Residential
014	SFD with Secondary Use (i.e., barber shop)	Single-Family Residential
015	Zero Lot Line Residential	Single-Family Residential
016	Residential Lot with Mobile Home	Mobile Home
017	Single-Family with Common Wall (duet, halfplex, etc.)	Single-Family Residential
020	Vacant Lot (zoned for two units)	Open Space
021	One Duplex – One Building	Single-Family Residential
022	Two SFDs On Single Parcel	Single-Family Residential
030	Vacant Lot Zoned for 3 or 4 Units	Open Space
031	Single Triplex – (3 units, 1 structure)	Multi-Family Residential
032	Three Units - 2 or More Structures	Multi-Family Residential
034	Single Fourplex	Multi-Family Residential
035	Four Units, 2 or More Structures	Multi-Family Residential
040	Vacant Lots Zoned for Apartments	Open Space
041	5-10 Residential Units – Single Building	Multi-Family Residential
042	5-10 Residential Units – 2 or more Buildings	Multi-Family Residential

043	11-20 Residential Units – One Structure	Multi-Family Residential
044	11-20 Residential Units – 2 or more Buildings	Multi-Family Residential
045	21-40 Units	Multi-Family Residential
046	41-100 Units	Multi-Family Residential
047	Over 100 Units	Multi-Family Residential
048	High-Rise Apartments	Multi-Family Residential
050	Rural Residential – Vacant Homesite	Agricultural
051	Rural Residence – 1 Residence	Rural Residential
052	Rural Residential – 2 or more residences	Rural Residential
053	Rural Residential – Vacant – Development with	Open Space - Developed
054	Rural Residences. - with Miscellaneous Residences. IMPS; Only	Open Space
055	Labor Camp	Rural Residential
056	Rural Residential with Mobil Home	Mobile Home
059	Residential Care Home (6 units or less)	Multi-Family Residential
060	Motels Less Than 50 Units	Commercial
061	Motels Over 50 Units	Commercial
062	Motels less than 50 units with some kitchens	Commercial
063	Motels over 50 Units with some Kitchens	Commercial
064	Motels Less Than 50 Units with Shops	Commercial
065	Motels Over 50 Units with Shops	Commercial
068	Resort Motels – Cabins, Etc.	Commercial
070	Hotel without Restaurant	Commercial
071	Hotel with Restaurant	Commercial
078	Rooming House – Convent – Rectory, Etc.	Commercial
080	Common Areas – No Structures	Open Space - Developed
081	Common Areas – with Structures	Open Space - Developed
082	Common Areas – Roads and Streets	Open Space - Developed
090	Mobile Home Park	Mobile Home
091	Overnight Type Trailer Park	Open Space
092	Mobile Home Park with Overnight Facilities	Mobile Home

093	Resort Type Trailer Park	Mobile Home
094	Mobile Home Condominium Lot	Mobile Home
095	Mobile Home Appurtenances	Mobile Home
096	Mobile Home	Mobile Home
100	Vacant Commercial Land – Undeveloped	Open Space
101	Vacant Commercial Land with Utilities	Open Space - Developed
102	Vacant Commercial Land with Miscellaneous IMPS	Open Space - Developed
107	Potential Commercial Subdivision	Open Space
110	Single-Story	Commercial
111	Multiple-Story Stories	Commercial
112	Multiple Stores in one Building	Commercial
113	Store with Residential Unit or Units	Commercial
114	Store Condo	Commercial
120	1 store and 1 office	Commercial
121	Multiple Combination of Offices, Shops	Commercial
130	1-Story Department Store	Commercial
131	2-Story Department Store	Commercial
140	Grocery Store	Commercial
141	Supermarkets	Commercial
142	Convenience Store	Commercial
143	Convenience Store with Gas Sales	Commercial
144	Fruit Stand	Commercial
150	Regional Shopping Center	Commercial
151	Community Shopping Center	Commercial
152	Neighborhood Shopping Center	Commercial
153	Individual Parcel Within Regional Shopping	Commercial
154	Individual Parcel Within Community Center	Commercial
155	Individual Parcel within neighborhood Shopping	Commercial
156	Shopping Center Common Area	Open Space - Developed
170	1-Story Office Building	Commercial
171	2-Story Office Building	Commercial
172	3 or More Story Office Building	Commercial
173	Office Building with Residential Unit or Units	Commercial
180	Assisted Living Residence	Multi-Family Residential
181	Congregate Seniors Housing	Multi-Family Residential



182	Continuing Care Retirement Community	Multi-Family Residential
183	Skilled Nursing Facility	Multi-Family Residential
184	Specialty Home (Developmentally Disable)	Multi-Family Residential
190	Medical Offices	Commercial
191	Dental Offices	Commercial
192	Medical Dental Complex	Commercial
193	Veterinary Hospitals	Commercial
194	One-Story Office Condo	Commercial
195	Two-Story Office Condo	Commercial
196	Medical Office Condo	Commercial
197	Dental Office Condo	Commercial
200	Commercial Common Area – Non Shopping C	Open Space - Developed
201	Miscellaneous Multiple Uses – None Fully Dominant	Commercial
202	Commercial Use	Commercial
203	Animal Training Facility	Commercial
204	Day Care Center	Commercial
210	Restaurants	Commercial
211	Fast Food Restaurants	Commercial
212	Food Preparation – Take Out Only	Commercial
213	Cocktail Lounge – Bars	Commercial
214	Restaurant with Residential Unit or Units	Commercial
230	Walk-In Theaters	Commercial
231	Multiple Screen Theaters	Commercial
240	Banks	Commercial
250	Full Service Stations	Commercial
251	Self Service. Station (has no facilities)	Commercial
252	Service Station with Car Wash	Commercial
253	Truck Terminals	Commercial
254	Bulk Plants	Commercial
255	Self Service Station with Mini Mart	Commercial
256	Convenience Store (mini-mart) with gas station	Commercial
260	Auto Sales with Service Center	Commercial
261	Auto Sales without Service Center	Commercial
262	Used Car Lot	Commercial
263	Other Sales Centers (Trailers, mobile home	Commercial

270	Farm or CONTS. Machine Sales and Service	Commercial
271	Farm or CONTS. Machine Sales Only	Commercial
272	Farm or CONST. Machine Sales Only	Commercial
280	Auto and Truck Repairs and Accessories	Commercial
281	Specialty Shops (Tires, Brakes, Etc.)	Commercial
282	Car Wash	Commercial
283	Self Service Car Wash	Commercial
284	Laundry	Commercial
285	Auto Body Shop	Commercial
290	Retail Nursery	Commercial
291	Commercial/Wholesale Nursery	Commercial
296		Commercial
300	Vacant Industrial Land Undeveloped	Open Space
301	Vacant Industrial Land – Developed With	Open Space - Developed
302	Vacant Industrial Land with Miscellaneous IMPS	Open Space - Developed
307	Potential Industrial Subdivision	Open Space
310	Light Manufacturing and Light Industrial	Industrial
311	Light Industrial and Warehousing	Industrial
312	Light Industrial Warehouse Multiple Tenants	Industrial
313	Industrial Condo	Industrial
314	Shop-Work Area with Small Office	Commercial
320	Warehousing – Active	Industrial
321	Warehousing – Inactive	Industrial
323	Warehousing – Yard	Industrial
324	Mini Storage Warehousing	Industrial
330	Lumber Mills	Industrial
331	Retail Lumber Yards	Industrial
332	Specialty Lumber Products (Mouldings, SA	Industrial
340	Packing Plants	Industrial
341	Cold Storage or Refrigerated Warehouse	Industrial
350	Fruit and Vegetable	Industrial
351	Meat Products	Industrial
352	Large Winery	Industrial

353	Small/Boutique Winery	Commercial
355	Other Food Processing	Industrial
360	Feed and Grain Mills	Industrial
361	Retail Feed and Grain Sales	Industrial
362	Stockyards	Industrial
363	AG Chemical Sales and/or Application	Industrial
370	Heavy Industry	Industrial
371	Shipyard	Industrial
380	Mineral Processing	Industrial
381	Sand and Gravel – Shale	Industrial
390	Industrial Common Area	Industrial
391	Miscellaneous Industrial Multiple Uses – None Full	Industrial
392	Industrial Use (doesn't reasonably fit any	Industrial
393	Airport (private	Commercial
400	Irrigated Orchard	Agricultural
401	Irrigated Orchard with Residence	Agricultural
410		Agricultural
411		Agricultural
420	Irrigated Vineyard	Agricultural
421	Irrigated Vineyard with Residence	Agricultural
450	Irrigated Row Crops	Agricultural
451	Irrigated Row Crops with Residence	Agricultural
460	Irrigated Pasture	Agricultural
461	Irrigated Pasture with Residence	Agricultural
462	Horse Ranch	Agricultural
463	Horse Ranch with Residence	Agricultural
470	Dairy	Agricultural
471	Dairy with Residence	Agricultural
480	Poultry Ranch	Agricultural
481	Poultry Ranch with Residence	Agricultural
490	Feed Lots	Agricultural
500	Dry Farm	Agricultural
501	Dry Farm with Residence	Agricultural
510	Dry Graze	Agricultural

511	Dry Graze with Residence	Agricultural
520	Non-Irrigated Vineyards	Agricultural
521	Non-Irrigated Vineyards with Residence	Agricultural
530	Specialty Farms	Agricultural
540		Agricultural
550	Tree Farm	Agricultural
551	Tree Farm (with or without residence)	Agricultural
570		Agricultural
590	Waste Lands	Open Space
591	Berms	Open Space
610	Swim Centers	Commercial
611	Recreational Centers	Commercial
612	Marina or Yachting Club	Commercial
613	Racquetball Club	Commercial
614	Tennis Club	Commercial
615	Private Campground or Resort	Commercial
620	Privately Owned Dance Halls	Commercial
630	Bowling Alleys	Commercial
631	Arcades and Amusement Centers	Commercial
632	Skating Rink	Commercial
640	Clubs, Lodge Halls	Commercial
650	Privately Owned Auditoriums and Stadiums	Commercial
660	18-Hole Public Golf Course	Open Space
661	9-Hole Public Golf Course	Open Space
662	Country Club	Open Space
664	Driving Range	Open Space
670	Privately Owned Race Tracks	Commercial
680	Non-Profit Organizations Camps (Boy Scouts, Etc.)	Commercial
690	Privately Owned Parks	Open Space
710	Church, Synagogue or Temple	Commercial
711	Other Church Property	Commercial
720	Private School	School
721	Parochial School	School
722	Special School	School
730	Private Colleges	School
740	Full Service Hospital	Commercial
742	Clinic	Commercial
760	Orphanages	Commercial

770	Cemeteries (non-profit)	Open Space
771	Mortuaries and Funeral Homes	Commercial
772	Cemetery Taxable (profit)	Open Space
810	SBE valued	Open Space - Developed
811	Utility Water Company	Open Space
812	Mutual Water Company	Open Space
813	Cable TV	Open Space
814	Radio and TV Broadcast Site	Open Space
815	Pipeline Right-Of-Way	Open Space
816		Open Space
850	Right-Of-Way	Open Space
851	Private Road	Open Space - Developed
860	Well Site	Open Space
861	Tank Site	Open Space
862	Springs and Other Water Sources	Open Space
870	Rivers and Lakes	Open Space
890	Parking Lots – Fee	Open Space - Developed
891	Parking Lots – No Fee	Open Space - Developed
892	Parking Garages	Commercial
900	Vacant Federal Lands	Open Space
901	Federal Buildings	Commercial
902	Military Installation	Commercial
903	Miscellaneous Federal Property	Commercial
910	Vacant State Lands	Open Space
911	State Buildings	Commercial
912	State Shops & Yards	Commercial
913	State Parks and Other Recreational Facilities	Open Space - Developed
914	State Schools, Colleges	School
916	Miscellaneous State Property	Commercial
920	Vacant County Land	Open Space
921	County Buildings	Commercial
923	County Parks and Other Recreational Facilities	Open Space
924	County Hospitals	Commercial
925	Miscellaneous County Property	Commercial
930	Vacant City Lands	Open Space
931	City Buildings	Commercial
932	City Shops and Yard	Commercial
933	City Parks and Other Recreational Facilities	Open Space
934	Municipal Utility Prop. (reservoirs, sewer pipeline)	Open Space - Developed
935	Parking Lots – Garages	Open Space - Developed

936	Municipal Airports	Commercial
937	Miscellaneous City Property	Commercial
940	School District Properties	Commercial
941	Fire Districts	Commercial
942	Flood Control District Property	Open Space
943	Water District Property	Open Space
944	Miscellaneous District property	Open Space
950	Public Owned Land – Non- Taxable	Open Space
951	Public Owned Land – Taxable [Section 11]	Open Space

**Appendix E**  
**List of Parcels &**  
**FY 2025/26 Assessment Roll**

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
097-110-140-000	202.28	097-570-210-000	53.14	097-610-050-000	18.84	097-620-310-000	17.06
097-560-010-000	51.66	097-570-220-000	73.90	097-610-060-000	18.84	097-620-320-000	17.06
097-560-020-000	74.68	097-570-230-000	89.36	097-610-070-000	17.06	097-620-330-000	23.16
097-560-030-000	91.64	097-570-240-000	66.40	097-610-080-000	17.06	097-620-340-000	23.16
097-560-040-000	91.64	097-580-010-000	67.32	097-610-090-000	17.06	097-620-350-000	20.20
097-560-050-000	74.84	097-580-020-000	63.28	097-610-100-000	17.06	097-620-360-000	17.06
097-560-060-000	75.16	097-580-030-000	67.36	097-610-110-000	17.06	097-620-370-000	23.16
097-560-070-000	97.54	097-580-040-000	95.06	097-610-120-000	17.06	097-620-380-000	23.16
097-560-080-000	97.38	097-580-050-000	67.46	097-610-130-000	17.06	097-620-390-000	17.06
097-560-090-000	97.76	097-580-060-000	63.34	097-610-140-000	23.16	097-620-400-000	17.06
097-560-100-000	103.86	097-580-070-000	99.70	097-610-150-000	17.06	097-620-410-000	17.06
097-560-110-000	103.86	097-580-080-000	82.42	097-610-160-000	17.06	097-620-420-000	17.06
097-560-120-000	103.84	097-580-090-000	75.60	097-610-170-000	23.16	097-620-430-000	20.20
097-560-130-000	88.38	097-580-100-000	79.92	097-610-180-000	17.06	097-620-440-000	17.06
097-560-140-000	108.12	097-580-110-000	73.74	097-610-190-000	17.06	097-620-450-000	17.06
097-560-150-000	103.86	097-580-120-000	125.28	097-610-200-000	23.16	097-620-460-000	17.06
097-560-160-000	103.86	097-580-130-000	125.34	097-610-210-000	23.16	097-620-470-000	17.06
097-560-170-000	101.66	097-580-140-000	98.72	097-610-220-000	17.06	097-620-480-000	17.06
097-560-180-000	119.14	097-580-150-000	82.66	097-610-230-000	17.06	097-620-490-000	23.16
097-560-190-000	115.52	097-580-160-000	95.04	097-610-240-000	23.16	097-620-500-000	23.16
097-560-200-000	115.54	097-580-170-000	67.24	097-610-250-000	23.16	097-620-510-000	27.42
097-560-210-000	101.62	097-580-180-000	67.40	097-610-260-000	20.20	097-620-520-000	27.42
097-560-220-000	122.84	097-580-190-000	77.50	097-610-270-000	17.06	097-620-530-000	17.06
097-560-230-000	122.86	097-580-200-000	78.32	097-610-280-000	17.06	097-620-540-000	17.06
097-560-240-000	127.88	097-580-210-000	529.02	097-610-290-000	17.06	097-630-010-000	27.48
097-560-250-000	9.04	097-580-220-000	77.88	097-610-300-000	17.06	097-630-020-000	27.48
097-560-260-000	31.38	097-580-230-000	77.82	097-610-310-000	17.06	097-630-030-000	27.48
097-560-270-000	44.40	097-580-240-000	78.14	097-610-320-000	17.06	097-630-040-000	27.48
097-560-280-000	51.56	097-580-250-000	77.56	097-610-330-000	23.16	097-630-050-000	2.00
097-560-290-000	75.00	097-580-260-000	91.80	097-610-340-000	23.16	097-630-060-000	27.48
097-560-300-000	67.58	097-580-270-000	89.34	097-610-350-000	17.06	097-630-070-000	27.48
097-560-310-000	89.38	097-580-280-000	84.52	097-610-360-000	17.06	097-630-080-000	27.48
097-560-320-000	70.24	097-580-290-000	91.52	097-610-370-000	23.16	097-630-090-000	27.48
097-560-330-000	55.10	097-580-300-000	91.54	097-610-380-000	23.16	097-630-100-000	2.00
097-560-340-000	86.44	097-580-310-000	92.28	097-610-390-000	17.06	097-630-110-000	32.54
097-560-350-000	63.18	097-580-320-000	91.52	097-610-400-000	17.06	097-630-120-000	32.54
097-560-360-000	84.64	097-580-330-000	84.56	097-610-410-000	17.06	097-630-130-000	32.54
097-560-370-000	120.68	097-580-340-000	105.82	097-610-420-000	20.20	097-630-140-000	32.54
097-560-380-000	111.72	097-590-010-000	1010.14	097-610-430-000	17.06	097-630-150-000	2.00
097-560-390-000	99.14	097-590-020-000	76.56	097-610-440-000	17.06	097-630-160-000	32.54
097-560-400-000	89.42	097-590-030-000	76.64	097-610-450-000	17.06	097-630-170-000	32.54
097-560-410-000	82.98	097-590-040-000	76.88	097-610-460-000	17.06	097-630-180-000	32.54
097-560-420-000	64.92	097-590-050-000	90.48	097-610-470-000	17.06	097-630-190-000	32.54
097-560-430-000	85.74	097-590-060-000	93.00	097-610-480-000	17.06	097-630-200-000	2.00
097-560-440-000	89.28	097-590-070-000	105.88	097-610-490-000	23.16	097-630-210-000	32.54
097-560-450-000	67.80	097-590-080-000	100.12	097-610-500-000	27.42	097-630-220-000	32.54
097-560-460-000	78.78	097-590-090-000	91.56	097-610-510-000	23.16	097-630-230-000	32.54
097-560-470-000	78.98	097-590-100-000	107.66	097-610-520-000	23.14	097-630-240-000	32.52
097-560-480-000	67.12	097-590-110-000	98.84	097-610-530-000	17.06	097-630-250-000	2.00
097-560-490-000	74.58	097-590-120-000	108.26	097-610-540-000	17.06	097-630-260-000	32.52
097-560-500-000	62.96	097-590-130-000	99.02	097-610-550-000	3.64	097-630-270-000	32.52
097-560-510-000	100.02	097-590-140-000	105.88	097-620-010-000	17.06	097-630-280-000	32.52
097-560-520-000	94.60	097-590-150-000	105.86	097-620-020-000	13.88	097-630-290-000	32.52
097-560-530-000	91.90	097-590-160-000	105.70	097-620-030-000	18.84	097-630-300-000	2.00
097-560-540-000	73.66	097-590-170-000	95.06	097-620-040-000	18.84	097-630-310-000	2.00
097-560-550-000	90.54	097-590-180-000	107.10	097-620-050-000	18.86	097-630-320-000	42.98
097-560-560-000	66.86	097-590-190-000	104.80	097-620-060-000	23.16	097-640-010-000	32.54
097-560-570-000	73.90	097-590-200-000	122.76	097-620-070-000	13.88	097-640-020-000	32.54
097-560-580-000	74.92	097-590-210-000	107.12	097-620-080-000	13.88	097-640-030-000	32.54
097-560-590-000	90.72	097-590-220-000	89.30	097-620-090-000	17.06	097-640-040-000	32.54
097-560-600-000	67.16	097-590-230-000	105.76	097-620-100-000	17.06	097-640-050-000	2.00
097-570-010-000	68.50	097-590-240-000	105.72	097-620-110-000	17.06	097-640-060-000	32.54
097-570-020-000	75.74	097-590-250-000	78.24	097-620-120-000	17.06	097-640-070-000	32.54
097-570-030-000	66.44	097-590-260-000	84.06	097-620-130-000	17.06	097-640-080-000	32.54
097-570-040-000	77.12	097-590-270-000	75.14	097-620-140-000	23.16	097-640-090-000	32.54
097-570-050-000	75.04	097-590-280-000	62.24	097-620-150-000	17.06	097-640-100-000	2.00
097-570-060-000	66.32	097-590-290-000	89.58	097-620-160-000	17.06	097-640-110-000	32.54
097-570-070-000	73.88	097-590-300-000	95.10	097-620-170-000	23.16	097-640-120-000	32.54
097-570-080-000	66.44	097-590-310-000	95.26	097-620-180-000	17.06	097-640-130-000	32.54
097-570-090-000	95.38	097-590-320-000	89.18	097-620-190-000	17.06	097-640-140-000	32.54
097-570-100-000	66.30	097-590-330-000	76.34	097-620-200-000	23.16	097-640-150-000	2.00
097-570-110-000	69.84	097-590-340-000	79.78	097-620-210-000	23.16	097-640-160-000	32.54
097-570-120-000	110.20	097-590-350-000	133.66	097-620-220-000	17.06	097-640-170-000	32.54
097-570-130-000	105.84	097-600-010-000	1594.98	097-620-230-000	17.06	097-640-180-000	32.54
097-570-140-000	105.58	097-600-020-000	588.78	097-620-240-000	23.16	097-640-190-000	32.52
097-570-150-000	74.00	097-600-030-000	200.32	097-620-250-000	23.16	097-640-200-000	2.00
097-570-160-000	108.96	097-600-040-000	88.90	097-620-260-000	17.06	097-640-210-000	32.54
097-570-170-000	76.06	097-610-010-000	13.88	097-620-270-000	17.06	097-640-220-000	32.54
097-570-180-000	93.94	097-610-020-000	13.88	097-620-280-000	17.06	097-640-230-000	32.54
097-570-190-000	89.68	097-610-030-000	23.16	097-620-290-000	17.06	097-640-240-000	32.54
097-570-200-000	62.32	097-610-040-000	23.16	097-620-300-000	17.06	097-640-250-000	2.00



# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
097-640-260-000	32.54	098-020-010-000	128.46	098-030-130-000	108.94	098-060-060-000	127.00
097-640-270-000	32.54	098-020-020-000	113.98	098-030-140-000	147.38	098-060-070-000	111.46
097-640-280-000	32.54	098-020-030-000	112.80	098-030-150-000	114.10	098-060-080-000	105.42
097-640-290-000	32.54	098-020-040-000	110.38	098-030-160-000	108.50	098-060-090-000	100.22
097-640-300-000	2.00	098-020-050-000	101.16	098-030-170-000	108.86	098-060-100-000	132.24
097-640-310-000	32.54	098-020-060-000	182.94	098-030-180-000	136.82	098-060-110-000	103.84
097-640-320-000	32.54	098-020-070-000	124.80	098-030-190-000	113.96	098-060-120-000	154.42
097-640-330-000	32.54	098-020-080-000	187.48	098-030-200-000	98.32	098-060-130-000	168.20
097-640-340-000	32.54	098-020-090-000	107.14	098-030-210-000	96.14	098-060-140-000	121.00
097-640-350-000	2.00	098-020-100-000	155.24	098-030-220-000	117.82	098-060-150-000	126.12
097-640-360-000	2.00	098-020-110-000	107.86	098-030-230-000	100.74	098-060-160-000	101.58
097-650-010-000	32.54	098-020-120-000	135.58	098-030-240-000	83.32	098-060-170-000	99.06
097-650-020-000	32.54	098-020-130-000	126.60	098-030-250-000	92.66	098-060-180-000	106.20
097-650-030-000	32.54	098-020-140-000	110.24	098-030-260-000	123.66	098-060-190-000	130.82
097-650-040-000	32.54	098-020-150-000	140.58	098-030-270-000	101.30	098-060-200-000	103.86
097-650-050-000	2.00	098-020-160-000	135.10	098-030-280-000	141.62	098-060-210-000	148.62
097-650-060-000	32.54	098-020-170-000	137.14	098-030-290-000	133.60	098-060-220-000	100.12
097-650-070-000	32.52	098-020-180-000	121.58	098-030-300-000	113.24	098-060-230-000	153.28
097-650-080-000	32.54	098-020-190-000	153.56	098-030-310-000	116.62	098-060-240-000	108.96
097-650-090-000	32.54	098-020-200-000	136.46	098-030-320-000	172.32	098-060-250-000	132.78
097-650-100-000	2.00	098-020-210-000	134.00	098-030-330-000	126.20	098-060-260-000	150.18
097-650-110-000	32.54	098-020-220-000	135.98	098-040-010-000	93.66	098-060-270-000	123.32
097-650-120-000	32.54	098-020-230-000	157.82	098-040-020-000	127.48	098-060-280-000	144.54
097-650-130-000	32.54	098-020-240-000	139.82	098-040-030-000	84.10	098-060-290-000	94.32
097-650-140-000	32.54	098-020-250-000	123.40	098-040-040-000	90.94	098-060-300-000	119.44
097-650-150-000	2.00	098-020-260-000	92.40	098-040-050-000	90.56	098-060-310-000	138.32
097-650-160-000	32.54	098-020-270-000	118.74	098-040-060-000	88.44	098-060-320-000	107.22
097-650-170-000	32.54	098-020-280-000	132.02	098-040-070-000	143.76	098-060-330-000	120.14
097-650-180-000	32.54	098-020-290-000	129.06	098-040-080-000	100.98	098-060-340-000	102.72
097-650-190-000	32.54	098-020-300-000	142.24	098-040-090-000	74.98	098-060-350-000	108.82
097-650-200-000	2.00	098-020-310-000	115.26	098-040-100-000	144.88	098-060-360-000	119.44
097-650-210-000	37.00	098-020-320-000	123.82	098-040-110-000	106.40	098-060-370-000	111.16
097-650-220-000	37.00	098-020-330-000	126.82	098-040-120-000	99.98	098-060-380-000	118.00
097-650-230-000	37.00	098-020-340-000	102.98	098-050-010-000	128.92	098-060-390-000	107.06
097-650-240-000	37.00	098-020-350-000	120.02	098-050-020-000	96.20	098-060-400-000	154.82
097-650-250-000	2.00	098-020-360-000	155.72	098-050-030-000	152.30	098-060-410-000	99.90
097-650-260-000	37.00	098-020-370-000	124.62	098-050-040-000	146.60	098-060-420-000	94.92
097-650-270-000	32.54	098-020-380-000	114.50	098-050-050-000	138.40	098-060-430-000	130.28
097-650-280-000	37.00	098-020-390-000	94.06	098-050-060-000	108.14	098-060-440-000	108.16
097-650-290-000	37.00	098-020-400-000	97.08	098-050-070-000	138.06	098-060-450-000	94.38
097-650-300-000	2.00	098-020-410-000	134.14	098-050-080-000	103.78	098-060-460-000	115.76
097-650-310-000	32.54	098-020-420-000	101.28	098-050-090-000	140.10	098-060-470-000	101.56
097-650-320-000	32.54	098-020-430-000	126.74	098-050-100-000	99.76	098-060-480-000	142.56
097-650-330-000	32.54	098-020-440-000	110.94	098-050-110-000	135.18	098-060-490-000	169.34
097-650-340-000	32.54	098-020-450-000	136.32	098-050-120-000	94.98	098-060-500-000	153.32
097-650-350-000	2.00	098-020-460-000	127.36	098-050-130-000	100.60	098-060-510-000	158.60
097-650-360-000	32.52	098-020-470-000	160.74	098-050-140-000	92.06	098-060-520-000	130.38
097-650-370-000	32.54	098-020-480-000	195.44	098-050-150-000	150.24	098-060-530-000	130.66
097-650-380-000	32.54	098-020-490-000	126.90	098-050-160-000	171.24	098-060-540-000	132.32
097-650-390-000	32.54	098-020-500-000	130.84	098-050-170-000	140.70	098-060-550-000	2.00
097-650-400-000	2.00	098-020-510-000	135.58	098-050-180-000	142.74	098-070-060-000	5262.42
097-650-410-000	32.54	098-020-520-000	129.62	098-050-190-000	121.96	098-090-010-000	112.26
097-650-420-000	32.54	098-020-530-000	195.80	098-050-200-000	120.70	098-090-020-000	142.26
097-650-430-000	32.54	098-020-540-000	122.88	098-050-210-000	96.38	098-090-030-000	127.64
097-650-440-000	32.54	098-020-550-000	170.26	098-050-220-000	124.54	098-090-040-000	99.90
097-650-450-000	2.00	098-020-560-000	185.70	098-050-230-000	100.40	098-090-050-000	133.60
097-650-460-000	2.00	098-020-570-000	116.18	098-050-240-000	138.84	098-090-060-000	93.20
097-650-470-000	2.00	098-020-580-000	163.94	098-050-250-000	164.56	098-090-070-000	121.98
097-650-480-000	2.00	098-020-590-000	135.50	098-050-260-000	144.86	098-090-080-000	99.88
097-660-010-000	37.00	098-020-600-000	111.44	098-050-270-000	111.72	098-090-090-000	93.14
097-660-020-000	32.54	098-020-610-000	125.78	098-050-280-000	99.68	098-090-100-000	99.88
097-660-030-000	37.00	098-020-620-000	191.20	098-050-290-000	114.52	098-090-110-000	113.42
097-660-040-000	32.52	098-020-630-000	203.72	098-050-300-000	134.68	098-090-120-000	95.08
097-660-050-000	2.00	098-020-640-000	157.34	098-050-310-000	135.28	098-090-130-000	118.92
097-660-060-000	37.00	098-020-650-000	137.34	098-050-320-000	124.76	098-090-140-000	101.30
097-660-070-000	37.00	098-020-660-000	117.36	098-050-330-000	130.72	098-090-150-000	93.10
097-660-080-000	37.00	098-020-670-000	126.26	098-050-340-000	159.76	098-090-160-000	79.26
097-660-090-000	32.54	098-020-680-000	116.14	098-050-350-000	127.12	098-090-170-000	85.76
097-660-100-000	2.00	098-020-690-000	109.86	098-050-360-000	103.88	098-090-180-000	120.26
097-660-110-000	37.00	098-030-010-000	113.12	098-050-370-000	130.04	098-090-190-000	99.96
097-660-120-000	37.00	098-030-020-000	82.48	098-050-380-000	98.02	098-090-200-000	91.84
097-660-130-000	37.00	098-030-030-000	118.40	098-050-390-000	137.08	098-090-210-000	92.68
097-660-140-000	32.54	098-030-040-000	133.12	098-050-400-000	165.84	098-090-220-000	92.70
097-660-150-000	2.00	098-030-050-000	175.08	098-050-410-000	116.38	098-090-230-000	120.32
097-660-160-000	37.00	098-030-060-000	99.04	098-050-420-000	124.62	098-090-240-000	87.46
097-660-170-000	37.00	098-030-070-000	115.28	098-050-430-000	145.84	098-090-250-000	103.24
097-660-180-000	32.54	098-030-080-000	108.26	098-060-010-000	169.28	098-090-260-000	120.42
097-660-190-000	37.00	098-030-090-000	102.92	098-060-020-000	127.86	098-090-270-000	107.46
097-660-200-000	2.00	098-030-100-000	92.68	098-060-030-000	151.86	098-090-280-000	90.40
097-660-210-000	2.00	098-030-110-000	115.02	098-060-040-000	164.38	098-090-290-000	89.98
097-670-010-000	748.24	098-030-120-000	100.44	098-060-050-000	135.92	098-110-010-000	3503.34

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
098-110-030-000	2.00	098-160-400-000	50.60	098-190-180-000	32.26	098-230-050-000	32.26
098-110-040-000	102.00	098-160-410-000	50.60	098-190-190-000	32.26	098-230-060-000	29.82
098-110-050-000	3500.98	098-160-420-000	50.60	098-190-200-000	32.26	098-230-070-000	32.24
098-130-010-000	67.72	098-160-430-000	29.82	098-190-210-000	32.26	098-230-080-000	32.26
098-130-020-000	61.18	098-160-440-000	29.82	098-190-220-000	32.24	098-230-090-000	32.26
098-130-030-000	61.26	098-160-450-000	70.10	098-190-230-000	32.26	098-230-100-000	32.24
098-130-040-000	61.26	098-160-460-000	70.10	098-190-240-000	32.26	098-230-110-000	32.26
098-130-050-000	61.18	098-160-470-000	32.26	098-190-250-000	29.82	098-230-120-000	29.82
098-130-060-000	61.26	098-160-480-000	32.26	098-190-260-000	29.82	098-230-130-000	32.26
098-130-070-000	55.74	098-160-490-000	34.36	098-190-270-000	32.24	098-230-140-000	32.26
098-130-080-000	64.82	098-160-500-000	32.24	098-190-280-000	29.82	098-230-150-000	32.26
098-130-090-000	59.06	098-160-510-000	32.24	098-190-290-000	32.26	098-230-160-000	32.24
098-130-100-000	59.08	098-160-520-000	29.82	098-190-300-000	29.82	098-230-170-000	32.26
098-130-110-000	59.06	098-160-530-000	32.24	098-200-010-000	50.60	098-230-180-000	32.26
098-130-120-000	59.08	098-160-540-000	29.82	098-200-020-000	46.80	098-230-190-000	32.24
098-130-130-000	59.08	098-170-010-000	61.40	098-200-030-000	46.80	098-230-200-000	32.24
098-130-140-000	53.54	098-170-020-000	61.40	098-200-040-000	46.78	098-230-210-000	29.82
098-130-150-000	81.94	098-170-030-000	69.90	098-200-050-000	42.38	098-230-220-000	32.26
098-130-160-000	78.70	098-170-040-000	69.90	098-200-060-000	42.38	098-230-230-000	32.26
098-130-170-000	78.82	098-170-050-000	79.92	098-200-070-000	50.60	098-230-240-000	29.82
098-130-180-000	78.82	098-170-060-000	32.24	098-200-080-000	50.60	098-230-250-000	32.24
098-130-190-000	78.70	098-170-070-000	32.24	098-200-090-000	50.60	098-230-260-000	29.82
098-130-200-000	79.82	098-170-080-000	32.24	098-200-100-000	46.78	098-250-010-000	55.04
098-130-210-000	83.10	098-170-090-000	32.24	098-200-110-000	42.36	098-250-020-000	54.86
098-130-220-000	2.00	098-170-100-000	47.94	098-200-120-000	37.24	098-250-030-000	54.82
098-140-040-000	250.86	098-170-110-000	47.94	098-200-130-000	25.60	098-250-040-000	2.00
098-140-070-000	412.26	098-170-120-000	49.06	098-200-140-000	25.60	098-250-050-000	68.08
098-140-080-000	2.00	098-170-130-000	49.06	098-200-150-000	31.46	098-250-060-000	69.74
098-140-110-000	271.24	098-170-140-000	47.94	098-200-160-000	31.46	098-250-070-000	71.54
098-140-120-000	178.26	098-170-150-000	47.94	098-200-170-000	50.60	098-250-080-000	61.32
098-140-130-000	156.94	098-170-160-000	47.94	098-200-180-000	50.60	098-250-090-000	59.62
098-140-140-000	151.24	098-170-170-000	47.94	098-200-190-000	50.60	098-250-100-000	61.60
098-140-150-000	136.60	098-170-180-000	47.94	098-200-200-000	50.60	098-250-110-000	61.38
098-140-160-000	137.96	098-170-190-000	47.92	098-200-210-000	29.82	098-250-120-000	2.00
098-140-170-000	129.78	098-170-200-000	32.24	098-200-220-000	29.82	098-250-130-000	54.82
098-140-180-000	129.48	098-170-210-000	32.24	098-200-230-000	32.26	098-250-140-000	54.78
098-140-190-000	191.72	098-170-220-000	32.24	098-200-240-000	32.24	098-260-010-000	137.74
098-140-200-000	2.00	098-170-230-000	32.24	098-200-250-000	34.36	098-260-020-000	231.36
098-140-210-000	369.60	098-170-240-000	70.00	098-200-260-000	32.26	098-260-030-000	142.86
098-140-220-000	2.00	098-170-250-000	70.00	098-200-270-000	32.26	098-260-040-000	169.48
098-140-230-000	2.00	098-170-260-000	70.00	098-200-280-000	32.26	098-260-050-000	127.92
098-150-080-000	2.00	098-170-270-000	9.72	098-200-290-000	32.26	098-260-060-000	122.38
098-160-010-000	70.12	098-180-010-000	47.94	098-200-300-000	29.82	098-260-070-000	117.08
098-160-020-000	70.10	098-180-020-000	47.94	098-210-010-000	32.24	098-260-080-000	109.80
098-160-030-000	70.10	098-180-030-000	49.06	098-210-020-000	32.24	098-260-090-000	176.18
098-160-040-000	70.10	098-180-040-000	49.06	098-210-030-000	32.26	098-260-100-000	119.26
098-160-050-000	70.12	098-180-050-000	32.24	098-210-040-000	32.26	098-260-110-000	140.70
098-160-060-000	70.00	098-180-060-000	32.24	098-210-050-000	50.58	098-260-120-000	104.94
098-160-070-000	70.00	098-180-070-000	32.24	098-210-060-000	50.60	098-260-130-000	83.70
098-160-080-000	70.00	098-180-080-000	32.26	098-210-070-000	49.06	098-260-140-000	113.76
098-160-090-000	70.00	098-180-090-000	81.50	098-210-080-000	49.06	098-260-150-000	103.88
098-160-100-000	70.00	098-180-100-000	57.62	098-210-090-000	50.58	098-260-160-000	105.98
098-160-110-000	70.00	098-180-110-000	57.62	098-210-100-000	50.58	098-260-170-000	114.98
098-160-120-000	58.62	098-180-120-000	57.62	098-210-110-000	50.58	098-260-180-000	87.96
098-160-130-000	58.62	098-180-130-000	57.62	098-210-120-000	50.58	098-260-190-000	136.88
098-160-140-000	58.62	098-180-140-000	57.62	098-210-130-000	50.60	098-260-200-000	142.06
098-160-150-000	58.62	098-180-150-000	49.06	098-210-140-000	50.58	098-260-210-000	156.16
098-160-160-000	58.62	098-180-160-000	49.06	098-210-150-000	32.24	098-260-220-000	98.98
098-160-170-000	51.54	098-180-170-000	47.94	098-210-160-000	32.24	098-260-230-000	113.56
098-160-180-000	50.58	098-180-180-000	47.94	098-210-170-000	32.24	098-260-240-000	147.30
098-160-190-000	46.78	098-180-190-000	32.24	098-210-180-000	32.24	098-260-250-000	132.56
098-160-200-000	50.60	098-180-200-000	32.24	098-220-010-000	50.60	098-260-260-000	124.96
098-160-210-000	46.78	098-180-210-000	32.24	098-220-020-000	50.60	098-260-270-000	128.90
098-160-220-000	42.36	098-180-220-000	32.24	098-220-030-000	49.06	098-260-280-000	147.28
098-160-230-000	37.24	098-190-010-000	47.94	098-220-040-000	49.06	098-260-290-000	121.12
098-160-240-000	25.58	098-190-020-000	47.94	098-220-050-000	32.24	098-260-300-000	102.22
098-160-250-000	31.46	098-190-030-000	49.08	098-220-060-000	32.26	098-260-310-000	130.32
098-160-260-000	31.44	098-190-040-000	49.08	098-220-070-000	32.24	098-260-320-000	171.84
098-160-270-000	31.46	098-190-050-000	32.24	098-220-080-000	32.26	098-260-330-000	167.18
098-160-280-000	70.10	098-190-060-000	32.26	098-220-090-000	49.06	098-260-340-000	206.80
098-160-290-000	70.12	098-190-070-000	32.26	098-220-100-000	49.06	098-260-350-000	200.12
098-160-300-000	66.74	098-190-080-000	32.26	098-220-110-000	50.58	098-260-360-000	177.36
098-160-310-000	66.74	098-190-090-000	57.62	098-220-120-000	50.58	098-260-370-000	97.20
098-160-320-000	70.10	098-190-100-000	74.06	098-220-130-000	32.26	098-260-380-000	2.00
098-160-330-000	50.60	098-190-110-000	57.62	098-220-140-000	32.26	098-260-390-000	79.98
098-160-340-000	50.60	098-190-120-000	57.66	098-220-150-000	29.82	098-260-400-000	2.00
098-160-350-000	46.78	098-190-130-000	32.24	098-220-160-000	32.26	098-260-410-000	109.46
098-160-360-000	50.60	098-190-140-000	29.82	098-230-010-000	50.60	098-260-420-000	81.12
098-160-370-000	42.38	098-190-150-000	32.26	098-230-020-000	50.60	098-260-430-000	77.48
098-160-380-000	37.24	098-190-160-000	29.82	098-230-030-000	49.06	098-260-440-000	2.00
098-160-390-000	50.60	098-190-170-000	32.26	098-230-040-000	49.06	098-260-450-000	71.38

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
098-260-460-000	68.10	098-290-270-000	80.62	098-330-070-000	61.42	098-380-220-000	138.32
098-260-470-000	87.02	098-300-010-000	144.28	098-330-080-000	2.00	098-380-230-000	128.72
098-260-480-000	64.76	098-300-020-000	231.80	098-330-090-000	63.46	098-380-240-000	144.82
098-260-510-000	92.50	098-300-030-000	178.78	098-330-100-000	60.98	098-380-250-000	98.54
098-260-520-000	96.86	098-300-040-000	197.46	098-330-110-000	61.18	098-400-010-000	64.76
098-260-530-000	84.34	098-300-050-000	162.60	098-330-120-000	61.42	098-400-020-000	68.42
098-260-540-000	92.00	098-300-060-000	138.78	098-330-130-000	61.16	098-400-030-000	68.42
098-260-550-000	102.24	098-300-070-000	139.66	098-330-140-000	63.46	098-400-040-000	60.14
098-260-560-000	2.00	098-300-080-000	168.14	098-330-150-000	60.98	098-400-050-000	64.76
098-260-570-000	2.00	098-300-090-000	149.72	098-330-160-000	55.38	098-400-060-000	63.48
098-260-580-000	2.00	098-300-100-000	2.00	098-330-170-000	2.00	098-400-070-000	67.48
098-260-590-000	73.90	098-300-110-000	102.82	098-340-010-000	109.82	098-400-080-000	59.32
098-270-010-000	48.30	098-300-120-000	116.42	098-340-020-000	126.54	098-400-090-000	59.34
098-270-020-000	48.62	098-300-130-000	137.12	098-340-030-000	171.58	098-400-100-000	63.48
098-270-030-000	63.42	098-300-140-000	117.08	098-340-040-000	188.08	098-400-110-000	80.32
098-270-040-000	63.20	098-300-150-000	109.72	098-340-050-000	179.14	098-400-120-000	88.50
098-270-050-000	38.88	098-300-160-000	124.02	098-340-060-000	165.52	098-400-130-000	77.80
098-270-060-000	55.26	098-300-170-000	139.56	098-340-070-000	185.64	098-400-140-000	77.78
098-270-070-000	54.60	098-300-180-000	270.42	098-340-080-000	150.54	098-400-150-000	75.86
098-270-080-000	55.24	098-300-190-000	177.56	098-340-090-000	150.94	098-400-160-000	2.00
098-270-090-000	60.98	098-300-200-000	196.72	098-360-010-000	126.00	098-410-010-000	184.68
098-270-100-000	45.02	098-300-210-000	245.74	098-360-020-000	102.14	098-410-020-000	162.62
098-270-110-000	56.60	098-300-220-000	325.08	098-360-030-000	110.04	098-410-030-000	136.24
098-270-120-000	56.62	098-300-230-000	244.66	098-360-040-000	105.10	098-410-040-000	137.76
098-270-130-000	49.74	098-300-240-000	206.96	098-360-050-000	134.56	098-410-050-000	120.30
098-270-140-000	44.24	098-310-010-000	108.28	098-360-060-000	103.28	098-410-060-000	133.64
098-270-150-000	56.60	098-310-020-000	197.46	098-360-070-000	130.10	098-410-070-000	178.98
098-270-160-000	56.60	098-310-030-000	147.80	098-360-080-000	136.84	098-410-080-000	160.32
098-270-170-000	44.20	098-310-040-000	277.80	098-360-090-000	140.08	098-410-090-000	201.50
098-270-180-000	44.24	098-310-050-000	147.02	098-360-100-000	128.12	098-410-100-000	137.06
098-270-190-000	70.96	098-310-060-000	162.16	098-360-110-000	170.58	098-410-110-000	157.50
098-270-200-000	45.08	098-310-070-000	126.74	098-360-120-000	101.54	098-410-120-000	193.98
098-270-210-000	2.00	098-310-080-000	156.28	098-360-130-000	96.12	098-410-130-000	107.44
098-270-220-000	347.92	098-310-090-000	170.60	098-360-140-000	90.72	098-410-140-000	116.70
098-280-010-000	66.04	098-310-100-000	130.94	098-360-150-000	118.66	098-410-150-000	135.04
098-280-020-000	68.64	098-320-010-000	204.22	098-360-160-000	105.16	098-410-160-000	122.08
098-280-030-000	66.08	098-320-020-000	246.82	098-360-170-000	103.76	098-410-170-000	142.32
098-280-040-000	68.76	098-320-030-000	183.24	098-360-180-000	96.38	098-410-180-000	126.76
098-280-050-000	78.66	098-320-040-000	236.06	098-360-190-000	99.78	098-410-190-000	148.88
098-280-060-000	68.62	098-320-050-000	169.68	098-360-200-000	121.14	098-410-200-000	145.16
098-280-070-000	68.74	098-320-060-000	107.74	098-360-210-000	101.52	098-410-210-000	120.60
098-280-080-000	78.74	098-320-070-000	165.78	098-360-220-000	140.26	098-410-220-000	140.32
098-280-090-000	66.10	098-320-080-000	229.06	098-360-230-000	103.02	098-410-230-000	122.16
098-280-100-000	68.68	098-320-090-000	178.90	098-360-240-000	159.14	098-410-240-000	145.68
098-280-110-000	66.06	098-320-100-000	114.02	098-360-250-000	239.46	098-410-250-000	2.00
098-280-120-000	69.40	098-320-110-000	112.42	098-360-260-000	106.40	098-420-010-000	161.04
098-280-130-000	69.34	098-320-120-000	123.34	098-360-270-000	121.42	098-420-020-000	146.14
098-280-140-000	66.14	098-320-130-000	112.32	098-360-280-000	130.22	098-420-030-000	162.74
098-280-150-000	70.30	098-320-140-000	129.20	098-360-290-000	151.24	098-420-040-000	178.66
098-280-160-000	59.32	098-320-150-000	168.90	098-370-010-000	175.06	098-420-050-000	193.38
098-280-170-000	78.60	098-320-160-000	133.78	098-370-020-000	146.64	098-420-060-000	149.42
098-280-180-000	77.92	098-320-170-000	302.46	098-370-030-000	198.86	098-420-070-000	118.36
098-280-190-000	69.48	098-320-180-000	157.96	098-370-040-000	149.42	098-420-080-000	131.58
098-280-200-000	69.42	098-320-190-000	137.60	098-370-050-000	161.48	098-420-090-000	123.86
098-280-210-000	80.18	098-320-200-000	141.70	098-370-060-000	152.20	098-420-100-000	124.52
098-280-220-000	65.50	098-320-210-000	124.62	098-370-070-000	184.92	098-420-110-000	155.56
098-280-230-000	2.00	098-320-220-000	150.82	098-370-080-000	140.52	098-420-120-000	168.74
098-290-010-000	91.18	098-320-230-000	149.36	098-370-090-000	102.74	098-420-130-000	171.20
098-290-020-000	62.66	098-320-240-000	131.00	098-370-100-000	162.60	098-420-140-000	127.12
098-290-030-000	79.64	098-320-250-000	112.78	098-370-110-000	136.64	098-420-150-000	125.86
098-290-040-000	79.26	098-320-260-000	135.52	098-380-010-000	113.12	098-420-160-000	149.30
098-290-050-000	99.68	098-320-270-000	122.50	098-380-020-000	98.96	098-420-170-000	137.26
098-290-060-000	2.00	098-320-280-000	92.42	098-380-030-000	139.24	098-420-180-000	147.52
098-290-070-000	98.58	098-320-290-000	150.48	098-380-040-000	164.12	098-420-190-000	141.62
098-290-080-000	62.66	098-320-300-000	100.90	098-380-050-000	122.62	098-420-200-000	140.60
098-290-090-000	77.94	098-320-310-000	141.62	098-380-060-000	99.92	098-420-210-000	176.98
098-290-100-000	62.68	098-320-320-000	102.50	098-380-070-000	118.58	098-420-220-000	148.66
098-290-120-000	149.92	098-320-330-000	102.54	098-380-080-000	173.48	098-420-230-000	136.60
098-290-140-000	80.62	098-320-340-000	119.40	098-380-090-000	232.32	098-420-240-000	121.44
098-290-150-000	62.68	098-320-350-000	110.70	098-380-100-000	234.04	098-430-010-000	115.76
098-290-160-000	80.62	098-320-360-000	101.94	098-380-110-000	288.24	098-430-020-000	144.20
098-290-170-000	73.68	098-320-370-000	111.24	098-380-120-000	254.98	098-430-030-000	105.24
098-290-180-000	83.52	098-320-380-000	112.68	098-380-130-000	105.60	098-430-040-000	167.24
098-290-190-000	91.18	098-320-390-000	100.46	098-380-140-000	225.72	098-430-050-000	169.52
098-290-200-000	91.18	098-320-400-000	129.50	098-380-150-000	134.86	098-430-060-000	140.96
098-290-210-000	62.66	098-330-010-000	61.16	098-380-160-000	145.08	098-430-070-000	135.28
098-290-220-000	62.70	098-330-020-000	60.98	098-380-170-000	159.00	098-430-080-000	142.44
098-290-230-000	73.66	098-330-030-000	63.44	098-380-180-000	119.40	098-430-090-000	137.06
098-290-240-000	80.62	098-330-040-000	61.14	098-380-190-000	134.70	098-430-100-000	126.66
098-290-250-000	91.18	098-330-050-000	61.42	098-380-200-000	116.58	098-430-110-000	93.02
098-290-260-000	2.00	098-330-060-000	61.16	098-380-210-000	183.28	098-430-120-000	112.34

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
098-430-130-000	100.22	098-460-060-000	75.50	098-470-400-000	118.02	098-500-200-000	115.98
098-430-140-000	93.06	098-460-070-000	72.82	098-480-010-000	133.46	098-500-210-000	107.96
098-430-150-000	100.28	098-460-080-000	101.58	098-480-020-000	217.68	098-500-220-000	102.26
098-430-160-000	112.40	098-460-090-000	59.30	098-480-030-000	106.50	098-500-230-000	112.62
098-430-170-000	109.88	098-460-100-000	59.26	098-480-040-000	127.22	098-500-240-000	133.56
098-430-180-000	112.52	098-460-110-000	87.80	098-480-050-000	120.76	098-500-250-000	137.24
098-430-190-000	100.28	098-460-120-000	122.18	098-480-060-000	102.60	098-500-260-000	124.38
098-430-200-000	78.98	098-460-130-000	130.34	098-480-070-000	168.64	098-500-270-000	150.14
098-430-210-000	106.98	098-460-140-000	159.42	098-480-080-000	193.24	098-500-280-000	134.56
098-430-220-000	89.42	098-460-150-000	163.96	098-480-090-000	184.22	098-500-290-000	228.96
098-430-230-000	114.72	098-460-160-000	170.56	098-480-100-000	205.12	098-500-300-000	125.84
098-430-240-000	118.22	098-460-170-000	210.60	098-480-110-000	315.82	098-500-310-000	190.40
098-430-250-000	87.32	098-460-180-000	164.18	098-480-120-000	194.16	098-500-320-000	177.48
098-430-260-000	88.68	098-460-190-000	214.46	098-480-130-000	171.92	098-500-330-000	148.02
098-430-270-000	123.20	098-460-200-000	244.08	098-480-140-000	171.04	098-500-340-000	111.56
098-430-280-000	127.22	098-460-210-000	206.94	098-480-150-000	135.34	098-500-350-000	100.72
098-430-290-000	137.20	098-460-220-000	209.82	098-480-160-000	238.28	098-500-360-000	163.42
098-430-300-000	118.10	098-460-230-000	167.90	098-480-170-000	141.80	098-500-370-000	100.42
098-430-310-000	89.34	098-460-240-000	198.52	098-480-180-000	140.30	098-500-380-000	157.32
098-430-320-000	88.70	098-460-250-000	173.48	098-480-190-000	121.40	098-500-390-000	128.04
098-430-330-000	103.74	098-460-260-000	179.54	098-480-200-000	170.92	100-020-010-000	10.30
098-430-340-000	80.60	098-460-270-000	2.00	098-480-210-000	186.36	100-020-020-000	90.26
098-430-350-000	2.00	098-460-280-000	228.84	098-480-220-000	2.00	100-020-030-000	93.02
098-430-360-000	2.00	098-460-290-000	140.76	098-480-230-000	2.00	100-020-040-000	129.32
098-440-010-000	141.00	098-460-300-000	150.58	098-490-010-000	144.04	100-020-050-000	93.02
098-440-020-000	91.24	098-460-310-000	133.92	098-490-020-000	108.80	100-020-060-000	145.88
098-440-030-000	93.52	098-460-320-000	161.10	098-490-030-000	147.56	100-020-070-000	98.08
098-440-040-000	113.48	098-460-330-000	125.36	098-490-040-000	140.78	100-020-080-000	90.40
098-440-050-000	168.26	098-460-340-000	117.56	098-490-050-000	103.64	100-020-090-000	97.46
098-440-060-000	186.64	098-460-350-000	121.24	098-490-060-000	131.70	100-020-100-000	97.44
098-440-070-000	91.74	098-460-360-000	106.82	098-490-070-000	142.00	100-020-110-000	92.20
098-440-080-000	140.66	098-460-370-000	153.04	098-490-080-000	103.84	100-020-120-000	93.68
098-440-090-000	126.56	098-460-380-000	142.02	098-490-090-000	145.18	100-020-130-000	77.96
098-440-100-000	129.16	098-460-390-000	141.28	098-490-100-000	144.02	100-020-140-000	141.78
098-440-110-000	109.02	098-460-400-000	117.16	098-490-110-000	110.22	100-020-150-000	117.74
098-440-120-000	98.52	098-460-410-000	160.84	098-490-120-000	102.56	100-020-160-000	153.00
098-440-130-000	105.54	098-460-420-000	126.98	098-490-130-000	115.98	100-020-170-000	90.56
098-440-140-000	164.30	098-460-430-000	137.80	098-490-140-000	108.88	100-020-180-000	91.42
098-440-150-000	127.94	098-460-440-000	156.70	098-490-150-000	101.04	100-020-190-000	91.42
098-440-160-000	95.96	098-460-450-000	2.00	098-490-160-000	110.24	100-020-200-000	84.86
098-440-170-000	138.56	098-460-460-000	2.00	098-490-170-000	137.26	100-020-210-000	91.14
098-440-180-000	166.08	098-460-470-000	2.00	098-490-180-000	136.54	100-020-220-000	144.46
098-440-190-000	90.06	098-470-010-000	178.90	098-490-190-000	115.96	100-020-230-000	90.76
098-440-200-000	89.16	098-470-020-000	109.04	098-490-200-000	145.22	100-020-240-000	84.90
098-440-210-000	110.44	098-470-030-000	107.60	098-490-210-000	120.74	100-020-250-000	68.26
098-440-220-000	112.46	098-470-040-000	103.56	098-490-220-000	103.42	100-020-260-000	93.32
098-450-010-000	105.28	098-470-050-000	102.20	098-490-230-000	107.22	100-020-270-000	104.36
098-450-020-000	3.06	098-470-060-000	104.30	098-490-240-000	139.46	100-020-280-000	164.66
098-450-030-000	143.00	098-470-070-000	126.96	098-490-250-000	143.40	100-020-290-000	140.78
098-450-040-000	141.54	098-470-080-000	140.74	098-490-260-000	122.42	100-020-300-000	93.70
098-450-050-000	142.86	098-470-090-000	105.02	098-490-270-000	111.08	100-020-310-000	105.32
098-450-060-000	142.20	098-470-100-000	113.84	098-490-280-000	113.84	100-020-320-000	143.66
098-450-070-000	185.54	098-470-110-000	140.24	098-490-290-000	116.54	100-020-330-000	144.16
098-450-080-000	75.70	098-470-120-000	121.72	098-490-300-000	149.50	100-020-340-000	109.88
098-450-090-000	88.66	098-470-130-000	139.60	098-490-310-000	136.20	100-020-350-000	113.64
098-450-100-000	81.78	098-470-140-000	106.90	098-490-320-000	136.46	100-020-360-000	91.64
098-450-110-000	92.18	098-470-150-000	133.50	098-490-330-000	115.28	100-020-370-000	85.38
098-450-120-000	77.06	098-470-160-000	157.46	098-490-340-000	168.70	100-020-380-000	128.52
098-450-130-000	76.94	098-470-170-000	126.98	098-490-350-000	192.62	100-020-390-000	105.32
098-450-140-000	77.04	098-470-180-000	124.06	098-490-360-000	159.70	100-020-400-000	92.28
098-450-150-000	77.04	098-470-190-000	194.82	098-490-370-000	151.76	100-020-410-000	68.28
098-450-160-000	71.46	098-470-200-000	101.84	098-490-380-000	134.84	100-020-420-000	90.82
098-450-170-000	83.26	098-470-210-000	101.32	098-500-010-000	119.62	100-020-430-000	90.64
098-450-180-000	83.26	098-470-220-000	111.20	098-500-020-000	112.86	100-020-440-000	90.62
098-450-190-000	83.24	098-470-230-000	85.42	098-500-030-000	131.08	100-020-450-000	79.76
098-450-200-000	82.30	098-470-240-000	111.86	098-500-040-000	179.76	100-020-460-000	100.00
098-450-210-000	67.88	098-470-250-000	101.00	098-500-050-000	109.76	100-020-470-000	74.38
098-450-220-000	71.50	098-470-260-000	115.10	098-500-060-000	133.18	100-020-480-000	97.58
098-450-230-000	71.08	098-470-270-000	124.88	098-500-070-000	114.58	100-020-490-000	92.42
098-450-240-000	77.84	098-470-280-000	144.34	098-500-080-000	107.38	100-020-500-000	142.44
098-450-250-000	72.68	098-470-290-000	108.52	098-500-090-000	184.62	100-020-510-000	118.30
098-450-260-000	78.12	098-470-300-000	107.48	098-500-100-000	183.00	100-020-560-000	2.00
098-450-270-000	76.98	098-470-310-000	147.40	098-500-110-000	198.68	100-030-010-000	79.54
098-450-280-000	76.98	098-470-320-000	128.00	098-500-120-000	231.52	100-030-020-000	84.10
098-450-290-000	76.96	098-470-330-000	145.66	098-500-130-000	121.38	100-030-030-000	58.18
098-450-300-000	2.74	098-470-340-000	146.52	098-500-140-000	121.60	100-030-040-000	113.02
098-460-010-000	75.70	098-470-350-000	130.34	098-500-150-000	171.06	100-030-050-000	84.22
098-460-020-000	90.04	098-470-360-000	149.58	098-500-160-000	136.22	100-030-060-000	62.38
098-460-030-000	80.26	098-470-370-000	184.96	098-500-170-000	110.88	100-030-070-000	63.90
098-460-040-000	81.46	098-470-380-000	152.94	098-500-180-000	103.94	100-030-080-000	99.34
098-460-050-000	2.00	098-470-390-000	113.66	098-500-190-000	145.68	100-030-090-000	81.72

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
100-030-100-000	61.66	100-040-240-000	55.28	100-060-210-000	88.56	100-090-220-000	40.54
100-030-110-000	73.96	100-040-250-000	55.46	100-060-220-000	94.72	100-090-230-000	54.42
100-030-120-000	99.30	100-040-270-000	55.48	100-060-230-000	92.02	100-090-240-000	36.68
100-030-130-000	51.10	100-040-280-000	65.44	100-060-240-000	87.00	100-090-250-000	40.54
100-030-140-000	72.64	100-040-290-000	55.48	100-060-250-000	97.60	100-090-260-000	47.66
100-030-150-000	73.68	100-040-300-000	54.60	100-060-260-000	70.84	100-090-270-000	40.54
100-030-160-000	112.88	100-040-330-000	41.48	100-060-270-000	90.34	100-090-280-000	64.66
100-030-170-000	84.02	100-040-340-000	39.14	100-060-280-000	84.88	100-090-290-000	67.68
100-030-180-000	72.08	100-050-010-000	109.98	100-060-290-000	101.76	100-090-300-000	72.56
100-030-190-000	72.70	100-050-020-000	117.12	100-060-300-000	81.30	100-090-310-000	57.84
100-030-200-000	84.22	100-050-030-000	104.16	100-060-310-000	94.26	100-090-320-000	57.84
100-030-210-000	51.14	100-050-040-000	111.38	100-060-320-000	97.82	100-090-330-000	57.12
100-030-220-000	51.10	100-050-050-000	103.72	100-060-330-000	83.72	100-090-340-000	57.84
100-030-230-000	64.00	100-050-060-000	131.58	100-060-340-000	93.08	100-090-350-000	67.56
100-030-240-000	74.36	100-050-070-000	103.12	100-060-350-000	72.20	100-090-360-000	72.58
100-030-250-000	99.76	100-050-080-000	112.66	100-060-360-000	86.32	100-090-370-000	67.56
100-030-260-000	74.06	100-050-090-000	114.40	100-060-370-000	93.32	100-090-380-000	67.64
100-030-270-000	62.34	100-050-100-000	75.88	100-060-380-000	83.70	100-090-390-000	57.90
100-030-280-000	72.64	100-050-110-000	71.16	100-060-390-000	62.62	100-090-400-000	67.94
100-030-290-000	112.90	100-050-120-000	89.72	100-060-400-000	94.76	100-090-410-000	73.34
100-030-300-000	74.70	100-050-130-000	84.28	100-060-410-000	106.60	100-090-420-000	58.78
100-030-310-000	71.10	100-050-140-000	162.20	100-060-420-000	104.24	100-090-430-000	73.34
100-030-320-000	99.14	100-050-150-000	136.42	100-060-430-000	63.50	100-090-440-000	73.50
100-030-330-000	51.20	100-050-160-000	91.72	100-060-440-000	89.44	100-090-450-000	56.78
100-030-340-000	64.04	100-050-170-000	93.44	100-080-010-000	83.12	100-090-460-000	63.78
100-030-350-000	75.94	100-050-180-000	84.74	100-080-020-000	58.22	100-090-470-000	58.70
100-030-360-000	64.30	100-050-190-000	106.66	100-080-030-000	83.06	100-090-480-000	58.72
100-030-370-000	51.28	100-050-200-000	85.50	100-080-040-000	72.62	100-090-490-000	72.94
100-030-380-000	63.82	100-050-210-000	101.68	100-080-050-000	112.50	100-090-500-000	61.92
100-030-390-000	62.48	100-050-220-000	106.02	100-080-060-000	70.92	100-090-510-000	72.68
100-030-400-000	72.14	100-050-230-000	147.48	100-080-070-000	109.96	100-090-520-000	43.48
100-030-410-000	84.08	100-050-240-000	123.30	100-080-080-000	83.20	100-090-530-000	72.68
100-030-420-000	72.66	100-050-250-000	116.40	100-080-090-000	74.66	100-090-540-000	69.42
100-030-430-000	112.94	100-050-260-000	94.38	100-080-100-000	98.70	100-090-550-000	61.86
100-030-440-000	58.20	100-050-270-000	102.46	100-080-110-000	75.52	100-090-560-000	61.84
100-030-450-000	72.62	100-050-280-000	94.02	100-080-120-000	95.92	100-090-570-000	72.68
100-030-460-000	84.10	100-050-290-000	120.14	100-080-130-000	74.68	100-090-580-000	61.84
100-030-470-000	72.12	100-050-300-000	106.24	100-080-140-000	98.72	100-090-590-000	72.80
100-030-480-000	69.94	100-050-310-000	99.46	100-080-150-000	65.62	100-090-600-000	61.94
100-030-490-000	69.88	100-050-320-000	105.54	100-080-160-000	75.60	100-090-610-000	72.64
100-030-500-000	72.16	100-050-330-000	93.24	100-080-170-000	65.62	100-090-620-000	61.82
100-030-510-000	72.14	100-050-340-000	127.88	100-080-180-000	65.62	100-090-630-000	61.82
100-030-520-000	70.48	100-050-350-000	115.46	100-080-190-000	101.66	100-090-640-000	71.84
100-030-530-000	70.48	100-050-360-000	92.80	100-080-200-000	74.72	100-090-650-000	61.82
100-030-540-000	72.16	100-050-370-000	133.90	100-080-210-000	62.00	100-090-660-000	72.56
100-030-550-000	72.16	100-050-380-000	111.66	100-080-220-000	66.72	100-090-670-000	72.98
100-030-560-000	72.14	100-050-390-000	127.24	100-080-230-000	69.44	100-090-680-000	67.40
100-030-570-000	72.24	100-050-400-000	123.42	100-080-240-000	66.72	100-090-690-000	72.66
100-030-580-000	97.74	100-050-410-000	143.82	100-080-250-000	69.46	100-100-010-000	40.98
100-030-590-000	91.02	100-050-420-000	97.44	100-080-260-000	58.94	100-100-020-000	40.90
100-030-600-000	72.14	100-050-430-000	128.96	100-080-270-000	58.96	100-100-030-000	56.60
100-030-610-000	72.14	100-050-440-000	102.64	100-080-280-000	62.12	100-100-040-000	57.50
100-030-620-000	72.14	100-050-450-000	121.66	100-080-290-000	62.08	100-100-050-000	56.60
100-030-630-000	72.14	100-050-460-000	114.52	100-080-300-000	58.94	100-100-060-000	56.62
100-030-640-000	72.14	100-050-470-000	112.80	100-080-310-000	58.88	100-100-070-000	58.02
100-030-650-000	72.14	100-050-480-000	126.20	100-080-320-000	84.66	100-100-080-000	64.08
100-030-660-000	71.44	100-050-490-000	98.56	100-080-330-000	69.42	100-100-090-000	58.04
100-030-670-000	80.14	100-050-500-000	142.74	100-080-340-000	66.68	100-100-100-000	58.04
100-040-010-000	61.24	100-050-510-000	100.02	100-080-350-000	69.40	100-100-110-000	58.04
100-040-020-000	61.38	100-050-520-000	146.50	100-080-360-000	61.96	100-100-120-000	64.06
100-040-030-000	61.38	100-050-530-000	93.80	100-090-010-000	61.88	100-100-130-000	66.84
100-040-040-000	46.26	100-060-010-000	114.02	100-090-020-000	61.82	100-100-140-000	60.52
100-040-050-000	66.96	100-060-020-000	107.54	100-090-030-000	63.48	100-100-150-000	56.62
100-040-060-000	46.24	100-060-030-000	99.96	100-090-040-000	61.76	100-100-160-000	56.58
100-040-070-000	64.92	100-060-040-000	119.74	100-090-050-000	72.62	100-100-170-000	42.66
100-040-080-000	46.94	100-060-050-000	108.48	100-090-060-000	72.66	100-100-180-000	42.68
100-040-090-000	39.10	100-060-060-000	108.18	100-090-070-000	72.64	100-100-190-000	56.60
100-040-100-000	39.10	100-060-070-000	120.38	100-090-080-000	72.64	100-100-200-000	56.60
100-040-110-000	54.88	100-060-080-000	90.24	100-090-090-000	61.82	100-100-210-000	68.78
100-040-120-000	39.08	100-060-090-000	140.84	100-090-100-000	61.94	100-100-220-000	68.78
100-040-130-000	61.56	100-060-100-000	109.70	100-090-110-000	36.68	100-100-230-000	42.68
100-040-140-000	72.68	100-060-110-000	121.04	100-090-120-000	64.94	100-100-240-000	45.40
100-040-150-000	61.24	100-060-120-000	112.10	100-090-130-000	36.58	100-100-250-000	64.04
100-040-160-000	72.92	100-060-130-000	91.04	100-090-140-000	65.20	100-100-260-000	64.02
100-040-170-000	61.24	100-060-140-000	132.26	100-090-150-000	65.18	100-100-270-000	42.14
100-040-180-000	61.22	100-060-150-000	103.42	100-090-160-000	43.38	100-100-280-000	45.56
100-040-190-000	72.66	100-060-160-000	81.56	100-090-170-000	40.54	100-100-290-000	64.08
100-040-200-000	72.70	100-060-170-000	119.82	100-090-180-000	54.44	100-100-300-000	64.08
100-040-210-000	72.68	100-060-180-000	96.86	100-090-190-000	36.68	100-100-310-000	2.50
100-040-220-000	61.30	100-060-190-000	84.52	100-090-200-000	54.42	100-100-320-000	58.30
100-040-230-000	55.26	100-060-200-000	96.84	100-090-210-000	36.68	100-100-330-000	60.18

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
100-100-340-000	81.48	100-110-320-000	65.74	100-120-690-000	43.24	100-200-090-000	50.10
100-100-350-000	52.56	100-110-330-000	76.92	100-120-700-000	57.78	100-200-100-000	42.20
100-100-360-000	57.98	100-110-340-000	2.00	100-120-710-000	67.58	100-200-110-000	42.12
100-100-370-000	73.82	100-110-350-000	57.92	100-120-720-000	43.24	100-200-120-000	50.10
100-100-380-000	73.80	100-110-360-000	49.30	100-120-730-000	43.26	100-200-130-000	50.10
100-100-390-000	52.52	100-110-370-000	49.28	100-120-740-000	43.28	100-200-140-000	37.14
100-100-400-000	57.98	100-110-380-000	57.82	100-120-750-000	73.18	100-200-150-000	42.12
100-100-410-000	71.30	100-110-390-000	43.38	100-120-760-000	49.22	100-200-160-000	50.10
100-100-420-000	71.28	100-110-400-000	43.36	100-120-770-000	49.20	100-200-170-000	50.10
100-100-430-000	73.74	100-110-410-000	65.24	100-120-780-000	49.22	100-200-180-000	37.14
100-100-440-000	52.54	100-110-420-000	49.28	100-120-790-000	49.22	100-200-190-000	43.18
100-100-450-000	61.18	100-110-430-000	49.30	100-120-800-000	73.20	100-200-200-000	36.42
100-100-460-000	58.00	100-110-440-000	65.84	100-120-810-000	49.22	100-200-210-000	58.42
100-100-470-000	61.18	100-120-010-000	76.78	100-120-820-000	49.20	100-200-220-000	58.40
100-100-480-000	58.00	100-120-020-000	76.94	100-120-830-000	49.34	100-200-230-000	36.42
100-100-490-000	81.48	100-120-030-000	82.76	100-120-840-000	2.00	100-200-240-000	39.16
100-100-500-000	58.24	100-120-040-000	61.82	100-130-030-000	458.48	100-200-250-000	41.00
100-100-510-000	58.18	100-120-050-000	61.84	100-130-040-000	4252.20	100-200-260-000	50.10
100-100-520-000	52.68	100-120-060-000	72.64	100-130-070-000	220.82	100-200-270-000	50.10
100-100-530-000	52.54	100-120-070-000	61.84	100-130-090-000	2.00	100-200-280-000	42.12
100-100-540-000	52.54	100-120-080-000	72.54	100-130-100-000	2.00	100-200-290-000	64.18
100-100-550-000	73.80	100-120-090-000	72.56	100-130-110-000	2.00	100-200-300-000	64.16
100-100-560-000	58.00	100-120-100-000	67.54	100-130-120-000	6118.14	100-200-310-000	56.28
100-100-570-000	52.54	100-120-110-000	67.54	100-130-140-000	2.00	100-200-320-000	56.30
100-100-580-000	52.54	100-120-120-000	67.56	100-130-150-000	398.50	100-200-330-000	55.34
100-100-590-000	52.52	100-120-130-000	57.82	100-150-290-000	1021.34	100-200-340-000	55.34
100-100-600-000	73.76	100-120-140-000	72.56	100-160-310-000	970.96	100-200-350-000	64.04
100-100-610-000	69.82	100-120-150-000	72.56	100-170-010-000	215.88	100-200-360-000	64.02
100-100-620-000	87.02	100-120-160-000	67.54	100-170-040-000	889.74	100-200-370-000	55.34
100-100-630-000	52.56	100-120-170-000	57.94	100-170-060-000	2.00	100-200-380-000	55.34
100-100-640-000	52.54	100-120-180-000	64.62	100-170-070-000	138.30	100-200-390-000	78.18
100-100-650-000	52.56	100-120-190-000	48.02	100-170-080-000	353.90	100-200-400-000	78.16
100-100-660-000	52.54	100-120-200-000	69.74	100-170-100-000	172.50	100-200-410-000	2.54
100-100-670-000	52.56	100-120-210-000	47.14	100-170-110-000	1702.84	100-210-010-000	109.86
100-100-680-000	52.54	100-120-220-000	47.62	100-180-010-000	121.00	100-210-020-000	138.60
100-100-690-000	52.56	100-120-230-000	48.52	100-180-020-000	140.92	100-210-030-000	114.52
100-100-700-000	52.56	100-120-240-000	64.36	100-180-030-000	132.96	100-210-040-000	148.02
100-100-710-000	52.72	100-120-250-000	43.28	100-180-040-000	128.72	100-210-050-000	145.16
100-100-720-000	54.94	100-120-260-000	47.96	100-180-050-000	152.50	100-210-060-000	136.04
100-100-730-000	54.24	100-120-270-000	64.36	100-180-060-000	162.04	100-210-070-000	154.36
100-100-740-000	62.38	100-120-280-000	43.38	100-180-070-000	131.86	100-210-080-000	145.66
100-100-750-000	72.48	100-120-290-000	64.36	100-180-080-000	2.00	100-210-090-000	142.28
100-100-760-000	53.90	100-120-300-000	64.40	100-180-090-000	155.96	100-210-100-000	119.54
100-100-770-000	60.86	100-120-310-000	69.42	100-180-100-000	53.86	100-210-110-000	142.42
100-100-780-000	62.30	100-120-320-000	43.24	100-190-010-000	41.50	100-210-120-000	149.98
100-100-790-000	76.50	100-120-330-000	43.26	100-190-020-000	54.96	100-210-130-000	119.84
100-100-800-000	52.56	100-120-340-000	44.12	100-190-030-000	54.94	100-210-140-000	116.86
100-100-810-000	69.14	100-120-350-000	64.26	100-190-040-000	40.54	100-210-150-000	110.20
100-100-820-000	2.74	100-120-360-000	43.30	100-190-050-000	40.52	100-210-160-000	115.36
100-100-830-000	2.00	100-120-370-000	43.32	100-190-060-000	36.74	100-210-170-000	114.96
100-110-010-000	49.34	100-120-380-000	64.44	100-190-070-000	58.62	100-210-180-000	104.76
100-110-020-000	49.24	100-120-390-000	43.44	100-190-080-000	58.62	100-210-190-000	150.46
100-110-030-000	65.14	100-120-400-000	43.40	100-190-090-000	40.56	100-210-200-000	94.76
100-110-040-000	65.14	100-120-410-000	43.28	100-190-100-000	2.00	100-210-210-000	102.40
100-110-050-000	49.18	100-120-420-000	64.36	100-190-110-000	40.54	100-210-220-000	128.04
100-110-060-000	49.22	100-120-430-000	43.28	100-190-120-000	36.76	100-210-230-000	151.44
100-110-070-000	49.20	100-120-440-000	64.36	100-190-130-000	58.62	100-210-240-000	149.26
100-110-080-000	49.34	100-120-450-000	43.30	100-190-140-000	58.62	100-210-250-000	256.98
100-110-090-000	49.30	100-120-460-000	43.26	100-190-150-000	40.58	100-210-260-000	136.20
100-110-100-000	65.78	100-120-470-000	43.24	100-190-160-000	40.54	100-210-270-000	107.20
100-110-110-000	2.00	100-120-480-000	67.50	100-190-170-000	36.72	100-210-280-000	169.88
100-110-120-000	65.38	100-120-490-000	67.58	100-190-180-000	48.20	100-210-290-000	149.64
100-110-130-000	65.20	100-120-500-000	43.24	100-190-190-000	43.66	100-210-300-000	91.38
100-110-140-000	49.28	100-120-510-000	64.32	100-190-200-000	37.58	100-210-310-000	90.28
100-110-150-000	49.20	100-120-520-000	43.30	100-190-210-000	41.46	100-210-320-000	110.42
100-110-160-000	65.14	100-120-530-000	51.50	100-190-220-000	54.96	100-210-330-000	139.12
100-110-170-000	49.20	100-120-540-000	51.50	100-190-230-000	54.96	100-210-340-000	133.46
100-110-180-000	49.18	100-120-550-000	43.30	100-190-240-000	41.48	100-210-350-000	139.28
100-110-190-000	49.20	100-120-560-000	64.38	100-190-250-000	40.56	100-210-360-000	136.34
100-110-200-000	49.18	100-120-570-000	43.28	100-190-260-000	40.56	100-210-370-000	108.40
100-110-210-000	65.14	100-120-580-000	43.42	100-190-270-000	48.20	100-210-380-000	173.06
100-110-220-000	49.18	100-120-590-000	53.48	100-190-280-000	43.68	100-210-390-000	128.64
100-110-230-000	49.30	100-120-600-000	51.48	100-190-290-000	41.48	100-210-400-000	122.98
100-110-240-000	65.88	100-120-610-000	43.30	100-200-010-000	39.12	100-210-410-000	120.66
100-110-250-000	65.26	100-120-620-000	43.28	100-200-020-000	36.42	100-210-420-000	136.20
100-110-260-000	65.26	100-120-630-000	43.30	100-200-030-000	64.48	100-210-430-000	143.20
100-110-270-000	57.84	100-120-640-000	64.36	100-200-040-000	57.18	100-210-440-000	177.76
100-110-280-000	65.74	100-120-650-000	64.36	100-200-050-000	40.20	100-210-450-000	130.22
100-110-290-000	65.76	100-120-660-000	43.30	100-200-060-000	43.18	100-210-460-000	142.50
100-110-300-000	65.24	100-120-670-000	51.48	100-200-070-000	37.14	100-210-470-000	168.10
100-110-310-000	49.30	100-120-680-000	51.48	100-200-080-000	51.74	100-210-480-000	101.98

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
100-210-490-000	122.62	100-250-210-000	2.00	100-260-370-000	84.82	100-290-040-000	110.26
100-210-500-000	146.84	100-250-230-000	102.18	100-260-380-000	89.40	100-290-050-000	110.24
100-210-510-000	112.42	100-250-240-000	109.92	100-260-390-000	76.82	100-290-060-000	110.22
100-220-010-000	140.90	100-250-250-000	82.90	100-260-400-000	84.84	100-290-070-000	110.28
100-220-020-000	103.24	100-250-260-000	85.14	100-260-410-000	76.80	100-290-080-000	110.22
100-220-030-000	103.06	100-250-270-000	71.50	100-260-420-000	89.40	100-290-090-000	126.82
100-220-040-000	122.34	100-250-280-000	90.78	100-260-430-000	92.30	100-290-100-000	110.24
100-220-050-000	117.00	100-250-290-000	80.66	100-260-440-000	95.42	100-290-110-000	110.26
100-220-060-000	107.60	100-250-300-000	85.38	100-260-450-000	99.86	100-290-120-000	111.78
100-220-070-000	91.80	100-250-310-000	84.56	100-260-460-000	99.86	100-290-130-000	981.06
100-220-080-000	87.88	100-250-320-000	91.12	100-260-470-000	120.72	100-290-140-000	53.84
100-220-090-000	102.42	100-250-330-000	83.80	100-260-480-000	88.64	100-290-150-000	1256.44
100-220-100-000	146.44	100-250-340-000	127.98	100-260-490-000	76.80	100-290-160-000	3424.72
100-220-110-000	111.78	100-250-350-000	85.60	100-260-500-000	95.64	100-300-010-000	119.70
100-220-120-000	107.00	100-250-360-000	87.46	100-260-510-000	80.34	100-300-020-000	107.30
100-220-130-000	102.30	100-250-370-000	88.76	100-260-520-000	76.86	100-300-030-000	120.86
100-220-140-000	96.46	100-250-380-000	83.78	100-260-530-000	82.94	100-300-040-000	138.56
100-220-150-000	117.02	100-250-390-000	78.40	100-260-540-000	80.36	100-300-050-000	143.86
100-220-160-000	93.28	100-250-400-000	77.88	100-260-550-000	76.86	100-300-060-000	131.86
100-220-170-000	93.42	100-250-410-000	72.48	100-260-560-000	90.98	100-300-070-000	117.42
100-220-180-000	115.52	100-250-420-000	86.48	100-260-570-000	105.76	100-300-080-000	109.42
100-220-190-000	117.40	100-250-430-000	82.50	100-260-580-000	165.66	100-300-090-000	188.74
100-220-200-000	115.58	100-250-440-000	91.06	100-260-590-000	76.00	100-300-100-000	182.52
100-220-210-000	103.04	100-250-450-000	96.10	100-270-030-000	123.54	100-300-110-000	127.82
100-220-220-000	93.26	100-250-460-000	72.78	100-270-040-000	104.10	100-300-120-000	127.82
100-220-230-000	105.76	100-250-470-000	112.48	100-270-050-000	104.10	100-300-130-000	156.72
100-220-240-000	84.72	100-250-480-000	74.58	100-270-060-000	123.62	100-310-010-000	295.50
100-220-250-000	93.36	100-250-490-000	76.54	100-270-070-000	123.60	100-310-020-000	109.70
100-220-260-000	100.46	100-250-500-000	65.20	100-270-080-000	102.58	100-310-030-000	1482.24
100-220-270-000	102.50	100-250-510-000	67.76	100-270-090-000	113.94	100-310-060-000	880.88
100-220-280-000	102.72	100-250-520-000	108.84	100-270-100-000	128.72	100-320-040-000	14.48
100-220-290-000	124.20	100-250-530-000	83.18	100-270-110-000	113.24	100-330-010-000	71.24
100-220-300-000	108.08	100-250-540-000	77.04	100-270-120-000	113.26	100-330-020-000	71.24
100-220-310-000	103.14	100-250-550-000	74.70	100-270-130-000	102.58	100-330-030-000	91.22
100-220-320-000	109.74	100-250-560-000	95.54	100-270-140-000	102.58	100-330-040-000	78.62
100-220-330-000	102.04	100-250-570-000	80.06	100-270-150-000	113.24	100-330-050-000	91.20
100-220-340-000	110.56	100-250-580-000	77.78	100-270-160-000	113.24	100-330-060-000	64.90
100-220-350-000	131.80	100-250-590-000	65.70	100-270-170-000	113.24	100-330-070-000	78.62
100-220-360-000	111.78	100-250-600-000	66.76	100-270-190-000	109.10	100-330-080-000	64.88
100-220-370-000	124.54	100-250-610-000	68.84	100-270-200-000	2.00	100-330-090-000	78.64
100-220-380-000	97.02	100-250-620-000	89.82	100-280-010-000	77.14	100-330-100-000	71.62
100-220-390-000	103.40	100-250-630-000	77.36	100-280-020-000	93.92	100-330-110-000	71.24
100-220-400-000	102.12	100-250-640-000	82.44	100-280-030-000	123.78	100-330-120-000	78.64
100-220-410-000	104.20	100-250-650-000	66.88	100-280-040-000	95.38	100-330-130-000	71.62
100-220-420-000	115.74	100-250-660-000	76.02	100-280-050-000	76.94	100-330-140-000	78.62
100-230-010-000	84.80	100-260-010-000	69.14	100-280-060-000	95.14	100-330-150-000	71.62
100-230-020-000	79.66	100-260-020-000	66.00	100-280-070-000	85.86	100-330-160-000	78.64
100-230-030-000	76.18	100-260-030-000	66.00	100-280-080-000	76.84	100-330-170-000	71.62
100-230-040-000	75.64	100-260-040-000	90.30	100-280-090-000	116.02	100-330-180-000	78.64
100-230-050-000	76.34	100-260-050-000	72.12	100-280-100-000	101.74	100-330-190-000	91.22
100-230-060-000	100.68	100-260-060-000	97.40	100-280-110-000	76.66	100-330-200-000	71.62
100-230-070-000	76.90	100-260-070-000	69.12	100-280-120-000	94.38	100-330-210-000	78.64
100-230-080-000	95.20	100-260-080-000	81.70	100-280-130-000	95.38	100-330-220-000	91.30
100-230-090-000	91.98	100-260-090-000	113.38	100-280-140-000	77.70	100-330-240-000	2.00
100-230-100-000	69.14	100-260-100-000	95.00	100-280-150-000	83.48	100-340-010-000	94.26
100-230-110-000	95.52	100-260-110-000	79.04	100-280-160-000	113.28	100-340-020-000	123.44
100-230-120-000	76.66	100-260-120-000	74.66	100-280-170-000	91.86	100-340-030-000	108.84
100-230-130-000	69.16	100-260-130-000	104.34	100-280-180-000	111.12	100-340-040-000	123.86
100-230-140-000	95.18	100-260-140-000	78.66	100-280-190-000	109.54	100-340-050-000	120.78
100-230-150-000	82.68	100-260-150-000	79.82	100-280-200-000	115.98	100-340-060-000	71.60
100-230-160-000	95.24	100-260-160-000	78.66	100-280-210-000	99.90	100-340-070-000	64.90
100-250-010-000	94.72	100-260-170-000	67.58	100-280-220-000	103.60	100-340-080-000	71.24
100-250-020-000	77.36	100-260-180-000	82.40	100-280-230-000	110.46	100-340-090-000	72.72
100-250-030-000	76.82	100-260-190-000	150.40	100-280-240-000	103.56	100-340-100-000	57.10
100-250-040-000	82.58	100-260-200-000	85.62	100-280-250-000	103.56	100-340-110-000	62.72
100-250-050-000	82.36	100-260-210-000	103.88	100-280-260-000	103.56	100-350-010-000	93.18
100-250-060-000	84.72	100-260-220-000	81.40	100-280-270-000	99.26	100-350-020-000	115.56
100-250-070-000	85.64	100-260-230-000	125.70	100-280-280-000	86.68	100-350-030-000	134.84
100-250-080-000	76.30	100-260-240-000	80.58	100-280-290-000	91.84	100-350-040-000	143.90
100-250-090-000	127.82	100-260-250-000	86.12	100-280-300-000	88.74	100-350-050-000	226.34
100-250-100-000	103.18	100-260-260-000	87.04	100-280-310-000	95.08	100-350-060-000	122.20
100-250-110-000	113.06	100-260-270-000	90.64	100-280-320-000	96.58	100-350-070-000	143.94
100-250-120-000	92.12	100-260-280-000	85.50	100-280-330-000	95.14	100-350-080-000	121.68
100-250-130-000	110.96	100-260-290-000	90.72	100-280-340-000	92.74	100-350-090-000	124.58
100-250-140-000	92.14	100-260-300-000	90.98	100-280-350-000	95.14	100-350-100-000	137.40
100-250-150-000	87.20	100-260-310-000	78.72	100-280-360-000	92.00	100-350-110-000	143.88
100-250-160-000	111.66	100-260-320-000	76.92	100-280-370-000	101.14	100-350-120-000	145.70
100-250-170-000	94.62	100-260-330-000	92.12	100-280-380-000	93.80	100-350-130-000	140.00
100-250-180-000	94.50	100-260-340-000	131.88	100-290-010-000	110.32	100-350-140-000	128.18
100-250-190-000	91.78	100-260-350-000	89.32	100-290-020-000	110.26	100-350-150-000	78.62
100-250-200-000	2.00	100-260-360-000	93.58	100-290-030-000	110.26	100-350-160-000	71.60

# APPENDIX E

## RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount	APN	Amount
100-350-170-000	91.20	100-380-320-000	43.06	100-410-340-000	61.42	100-450-040-000	49.28
100-350-180-000	78.60	100-380-330-000	51.46	100-410-350-000	76.72	100-450-050-000	49.28
100-350-190-000	71.62	100-380-340-000	51.34	100-410-360-000	51.66	100-450-060-000	76.78
100-350-200-000	91.20	100-380-350-000	49.00	100-410-370-000	45.78	100-450-070-000	49.28
100-350-210-000	78.62	100-380-360-000	43.06	100-410-380-000	4.14	100-450-080-000	49.28
100-350-220-000	78.62	100-380-370-000	51.46	100-420-010-000	42.12	100-450-090-000	76.78
100-350-230-000	78.60	100-390-040-000	3945.48	100-420-020-000	55.48	100-450-100-000	65.84
100-350-240-000	77.30	100-400-010-000	36.48	100-420-030-000	55.48	100-450-110-000	57.38
100-350-250-000	91.18	100-400-020-000	41.12	100-420-040-000	42.10	100-450-120-000	57.82
100-350-260-000	78.62	100-400-030-000	61.10	100-420-050-000	55.48	100-450-130-000	43.38
100-350-270-000	71.62	100-400-040-000	48.88	100-420-060-000	55.48	100-450-140-000	70.04
100-350-280-000	91.20	100-400-050-000	36.48	100-420-070-000	42.10	100-450-150-000	65.90
100-350-290-000	71.62	100-400-060-000	48.90	100-420-080-000	55.48	100-450-160-000	49.68
100-350-300-000	78.72	100-400-070-000	61.06	100-420-090-000	42.10	100-450-170-000	49.56
100-350-310-000	82.80	100-400-080-000	45.78	100-420-100-000	55.48	100-450-180-000	49.38
100-350-320-000	2.00	100-400-090-000	46.76	100-420-110-000	42.10	100-450-190-000	76.82
100-370-010-000	47.56	100-400-100-000	69.46	100-420-120-000	78.60	100-450-200-000	65.76
100-370-020-000	47.46	100-400-110-000	55.62	100-420-130-000	61.24	100-450-210-000	76.80
100-370-030-000	56.74	100-400-120-000	69.46	100-420-140-000	76.56	100-450-220-000	65.74
100-370-040-000	49.16	100-400-130-000	46.78	100-420-150-000	42.10	100-450-230-000	49.32
100-370-050-000	51.52	100-400-140-000	41.46	100-420-160-000	55.48	100-450-240-000	49.32
100-370-060-000	43.40	100-400-150-000	36.44	100-420-170-000	69.34	100-450-250-000	81.14
100-370-070-000	49.16	100-400-160-000	61.08	100-420-180-000	69.34	100-450-260-000	49.30
100-370-080-000	51.44	100-400-170-000	48.88	100-420-190-000	55.48	100-450-270-000	65.82
100-370-090-000	51.48	100-400-180-000	41.46	100-420-200-000	2.00	100-450-280-000	65.78
100-370-100-000	43.08	100-400-190-000	69.48	100-420-210-000	2.00	100-450-290-000	49.28
100-370-110-000	49.04	100-400-200-000	55.62	100-420-220-000	2.00	100-450-300-000	65.20
100-370-120-000	45.20	100-400-210-000	55.60	100-430-010-000	41.90	100-450-310-000	65.74
100-370-130-000	45.32	100-400-220-000	55.60	100-430-020-000	56.02	100-450-320-000	65.72
100-370-140-000	37.94	100-400-230-000	41.46	100-430-030-000	69.00	100-450-330-000	49.28
100-370-150-000	43.16	100-400-240-000	41.46	100-430-040-000	57.80	100-450-340-000	65.70
100-370-160-000	43.08	100-400-250-000	61.40	100-430-050-000	41.90	100-450-350-000	65.26
100-370-170-000	49.02	100-400-260-000	61.42	100-430-060-000	56.04	100-450-360-000	65.72
100-370-180-000	51.36	100-400-270-000	45.76	100-430-070-000	69.00	100-450-370-000	49.28
100-370-190-000	51.46	100-400-280-000	46.76	100-430-080-000	56.02	100-450-380-000	49.28
100-370-200-000	51.36	100-400-290-000	76.68	100-430-090-000	56.02	100-450-390-000	49.28
100-370-210-000	51.48	100-400-300-000	61.38	100-430-100-000	56.04	100-450-400-000	82.52
100-370-220-000	43.06	100-400-310-000	55.60	100-430-110-000	69.00	100-450-410-000	73.28
100-370-230-000	49.12	100-400-320-000	69.46	100-430-120-000	56.02	100-450-420-000	76.80
100-370-240-000	48.96	100-400-330-000	46.76	100-430-130-000	41.90	100-450-430-000	49.30
100-370-250-000	51.34	100-400-340-000	41.46	100-430-140-000	56.04	100-450-440-000	76.80
100-370-260-000	51.46	100-400-350-000	69.46	100-430-150-000	41.90	100-450-450-000	76.80
100-370-270-000	43.06	100-400-360-000	46.76	100-430-160-000	56.04	100-450-460-000	49.30
100-370-280-000	43.12	100-400-370-000	45.78	100-430-170-000	2.00	100-450-470-000	49.30
100-370-290-000	51.34	100-400-380-000	45.78	100-430-180-000	2.00	100-450-480-000	76.82
100-370-300-000	49.00	100-400-390-000	46.78	100-440-010-000	82.56	100-450-490-000	65.74
100-370-310-000	43.06	100-400-400-000	69.48	100-440-020-000	73.24	100-460-010-000	2.00
100-370-320-000	51.46	100-400-410-000	5.14	100-440-030-000	49.30	100-460-020-000	134.32
100-370-330-000	51.30	100-410-010-000	61.44	100-440-040-000	76.76	100-460-030-000	134.36
100-370-340-000	2.60	100-410-020-000	45.80	100-440-050-000	65.72	100-460-040-000	138.34
100-380-010-000	45.22	100-410-030-000	45.78	100-440-060-000	65.72	100-460-050-000	138.28
100-380-020-000	45.32	100-410-040-000	61.44	100-440-070-000	49.28	100-460-060-000	118.22
100-380-030-000	37.94	100-410-050-000	61.44	100-440-080-000	49.28	100-460-070-000	137.72
100-380-040-000	49.04	100-410-060-000	45.80	100-440-090-000	65.72	100-460-080-000	1812.74
100-380-050-000	45.20	100-410-070-000	45.80	100-440-100-000	76.86	100-460-090-000	1364.62
100-380-060-000	51.46	100-410-080-000	61.44	100-440-110-000	2.42	100-460-100-000	137.66
100-380-070-000	48.94	100-410-090-000	66.40	100-440-120-000	65.80	100-460-110-000	137.58
100-380-080-000	43.10	100-410-100-000	55.86	100-440-130-000	57.42	100-460-120-000	120.96
100-380-090-000	51.70	100-410-110-000	66.40	100-440-140-000	57.82	100-460-130-000	121.00
100-380-100-000	51.52	100-410-120-000	82.98	100-440-150-000	43.36	100-460-140-000	137.58
100-380-110-000	58.92	100-410-130-000	55.86	100-440-160-000	65.90	100-460-150-000	137.58
100-380-120-000	43.00	100-410-140-000	45.80	100-440-170-000	49.32	100-460-160-000	137.56
100-380-130-000	48.94	100-410-150-000	45.80	100-440-180-000	49.32	100-470-010-000	137.56
100-380-140-000	51.44	100-410-160-000	51.66	100-440-190-000	49.32	100-470-020-000	137.60
100-380-150-000	51.96	100-410-170-000	76.72	100-440-200-000	76.82	100-470-030-000	121.04
100-380-160-000	43.10	100-410-180-000	61.42	100-440-210-000	49.32	100-470-040-000	120.98
100-380-170-000	49.04	100-410-190-000	49.52	100-440-220-000	49.32	100-470-050-000	121.00
100-380-180-000	51.34	100-410-200-000	51.66	100-440-230-000	76.82	100-470-060-000	121.02
100-380-190-000	51.44	100-410-210-000	82.96	100-440-240-000	65.76	100-470-070-000	137.68
100-380-200-000	43.08	100-410-220-000	66.42	100-440-250-000	65.84	100-470-080-000	747.36
100-380-210-000	49.02	100-410-230-000	45.80	100-440-260-000	82.50	100-470-090-000	96.28
100-380-220-000	51.36	100-410-240-000	45.78	100-440-270-000	82.52	100-470-100-000	96.24
100-380-230-000	51.46	100-410-250-000	76.74	100-440-280-000	76.78	100-470-110-000	96.24
100-380-240-000	45.18	100-410-260-000	76.72	100-440-290-000	65.74	100-470-120-000	96.22
100-380-250-000	45.28	100-410-270-000	45.80	100-440-300-000	76.80	100-470-130-000	128.68
100-380-260-000	43.04	100-410-280-000	51.66	100-440-310-000	76.80	100-470-140-000	128.64
100-380-270-000	48.98	100-410-290-000	51.66	100-440-320-000	49.30	100-470-150-000	128.60
100-380-280-000	45.16	100-410-300-000	66.42	100-440-330-000	76.82	100-470-160-000	126.26
100-380-290-000	45.24	100-410-310-000	61.40	100-450-010-000	49.36	100-470-170-000	126.70
100-380-300-000	42.98	100-410-320-000	76.74	100-450-020-000	65.22	100-470-180-000	138.78
100-380-310-000	48.98	100-410-330-000	61.44	100-450-030-000	49.28	100-470-190-000	134.38



## APPENDIX E

### RD 1608 Proposed Assessment

APN	Amount	APN	Amount	APN	Amount
100-470-200-000	134.38				
100-470-210-000	118.14				
100-470-220-000	121.10				
100-480-010-000	102.94				
100-480-020-000	104.96				
100-480-030-000	103.78				
100-480-040-000	129.38				
100-480-050-000	113.42				
100-480-060-000	91.58				
100-480-070-000	101.82				
100-480-080-000	84.74				
100-480-090-000	84.76				
100-480-100-000	105.12				
100-480-110-000	92.52				
100-480-120-000	84.74				
100-480-130-000	100.70				
100-480-140-000	100.98				
100-480-150-000	97.14				
100-480-160-000	98.24				
100-480-170-000	98.96				
100-480-180-000	106.04				
100-480-190-000	110.08				
100-480-200-000	127.68				
100-480-210-000	129.10				
100-480-220-000	128.68				
100-490-010-000	91.66				
100-490-020-000	100.00				
100-490-030-000	121.46				
100-490-040-000	93.36				
100-490-050-000	102.52				
100-490-060-000	124.80				
100-490-070-000	104.40				
100-490-080-000	114.80				
100-490-090-000	84.72				
100-490-100-000	94.72				
100-490-110-000	113.78				
100-490-120-000	102.20				
100-490-130-000	112.86				
100-490-140-000	117.12				
100-490-150-000	84.76				
100-490-160-000	110.78				
100-490-170-000	84.74				
100-490-180-000	109.30				
100-490-190-000	84.84				
100-490-200-000	98.80				
100-490-210-000	101.88				
100-490-220-000	101.82				
100-490-230-000	106.10				
100-490-240-000	89.02				
100-490-250-000	89.72				
100-490-260-000	84.88				
100-490-270-000	105.18				
100-490-280-000	119.14				
100-490-290-000	119.90				