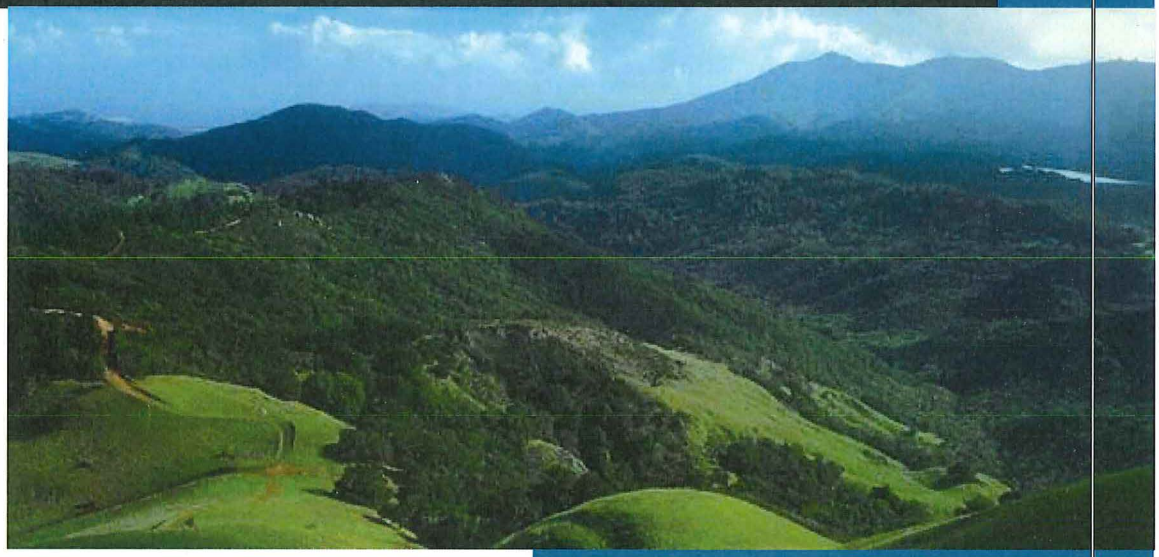
ROSS VALLEY FLOOD PROTECTION AND WATERSHED PROGRAM

FINAL Storm Drainage Fee Update Report



Marin County

Town of Fairfax

City of Larkspur

Town of Ross

Town of San Anselmo

July 2022

Prepared by:

Kristin Lowell, Inc.

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CERTIFICATES

The undersigned respectfully submits the enclosed Final Storm Drainage Fee Update Report as directed by the Board of Supervisors of the Marin County Flood Control and Water Conservation District.

Dated: July 14, 2022

TERRANCE E. LOWELL, P.E.,
For Kristin Lowell Inc.,
Engineer of Work

By Terrance E Lowell

I HEREBY CERTIFY that the enclosed Final Storm Drainage Fee Update Report was filed with me on the 19th day of July, 2022.

Carla Kacmar, Assistant Clerk of the Board, County of Marin, California

By Carla Kacmar

I HEREBY CERTIFY that the enclosed Final Storm Drainage Fee Update Report was approved and confirmed by the Board of Supervisors of the Marin County Flood Control and Water Conservation District, on the 19th day of July, 2022.

Carla Kacmar, Assistant Clerk of the Board, County of Marin, California

By Carla Kacmar

ENGINEER'S STATEMENT

This Report is prepared and submitted, as directed by the Marin County Flood Control and Water Conservation District Board of Supervisors ("District BOS"), pursuant to the Health and Safety Code Section 5473.1, as supplemented by Article XIIID Section 6 of the California Constitution.

The program which is subject of this report will be designed to:

> *Reduce damage due to flooding; maintain natural creek functions; reduce pollutants entering the Bay; incorporate habitat enhancements; and improve fish passage.*

The duration of the storm drainage fee is for an additional five (5) years, terminating with fiscal year 2026/27, and an estimated budget for the program is set forth in Exhibit B. Fees will be subject to an annual increase of up to 3% per year as determined by the District BOS. Funding for the storm drainage improvements shall be derived from a property-based fee levied on each parcel that drains into the watershed. A detailed description of the methodology for determining the fee for each parcel is set forth in Exhibit C.

This report includes the following attached exhibits:

EXHIBIT A: Description of the program.

EXHIBIT B: The estimate of the program cost to be financed through the fee program.

EXHIBIT C: A statement of the method by which the undersigned determined the proposed storm drainage fee to be charged against each parcel, based on the relative stormwater runoff.

EXHIBIT D: A list of the names and Assessor Parcel Numbers of the owners of real property along with the proposed fee.

Respectfully submitted,

Terrance E Lowell

TERRANCE E. LOWELL, P.E.

ANNUAL UPDATE

In July 2007, the District BOS approved the levy of a storm drainage fee against those parcels that drain into the Ross Valley Watershed. The fee is to pay a portion of the annual costs for the flood protection programs, see Exhibit A for detail.

1. Every year the District BOS is required to approve an annual update report in order to levy the storm drainage fee for the following fiscal year.

2. Additionally, each year there is the ability to increase the fee by up to 3%. This year the District BOS will not impose an annual fee increase. Instead, the fee levels for each land use type will remain the same as last year.

Please see Exhibit C for the fee methodology and rates.

EXHIBIT A: PROGRAM DESCRIPTION

History

The Ross Valley Watershed experienced flooding from a storm resulting in a 100-year flood on December 31, 2005. Engineers use that term to describe a storm that has a 1% chance of occurring in any given year, not a storm that occurs only once in 100 years. In fact, Ross Valley has experienced two 100-year storms since 1980 (1982 and 2005). Much of Ross Valley's drainage system currently provides a 6-year level of flood protection, meaning that it can be overwhelmed by a storm that has a 16.7% chance of occurring in any year.

The Ross Valley Flood Protection & Watershed Program (Program) is a multi-jurisdictional, regional effort with the Marin County Flood Control and Water Conservation District (District) as the lead agency. The Program is a partnership between the District, County of Marin, Towns of Fairfax, San Anselmo, Ross, and City of Larkspur along with the unincorporated communities of Greenbrae, Kentfield, Sleepy Hollow and Oak Manor. The overall goal is to substantially reduce the frequency and severity of flooding throughout the Ross Valley Watershed in an economically viable manner while prioritizing public safety and minimizing environmental impacts.

The Program's overall, long-range goal is to increase the existing 6-year level of protection to a 100-year level and it is currently organized around two phases of work to address flooding issues within the Ross Valley. Phase 1 of the remaining fee years (2019 – 2027), will continue the shorter-term target goal of between 10-year and 25-year level of flood protection. Phase 2 (2028 – 2050), depending on securing funding sources such as grants and a renewal of the storm drainage fee for the typically required local matching funds, will add additional measures to work toward achieving a target goal of 25-year to 100-year level of flood protection.

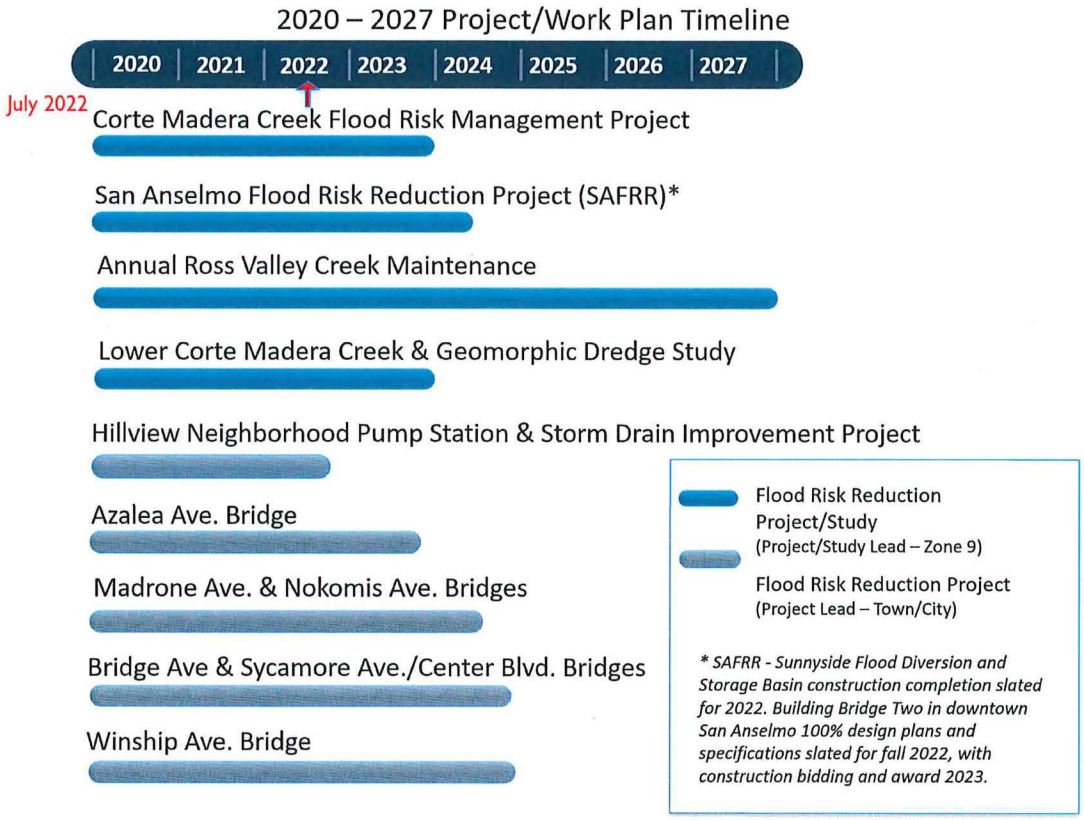
The District intends to meet the Phase 1 objectives through the following actions:

- Increase creek and floodplain capacity to convey floodwaters by:
    - Enlarging some channels through the removal, modification or replacement of existing obstructions to flow, such as structures or bridges
    - Containing flood flows as they move through the watershed
    - Conducting regular creek and channel maintenance
- Reduce and attenuate flows by increasing floodplain detention storage and stormwater infiltration
- Community flood education including flood preparedness real-time rain and stream monitoring, flood response checklists and information

The projects and studies featured within the Fiscal Year (FY) 2021 – 2022 Work Plan are reflective of the current Program goal and objectives. In FY 2022 - 2023 no new projects are being proposed and we are still proceeding consistent with the 2020 - 2021 Work Plan. Figure A (page 2) is a visual timeline of the projects and studies currently underway and part of the Program Work Plan.

Visit the Program website for the FY 2022 – 2023 Baseline Budget Report:
https://www.marinwatersheds.org/sites/default/files/2022-04/Proposed%20FZ9%20FY23%20Baseline%20Budget.pdf

Figure A



Program Workplan is funded through a combination of funding sources including;

- Flood Zone 9 Storm drainage Fees
- State grant funds from the Department of Water Resources in support of the San Anselmo Flood Risk Reduction Project, Corte Madera Creek Flood Risk Management Project - Phase 1, and Local Levee Assistance Program for Lower Corte Madera Creek Improvement Study (additional grants are being pursued by project partners for Phase 2)
- Federal appropriations through the Army Corps of Engineers for the Corte Madera Creek Flood Risk Management Project (formally Army Corps of Engineers Corte Madera Creek Project, Units 2, and 3, and 4). Note: appropriations for new construction projects beyond 2019 are not anticipated
- County of Marin general fund (< $100k) to assist with ongoing maintenance and/or installation costs for the District led rain/stream gage program & alert system, and public engagement and outreach such as for the Community Rating System
- Federal Emergency Management Agency Hazard Mitigation Grant Program administered by the California Office of Emergency Services (e.g: as a funding source for residential home elevation grant applicants)

Proposed Projects and Program Activities

The Ross Valley Watershed Storm drainage fee, along with the other funding sources listed above, will support the continued development and implementation of the projects and activities outlined in the Fiscal Year 2021-22 Work Plan, described in more detail below. The District may explore financing options this fiscal year to ensure necessary cash flow is available during anticipated project construction. Please visit the Program website at www.RossValleyWatershed.org for the budget and more information.

1. **Corte Madera Creek Flood Risk Management Project**

   The objective of the project is to reduce peak flood flow water surface elevations while minimizing any downstream impacts; restoring sections of the existing concrete channel to provide more natural creek habitat and floodplain overflow areas where possible and improving fish passage through the concrete channel. In Fiscal Year 2021-2022, the locally led project incorporated input from previous public workshops and community feedback to produce a Final EIR and complete the CEQA process. In Fiscal Year 2022-2023 coordination with District Partners including Town of Ross, College of Marin, Friends of Corte Madera Creek, and regulatory agencies will finalize the project plans and specifications and construct portions of the overall project that do not require FEMA review. The District submitted environmental permitting applications and is continuing to work with the US Army Corps of Engineers for 408 approval to modify the existing Corps project and with FEMA for the portions of the project that do impact water surface elevations. Construction for portions of the project that undergo FEMA review are anticipated to begin in 2023.

   Learn more by visiting the project page:
   http://www.marinwatersheds.org/resources/projects/usace-corte-madera-creek-flood-risk-management-project

2. **San Anselmo Flood Risk Reduction Project**

   The objective of the project is to reduce both peak flows in Fairfax Creek and out-of-bank flow in San Anselmo Creek in concert with other flood risk reduction measures. In Fiscal Year 2022-23, the project will continue in design, permitting and construction of three project components: (1) Sunnyside Flood Diversion and Storage Basin at 3000 Sir Francis Drake Boulevard (Phase 2 Construction); (2) the removal of a building at 634-636 San Anselmo Avenue in San Anselmo, a structure that partially obstructs the flow of San Anselmo Creek; and (3) flood mitigation measures on downstream private properties that may see impacts from the project. Construction of the project started in 2019 and will continue in phases through 2023.

   Learn more by visiting the project page:
   http://www.marinwatersheds.org/resources/projects/san-anselmo-flood-risk-reduction-safrr-project

3. **Ross Valley Bridge Projects**

   The District will continue to work closely with the Towns of Ross, San Anselmo and Fairfax on final designs and environmental review for bridge modifications /replacements that will increase flow capacity in the creeks and reduce localized flooding. Nine (9) bridges were

originally identified for replacement in the 10 Year Work Plan, seven (7) of which received Caltrans funding. The District has provided local matching funds for Design and CEQA through local storm drainage fees and the towns will continue to provide project management. Five (5) of the bridge projects were approved for Caltrans funding (88.5%-100% funding by Caltrans) including:

- Azalea Avenue Bridge, Town of Fairfax

  [http://fairfaxbridges.com/about/azalea-avenue-bridge/]
- Madrone Avenue Bridge Replacement, Town of San Anselmo

  [https://www.sananselmobridges.org/Madrone]
- Nokomis Avenue Bridge Replacement, Town of San Anselmo

  [https://www.sananselmobridges.org/Nokomis]
- Sycamore Avenue/Center Boulevard Bridge Replacement, Town of San Anselmo

  [https://www.sananselmobridges.org/Center]
- Winship Avenue Bridge, Town of Ross

  [https://www.townofross.org/publicworks/page/winship-bridge-replacement-project]

Funding is currently being sought by the Towns for the replacement of the Bridge Avenue Bridge in the Town of San Anselmo and the Sir Francis Drake Boulevard Bridge in Town of Ross. Although Caltrans has placed funding of the bridge projects on hold the Towns are seeking funding sources to proceed in replacing the bridges.

4. Lower Corte Madera Creek Improvement Study

The Study provided a comprehensive assessment of the current condition of the levee and creek system downstream of the concrete channel and identified and provided recommendations for improvements including how to achieve the equilibrium channel dimensions for Corte Madera Creek (also known as the Geomorphic Dredge study). The Study considered potential project concepts that could be partially funded for final design and construction under the Department of Water Resources Local Levee Assistance Program or from other funding sources. In Fiscal Year 2019-20, the Local Levee Evaluation Study was completed and is available from the project page:

http://www.marinwatersheds.org/resources/projects/lower-corte-madera-creek-levee-evaluation

Work in Fiscal Year 2022-23 will continue to develop a future technical report to describe the Geomorphic Dredge study and design basis. The report is anticipated to be completed in Fiscal Year 2022-23.

5. Hillview Stormdrain and Pump Station Project

Led by City of Larkspur with Caltrans provided funding to the City for the pump station component, the proposed project includes drainage improvements in the Hillview neighborhood and seeks to minimize the need to perform sediment removal in Corte

Madera Creek at existing storm drainage outfalls. Periodic sediment removal has been necessary in the past to provide pathways from these outfalls to the main creek channel to properly discharge Hillview neighborhood drainage. The initial conceptual design to improve the drainage in the neighborhood was envisioned to redirect storm drains within Hillview Gardens to a new pump station on Bon Air Road constructed through the City of Larkspur Bon Air Road Bridge Replacement Project. In Fiscal Year 2020-21 the District continued coordination with City of Larkspur on environmental review, final design, and construction planning and awarded the construction contract in June 2021 with construction planned to be completed in summer/fall 2022 in coordination with the completion of Bon Air Road Bridge Replacement Project.

Learn more by visiting the project page:
http://www.marinwatersheds.org/resources/projects/hillview-pump-station-stormdrain-improvements

6. Annual Creek Maintenance Program

The District is continuing the annual creek maintenance program within unincorporated and incorporated areas in coordination with the municipalities to manage debris, sediment, and flow-inhibiting vegetation before the winter rainy season. The District may also continue to work with Ross Valley public agencies to facilitate local community creek cleanups.

Maintenance activities, including Town and City led efforts reimbursed by the Flood Zone 9, may occur on the following creeks: Corte Madera Creek concrete and earthen channel, Bothin Creek, Fairfax Creek, Larkspur Creek, Murphy Creek, Ross Creek, San Anselmo Creek, Sleepy Hollow Creek, Sorich Creek, Van Winkle Creek and connecting culverts, and City of Larkspur drainage ditches on publicly maintained lands near 600 Magnolia Avenue and 444 block of William Avenue. Stream maintenance programmatic permits are in the process of being renewed with CA Department of Fish & Wildlife and with the San Francisco Regional Water Quality Control Board.

Learn more by visiting the activity page:
http://www.marinwatersheds.org/resources/projects/ross-valley-creek-conveyance-and-habitat-maintenance-program

Stream Maintenance Manual:

https://www.marinwatersheds.org/resources/publications-reports/marin-county-stream-maintenance-manual

7. Program Activities

Completing and/or updating necessary hydrology/hydraulic modeling, collecting finished floor elevation information, purchase of land for flood risk reduction purposes, storm and flood monitoring systems (such as creek/tide gauges, creek monitoring cameras, real-time website, public information), flood preparedness outreach, and overall program implementation and administration (such as obtaining and administering grants and bonds, and regulatory permits, California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documents, and integrated flood control planning with local jurisdictions).

The District will continue to pursue outside funding opportunities for the 10 Year Work Plan projects as funding opportunities arise. This includes participation in the Marin County Multi-Jurisdictional Local Hazard Mitigation Plan updates in order to be eligible for FEMA Hazard Mitigation Assistance.

Other on-going activities include participation in local fish passage and habitat enhancement projects, required annual maintenance and inspections and repairs to the concrete channel section and downstream sections of the U.S. Army Corps of Engineers project.

EXHIBIT B: COST ESTIMATE

The following table identifies the *approximate* cost to provide the program related work as outlined in Exhibit A for Fiscal Year 2022/23.

Program Description	Program Cost
Flood Protection Programs *	$12,705,600
LESS: Other funding sources	($10,068,040)
Total Cost Assigned to FY 2022/23 Fee	**$2,637,560**

** Estimated costs for Fiscal Year 2022/23, if all projects and programs identified in Exhibit A are constructed. The estimated program cost includes proposed project expenditures that are not captured in the $1,889,971 Zone 9 baseline budget adopted by the District BOS on June 22, 2022, such as estimated $10,860,629 in prior year carry-forward contract encumbrances and future project contract encumbrances recommended by the Advisory Board to the District BOS. The intent of the baseline budget is to fund ordinary maintenance, annual programmatic costs, and preliminary project planning with the expectation that major project costs such as design and construction contracts be approved by the District BOS along with budget adjustments. The Zone 9 budget will be adjusted as needed and authorized by the District BOS to award major project contracts.*

EXHIBIT C: FEE METHODOLOGY

General

The Health and Safety Code allows the District BOS to charge a fee for acquiring, constructing, reconstructing, maintaining, and operating storm drainage facilities. As discussed in Exhibit A, the District has outlined the intended storm drainage improvement programs to alleviate the localized flooding. In order to fund these improvements, the District intends to levy a fee to parcels that drain into the watershed.

Fee Methodology

The fee for each property is related to how much stormwater runoff it generates. Land that is developed, for example, with a house, commercial building or parking lot, creates more stormwater runoff than a vacant piece of land. The more hard surface coverage a parcel has the more "impervious" area and stormwater runoff it generates. Typically, the smaller sized developed parcels have a higher impervious factor than the larger size developed parcels with the same amount of hard surface coverage. The reason being is that the smaller size parcel has less undeveloped ground to absorb the stormwater. Generally, an impervious surface is a hardened surface (concrete, rooftop, asphalt, compacted gravel, etc.) that does not absorb stormwater. Such features do not allow stormwater to soak into the ground thereby generating runoff. This runoff may increase the potential for flooding, pollutants flowing into the water basin and lower stream base flows, and decreased infiltration of storm water into the soil.

Even though every parcel drains into and uses the storm drainage system, not all parcels use the system to the same degree. In order to determine the benefit relationship between the parcels we assign a "Basic Drainage Unit" (BDU) factor to every parcel. In this way we relate the single-family parcel, the most common land use, to all other land use types; multi-family, condominium/townhome, commercial/industrial. The median single-family parcel in the Watershed is approximately 0.19 acres with an average impervious factor of 31%. As an example, a parcel consisting of a completely impervious parking lot without any landscaping would be considered 100% impervious. Within each land use type we have further defined parcel sizes into 5 size categories. Each land use type is separated into the following parcel size categories, in acres;

0 - 0.15,
0.151 - 0.25,
0.251 - 0.50,
0.501 – 1.0,
1.0 and greater.

Each land use type also has distinct impervious surfaces by size category. The following table illustrates the BDUs for each land use type by size category and basic drainage unit factors.

Basic Drainage Unit (BDU) Factors

Acres	Single Family, BDU	Condos/ Townhomes, BDU	Multi Family, BDU	Commercial/ Industrial, BDU
0.0 - 0.150	0.862	0.240	0.687	1.251
0.151 - 0.250	1.000	0.879	1.120	2.300
0.251 - 0.500	1.183	0.000	1.577	5.168
0.501 - 1.00	1.684	0.000	2.418	9.130
> 1.01	2.791	0.000	Individual*	Individual*

*Individual BDU calculation is described in 'Fee Calculation' section below.

Fee Calculation

As discussed, each parcel is assigned a BDU factor. One BDU will receive a stormwater fee amount of $153.76 (which is the same as last fiscal year). That is to say that a single-family parcel in the 0.151 - 0.25 size category will be charged a fee of $153.76. Whereas a condo/townhome parcel in the 0 - 0.15 size category will be charged a fee of $36.92 because its BDU factor is 0.240 ($153.76 x 0.240 = $36.92). All land use types, and size categories are calculated in like manner with each receiving a unique fee amount. *Note: the BDU and fee amounts are rounded to the third and second decimal place respectively which may vary slightly when calculated by hand.* Single Family Residence fees are capped at $221.40. Because of the unique characteristics and development of the parcels greater than one acre for multi-family and commercial/industrial, each of those parcel's fee amounts will be calculated individually. The individual calculation for multi-family commercial/industrial parcels greater than one acre incorporates the acreage, impervious percentage of the individual property, and single BDU cost of $153.76 to determine the individual fee amount.

The following tables illustrate the fee amount for each land use type and size category.

Single Family:

Acres	Drainage Fee per BDU	# of Parcels in Range
0.0 - 0.150	$132.48	3,410
0.151 - 0.250	$153.76	4,334
0.251 - 0.500	$181.86	2,717
0.501 - 1.00	$221.40	1,239
> 1.01	$221.40	746

Condos/Townhomes:

Acres	Drainage Fee per BDU	# of Parcels in Range
0.0 - 0.150	$36.92	1,582
0.151 - 0.250	$135.08	6
0.251 - 0.500	$0.00	0
0.501 - 1.00	$0.00	0
> 1.01	$0.00	0

Multi Family:

Acres	Drainage Fee per BDU	# of Parcels in Range
0.0 - 0.150	$105.64	236
0.151 - 0.250	$172.20	234
0.251 - 0.500	$242.38	121
0.501 - 1.00	$371.80	42
> 1.01	Individual	24

Commercial/Industrial:

Acres	Drainage Fee per BDU	# of Parcels in Range
0.0 - 0.150	$192.32	167
0.151 - 0.250	$353.56	77
0.251 - 0.500	$794.50	87
0.501 - 1.00	$1,403.62	51
> 1.01	Individual	44

EXHIBIT D: OWNER LISTING and FEE AMOUNT

The total estimated fee revenue for Fiscal Year 2022/23 is $2,637,560.

The complete owner's listing and fee amounts is included in Attachment A.