

TECHNICAL MEMORANDUM

To: Steve Fordice, Reclamation District 784

From: Ellen Martin and Megan Quinn

Subject: Inflation-Adjusted Reclamation District 784 Drainage Impact Fees; EPS #122142

Date: June 29, 2018

The Economics of Land Use



Reclamation District No. 784 (RD 784) has a drainage impact fee program in place to fund drainage improvements serving new development in Basins A, B, and C. A discrete fee is computed for each drainage basin based on the drainage improvements required to serve benefitting development in each individual basin. In addition, discrete fees are computed for drainage sub-basins in Basin A (Basin A-1) and Basin C (Basin C-1 and Basin C-2). The drainage impact fee program also includes an Advance Funding Charge applicable to Basin C development that accelerates funding for regional improvements benefitting Basin C.

The discussion below and attached tables provide the basis for the Drainage Impact Fee program inflation adjustments by drainage basin. This analysis calculates inflated RD 784 drainage fees for the following basins and sub-basins:

- Drainage Basin A.
- Drainage Basin A-1.
- Drainage Basin B.
- Drainage Basin C.
- Drainage Basin C-1.
- Drainage Basin C-2.
- Drainage Basin C Advance Funding Charge.

Consistent with the methodology set forth in the 2013 RD 784 Nexus Study addenda and the 2015 Basin C-2 Nexus Study, EPS adjusted the improvement cost estimates using the average of the change in the San Francisco Construction Cost Index (CCI) and the change in the 20-City CCI, as reported in the Engineering News-Record.

The table below summarizes the basis for the improvement cost estimate adjustment from May 2017 to May 2018.

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Construction Cost Index Adjustment Factor for 2018 Update

Construction Cost Index	May 2017	May 2018	Adjustment Factor
20-City Average	10,692	11,013	3.00%
San Francisco	11,691	12,015	2.77%
Average % Increase			2.88%

"cci_18"

Source: Engineering News Record.

At the June 6, 2018, board meeting, the RD 784 Board of Trustees (Trustees) established two changes to the RD 784 drainage impact fee program, which are described below:

- **Nonresidential Agricultural Building Impact Fee Rate:** Under the Nexus Analysis supporting adoption of the fees, agricultural buildings are considered industrial uses and charged the industrial fee rate. Effective June 6, 2018, the Trustees established a new rate and policy for nonresidential agricultural buildings for Basin A, Basin B, and Basin C. Under this policy, for infill projects on individual parcels or small development projects of four (4) parcels or fewer, the rate for agriculture buildings is one-half of the industrial rate and equal to the low-density residential rate. The fee applies if structures are located outside of established residential neighborhoods. Nonresidential agricultural projects anywhere in Basin A will be assessed at the Basin A-1 agricultural rate.
- **Waiving Imposition of Basin C Advanced Funding Fees on Infill Projects:** The Basin C Advance Funding Charge is waived for infill projects for individual residential homeowners and small development projects (four [4] parcels or fewer), effective June 6, 2018.

Table 1 through **Table 6** provide the updated fees for each basin, sub-basin, and the Drainage Basin C Advance Funding Charge.

Please contact Ellen Martin at (916) 649-8010 with questions or comments regarding this memorandum.

Table 1
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin A and A-1 (2018\$)

Basin A

Land Use Category	2017 Cost per Acre	2018 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.88% [1]	3%	1%	
DRAINAGE BASIN A [2]					
Residential Land Uses					
Low Density Residential	\$6,246	\$6,426	\$193	\$64	\$6,683
Medium Density Residential	\$7,807	\$8,032	\$241	\$80	\$8,353
Medium/High Density Residential	\$9,368	\$9,638	\$289	\$96	\$10,023
High Density Residential	\$10,149	\$10,442	\$313	\$104	\$10,859
Nonresidential Land Uses					
Business Park	\$14,052	\$14,458	\$434	\$145	\$15,037
Commercial	\$14,052	\$14,458	\$434	\$145	\$15,037
Industrial	\$12,491	\$12,851	\$386	\$129	\$13,366
Agricultural Building [3]	\$11,227	\$11,550	\$347	\$116	\$12,013
Public/Other Land Uses					
School	\$8,588	\$8,835	\$265	\$88	\$9,188
Other [4]	\$12,491	\$12,851	\$386	\$129	\$13,366
DRAINAGE BASIN A-1 [2] <i>(All Development Excl. Sawyer's Landing and Bear River)</i>					
Residential Land Uses					
Low Density Residential	\$11,227	\$11,550	\$347	\$116	\$12,013
Medium Density Residential	\$14,033	\$14,438	\$433	\$144	\$15,015
Medium/High Density Residential	\$16,840	\$17,326	\$520	\$173	\$18,019
High Density Residential	\$18,243	\$18,770	\$563	\$188	\$19,521
Nonresidential Land Uses					
Business Park	\$25,260	\$25,989	\$780	\$260	\$27,029
Commercial	\$25,260	\$25,989	\$780	\$260	\$27,029
Industrial	\$22,453	\$23,101	\$693	\$231	\$24,025
Agricultural Building [3]	\$11,227	\$11,550	\$347	\$116	\$12,013
Public/Other Land Uses					
School	\$15,437	\$15,882	\$476	\$159	\$16,517
Other [4]	\$22,453	\$23,101	\$693	\$231	\$24,025

fee_sum_18

- [1] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.
- [2] Basin A fee rates would apply to Sawyer's Landing and Bear River only. Drainage Basin A-1 rates would apply to all other Basin A development. Note that the fees for each basin are mutually exclusive and not additive.
- [3] Agricultural building rate established by the RD 784 Board of Trustees policy, effective June 6, 2018. Agricultural building fee rate applies to infill projects on individual parcels or small development projects of four (4) parcels or fewer and if these structures are located outside of established residential neighborhoods. Nonresidential, agricultural projects anywhere within Basin A will be assessed at the Basin A-1 agricultural rate.
- [4] Excludes parks, which are exempt from the fee.

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Table 2
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin B (2018\$)

Basin B

Land Use Category	2017 Cost per Acre	2018 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.88% [1]	3%	1%	
Residential Land Uses					
Low Density Residential	\$9,456	\$9,729	\$292	\$97	\$10,118
Medium Density Residential	\$11,821	\$12,161	\$365	\$122	\$12,648
Medium/High Density Residential	\$14,185	\$14,594	\$438	\$146	\$15,178
High Density Residential	\$15,366	\$15,809	\$474	\$158	\$16,441
Nonresidential Land Uses					
Business Park	\$21,277	\$21,890	\$657	\$219	\$22,766
Commercial	\$21,277	\$21,890	\$657	\$219	\$22,766
Industrial	\$18,913	\$19,458	\$584	\$195	\$20,237
Agricultural Building [2]	\$9,456	\$9,729	\$292	\$97	\$10,118
Public/Other Land Uses					
School	\$13,002	\$13,377	\$401	\$134	\$13,912
Other [3]	\$18,913	\$19,458	\$584	\$195	\$20,237

fee_sum_18

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.

[2] Agricultural building rate established by the RD 784 Board of Trustees policy, effective June 6, 2018. Agricultural building fee rate applies to infill projects on individual parcels or small development projects of four (4) parcels or fewer and if these structures are located outside of established residential neighborhoods.

[3] Excludes parks, which are exempt from the fee.

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Table 3
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin C (2018\$)

Basin C

Land Use Category	2017 Cost per Acre	2018 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.88% [1]	3%	1%	
	DRAINAGE BASIN C [2]				
Residential Land Uses					
Low Density Residential	\$15,884	\$16,342	\$490	\$163	\$16,995
Medium Density Residential	\$19,855	\$20,428	\$613	\$204	\$21,245
Medium/High Density Residential	\$23,825	\$24,512	\$735	\$245	\$25,492
High Density Residential	\$25,812	\$26,556	\$797	\$266	\$27,619
Commercial					
Business Park	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Commercial	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Industrial	\$31,768	\$32,684	\$981	\$327	\$33,992
Agricultural Building [3]	\$15,884	\$16,342	\$490	\$163	\$16,995
Other					
School	\$21,840	\$22,470	\$674	\$225	\$23,369
Other [4]	\$31,768	\$32,684	\$981	\$327	\$33,992

fee_sum_18

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.

[2] Applies to all Basin C development, including outside sub-basins C-1 and C-2.

[3] Agricultural building rate established by the RD 784 Board of Trustees policy, effective June 6, 2018. Agricultural building fee rate applies to infill projects on individual parcels or small development projects of four (4) parcels or fewer and if these structures are located outside of established residential neighborhoods.

[4] Excludes parks, which are exempt from the fee.

Table 4
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin C-1 (2018\$)

Basin C-1 Development

Land Use Category	2017 Cost per Acre	2018 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.88% [1]	3%	1%	
DRAINAGE BASIN C FEE					
Residential Land Uses					
Low Density Residential	\$15,884	\$16,342	\$490	\$163	\$16,995
Medium Density Residential	\$19,855	\$20,428	\$613	\$204	\$21,245
Medium/High Density Residential	\$23,825	\$24,512	\$735	\$245	\$25,492
High Density Residential	\$25,812	\$26,556	\$797	\$266	\$27,619
Commercial					
Business Park	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Commercial	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Industrial	\$31,768	\$32,684	\$981	\$327	\$33,992
Agricultural Building [2]	\$15,884	\$16,342	\$490	\$163	\$16,995
Other					
School	\$21,840	\$22,470	\$674	\$225	\$23,369
Other [3]	\$31,768	\$32,684	\$981	\$327	\$33,992
DRAINAGE BASIN C-1 SURCHARGE					
Residential Land Uses					
Low Density Residential	\$8,418	\$8,661	\$260	\$87	\$9,008
Medium Density Residential	\$10,523	\$10,826	\$325	\$108	\$11,259
Medium/High Density Residential	\$12,627	\$12,992	\$390	\$130	\$13,512
High Density Residential	\$13,680	\$14,074	\$422	\$141	\$14,637
Commercial					
Business Park	\$18,941	\$19,487	\$585	\$195	\$20,267
Commercial	\$18,941	\$19,487	\$585	\$195	\$20,267
Industrial	\$16,837	\$17,322	\$520	\$173	\$18,015
Agricultural Building [2]	\$8,418	\$8,661	\$260	\$87	\$9,008
Other					
School	\$11,575	\$11,909	\$357	\$119	\$12,385
Other [3]	\$16,837	\$17,322	\$520	\$173	\$18,015
TOTAL DRAINAGE BASIN C-1 FEE					
Residential Land Uses					
Low Density Residential	\$24,302	\$25,003	\$750	\$250	\$26,003
Medium Density Residential	\$30,378	\$31,254	\$938	\$312	\$32,504
Medium/High Density Residential	\$36,453	\$37,504	\$1,125	\$375	\$39,004
High Density Residential	\$39,491	\$40,630	\$1,219	\$407	\$42,256
Commercial					
Business Park	\$54,680	\$56,257	\$1,688	\$563	\$58,508
Commercial	\$54,680	\$56,257	\$1,688	\$563	\$58,508
Industrial	\$48,605	\$50,006	\$1,501	\$500	\$52,007
Agricultural Building [2]	\$24,302	\$25,003	\$750	\$250	\$26,003
Other					
School	\$33,416	\$34,379	\$1,031	\$344	\$35,754
Other [3]	\$48,605	\$50,006	\$1,501	\$500	\$52,007

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[1] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.

[2] Agricultural building rate established by the RD 784 Board of Trustees policy, effective June 6, 2018. Agricultural building fee rate applies to infill projects on individual parcels or small development projects of four (4) parcels or fewer and if these structures are located outside of established residential neighborhoods.

[3] Excludes parks, which are exempt from the fee.

**Table 5
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin C-2 (2018\$)**

**Basin C-2
Development**

Land Use Category	2017 Cost per Acre	2018 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.88% [1]	3%	1%	
DRAINAGE BASIN C FEE					
Residential Land Uses					
Low Density Residential	\$15,884	\$16,342	\$490	\$163	\$16,995
Medium Density Residential	\$19,855	\$20,428	\$613	\$204	\$21,245
Medium/High Density Residential	\$23,825	\$24,512	\$735	\$245	\$25,492
High Density Residential	\$25,812	\$26,556	\$797	\$266	\$27,619
Commercial					
Business Park	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Commercial	\$35,739	\$36,770	\$1,103	\$368	\$38,241
Industrial	\$31,768	\$32,684	\$981	\$327	\$33,992
Agricultural Building [2]	\$15,884	\$16,342	\$490	\$163	\$16,995
Other					
School	\$21,840	\$22,470	\$674	\$225	\$23,369
Other [3]	\$31,768	\$32,684	\$981	\$327	\$33,992
DRAINAGE BASIN C-2 SURCHARGE					
Residential Land Uses					
Low Density Residential	\$6,606	\$6,797	\$204	\$68	\$7,069
Medium Density Residential	\$8,258	\$8,496	\$255	\$85	\$8,836
Medium/High Density Residential	\$9,909	\$10,195	\$306	\$102	\$10,603
High Density Residential	\$10,735	\$11,045	\$331	\$110	\$11,486
Commercial					
Business Park	\$14,864	\$15,293	\$459	\$153	\$15,905
Commercial	\$14,864	\$15,293	\$459	\$153	\$15,905
Industrial	\$13,213	\$13,594	\$408	\$136	\$14,138
Agricultural Building [2]	\$6,606	\$6,797	\$204	\$68	\$7,069
Other					
School	\$9,084	\$9,346	\$280	\$93	\$9,719
Other [3]	\$13,213	\$13,594	\$408	\$136	\$14,138
TOTAL DRAINAGE BASIN C-2 FEE					
Residential Land Uses					
Low Density Residential	\$22,490	\$23,139	\$694	\$231	\$24,064
Medium Density Residential	\$28,113	\$28,924	\$868	\$289	\$30,081
Medium/High Density Residential	\$33,735	\$34,708	\$1,041	\$347	\$36,096
High Density Residential	\$36,547	\$37,601	\$1,128	\$376	\$39,105
Commercial					
Business Park	\$50,603	\$52,063	\$1,562	\$521	\$54,146
Commercial	\$50,603	\$52,063	\$1,562	\$521	\$54,146
Industrial	\$44,981	\$46,278	\$1,388	\$463	\$48,129
Agricultural Building [2]	\$22,490	\$23,139	\$694	\$231	\$24,064
Other					
School	\$30,924	\$31,816	\$954	\$318	\$33,088
Other [3]	\$44,981	\$46,278	\$1,388	\$463	\$48,129

c2_2018

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.
 [2] Agricultural building rate established by the RD 784 Board of Trustees policy, effective June 6, 2018. Agricultural building fee rate applies to infill projects on individual parcels or small development projects of four (4) parcels or fewer and if these structures are located outside of established residential neighborhoods.
 [3] Excludes parks, which are exempt from the fee.

Table 6
Reclamation District 784
Drainage Impact Fee Update
Basin C Advance Funding Charge (2018\$) [1]

Item	Amount
Advance Funding Charge per Acre (2017\$)	\$45,896
Adjustment Factor (May 2017-May 2018) [2]	2.88%
Adjusted Advance Funding Charge per Acre	\$47,219

advance_18

[1] The Basin C Advance Funding Charge is waived for infill projects for individual residential homeowners and small development projects (four (4) parcels or fewer), effective June 6, 2018.

[2] CCI average adjustment factor of San Francisco and 20-City average for May 2017 to May 2018.