

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: May 23, 2019

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 2018 to May 2019.

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Construction Cost Index Adjustment Factor for 2019 Update

Construction Cost Index	May 2018	May 2019	Adjustment Factor
20-City Average	11,013	11,230	1.97%
San Francisco	12,015	12,333	2.65%
Average % Increase			2.31%

cci_19

Source: Engineering News Record.

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 (2019\$)

Basin A

Land Use Category	2018 Cost per Acre	2019 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.31% [1]	3%	1%	
	DRAINAGE BASIN A [2]				
Residential Land Uses					
Low Density Residential	\$6,426	\$6,574	\$197	\$66	\$6,837
Medium Density Residential	\$8,032	\$8,218	\$247	\$82	\$8,547
Medium/High Density Residential	\$9,638	\$9,861	\$296	\$99	\$10,256
High Density Residential	\$10,442	\$10,683	\$320	\$107	\$11,110
Nonresidential Land Uses					
Business Park	\$14,458	\$14,792	\$444	\$148	\$15,384
Commercial	\$14,458	\$14,792	\$444	\$148	\$15,384
Industrial	\$12,851	\$13,148	\$394	\$131	\$13,673
Agricultural Building [3]	\$11,550	\$11,818	\$355	\$118	\$12,291
Public/Other Land Uses					
School	\$8,835	\$9,040	\$271	\$90	\$9,401
Other [4]	\$12,851	\$13,148	\$394	\$131	\$13,673
	DRAINAGE BASIN A-1 [2] <i>(All Development Excl. Sawyer's Landing and Bear River)</i>				
Residential Land Uses					
Low Density Residential	\$11,550	\$11,818	\$355	\$118	\$12,291
Medium Density Residential	\$14,438	\$14,772	\$443	\$148	\$15,363
Medium/High Density Residential	\$17,326	\$17,726	\$532	\$177	\$18,435
High Density Residential	\$18,770	\$19,204	\$576	\$192	\$19,972
Nonresidential Land Uses					
Business Park	\$25,989	\$26,590	\$798	\$266	\$27,654
Commercial	\$25,989	\$26,590	\$798	\$266	\$27,654
Industrial	\$23,101	\$23,635	\$709	\$236	\$24,580
Agricultural Building [3]	\$11,550	\$11,818	\$355	\$118	\$12,291
Public/Other Land Uses					
School	\$15,882	\$16,249	\$487	\$162	\$16,898
Other [4]	\$23,101	\$23,635	\$709	\$236	\$24,580

fee_sum_19

- [1] CCI average adjustment factor of San Francisco and 20-City average for May 2018 to May 2019.
- [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.

Table 2
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin B (2019\$)

Basin B

Land Use Category	2018 Cost per Acre	2019 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.31% [1]	3%	1%	
Residential Land Uses					
Low Density Residential	\$9,729	\$9,954	\$299	\$100	\$10,353
Medium Density Residential	\$12,161	\$12,443	\$373	\$124	\$12,940
Medium/High Density Residential	\$14,594	\$14,931	\$448	\$149	\$15,528
High Density Residential	\$15,809	\$16,175	\$485	\$162	\$16,822
Nonresidential Land Uses					
Business Park	\$21,890	\$22,397	\$672	\$224	\$23,293
Commercial	\$21,890	\$22,397	\$672	\$224	\$23,293
Industrial	\$19,458	\$19,908	\$597	\$199	\$20,704
Agricultural Building [2]	\$9,729	\$9,954	\$299	\$100	\$10,353
Public/Other Land Uses					
School	\$13,377	\$13,686	\$411	\$137	\$14,234
Other [3]	\$19,458	\$19,908	\$597	\$199	\$20,704

fee_sum_19

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2018 to May 2019.

[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 3
Reclamation District 784
Drainage Impact Fee Update
Summary of Drainage Impact Fees - Basin C (2019\$)

Basin C

Land Use Category	2018 Cost per Acre	2019 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.31% [1]	3%	1%	
DRAINAGE BASIN C [2]					
Residential Land Uses					
Low Density Residential	\$16,342	\$16,720	\$502	\$167	\$17,389
Medium Density Residential	\$20,428	\$20,900	\$627	\$209	\$21,736
Medium/High Density Residential	\$24,512	\$25,079	\$752	\$251	\$26,082
High Density Residential	\$26,556	\$27,170	\$815	\$272	\$28,257
Commercial					
Business Park	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Commercial	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Industrial	\$32,684	\$33,440	\$1,003	\$334	\$34,777
Agricultural Building [3]	\$16,342	\$16,720	\$502	\$167	\$17,389
Other					
School	\$22,470	\$22,990	\$690	\$230	\$23,910
Other [4]	\$32,684	\$33,440	\$1,003	\$334	\$34,777

fee_sum_19

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2018 to May 2019.

[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 (2019\$)

Basin C-1 Development

Land Use Category	2018 Cost per Acre	2019 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.31% [1]	3%	1%	
DRAINAGE BASIN C FEE					
Residential Land Uses					
Low Density Residential	\$16,342	\$16,720	\$502	\$167	\$17,389
Medium Density Residential	\$20,428	\$20,900	\$627	\$209	\$21,736
Medium/High Density Residential	\$24,512	\$25,079	\$752	\$251	\$26,082
High Density Residential	\$26,556	\$27,170	\$815	\$272	\$28,257
Commercial					
Business Park	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Commercial	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Industrial	\$32,684	\$33,440	\$1,003	\$334	\$34,777
Agricultural Building [2]	\$16,342	\$16,720	\$502	\$167	\$17,389
Other					
School	\$22,470	\$22,990	\$690	\$230	\$23,910
Other [3]	\$32,684	\$33,440	\$1,003	\$334	\$34,777
DRAINAGE BASIN C-1 SURCHAGE					
Residential Land Uses					
Low Density Residential	\$8,661	\$8,861	\$266	\$89	\$9,216
Medium Density Residential	\$10,826	\$11,077	\$332	\$111	\$11,520
Medium/High Density Residential	\$12,992	\$13,292	\$399	\$133	\$13,824
High Density Residential	\$14,074	\$14,400	\$432	\$144	\$14,976
Commercial					
Business Park	\$19,487	\$19,938	\$598	\$199	\$20,735
Commercial	\$19,487	\$19,938	\$598	\$199	\$20,735
Industrial	\$17,322	\$17,723	\$532	\$177	\$18,432
Agricultural Building [2]	\$8,661	\$8,861	\$266	\$89	\$9,216
Other					
School	\$11,909	\$12,184	\$366	\$122	\$12,672
Other [3]	\$17,322	\$17,723	\$532	\$177	\$18,432
TOTAL DRAINAGE BASIN C-1 FEE					
Residential Land Uses					
Low Density Residential	\$25,003	\$25,581	\$768	\$256	\$26,605
Medium Density Residential	\$31,254	\$31,977	\$959	\$320	\$33,256
Medium/High Density Residential	\$37,504	\$38,371	\$1,151	\$384	\$39,906
High Density Residential	\$40,630	\$41,570	\$1,247	\$416	\$43,233
Commercial					
Business Park	\$56,257	\$57,558	\$1,727	\$575	\$59,860
Commercial	\$56,257	\$57,558	\$1,727	\$575	\$59,860
Industrial	\$50,006	\$51,163	\$1,535	\$511	\$53,209
Agricultural Building [2]	\$25,003	\$25,581	\$768	\$256	\$26,605
Other					
School	\$34,379	\$35,174	\$1,056	\$352	\$36,582
Other [3]	\$50,006	\$51,163	\$1,535	\$511	\$53,209

c1_2019

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2018 to May 2019.

[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 (2019\$)

Basin C-2 Development

Land Use Category	2018 Cost per Acre	2019 Cost per Acre	Plus RD 784 Administration	Plus Yuba County Administration	Total Fee per Acre
		2.31% [1]	3%	1%	
DRAINAGE BASIN C FEE					
Residential Land Uses					
Low Density Residential	\$16,342	\$16,720	\$502	\$167	\$17,389
Medium Density Residential	\$20,428	\$20,900	\$627	\$209	\$21,736
Medium/High Density Residential	\$24,512	\$25,079	\$752	\$251	\$26,082
High Density Residential	\$26,556	\$27,170	\$815	\$272	\$28,257
Commercial					
Business Park	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Commercial	\$36,770	\$37,620	\$1,129	\$376	\$39,125
Industrial	\$32,684	\$33,440	\$1,003	\$334	\$34,777
Agricultural Building [2]	\$16,342	\$16,720	\$502	\$167	\$17,389
Other					
School	\$22,470	\$22,990	\$690	\$230	\$23,910
Other [3]	\$32,684	\$33,440	\$1,003	\$334	\$34,777
DRAINAGE BASIN C-2 SURCHARGE					
Residential Land Uses					
Low Density Residential	\$6,797	\$6,954	\$209	\$70	\$7,233
Medium Density Residential	\$8,496	\$8,692	\$261	\$87	\$9,040
Medium/High Density Residential	\$10,195	\$10,431	\$313	\$104	\$10,848
High Density Residential	\$11,045	\$11,300	\$339	\$113	\$11,752
Commercial					
Business Park	\$15,293	\$15,646	\$469	\$156	\$16,271
Commercial	\$15,293	\$15,646	\$469	\$156	\$16,271
Industrial	\$13,594	\$13,908	\$417	\$139	\$14,464
Agricultural Building [2]	\$6,797	\$6,954	\$209	\$70	\$7,233
Other					
School	\$9,346	\$9,562	\$287	\$96	\$9,945
Other [3]	\$13,594	\$13,908	\$417	\$139	\$14,464
TOTAL DRAINAGE BASIN C-2 FEE					
Residential Land Uses					
Low Density Residential	\$23,139	\$23,674	\$710	\$237	\$24,621
Medium Density Residential	\$28,924	\$29,593	\$888	\$296	\$30,777
Medium/High Density Residential	\$34,708	\$35,510	\$1,065	\$355	\$36,930
High Density Residential	\$37,601	\$38,470	\$1,154	\$385	\$40,009
Commercial					
Business Park	\$52,063	\$53,267	\$1,598	\$533	\$55,398
Commercial	\$52,063	\$53,267	\$1,598	\$533	\$55,398
Industrial	\$46,278	\$47,348	\$1,420	\$473	\$49,241
Agricultural Building [2]	\$23,139	\$23,674	\$710	\$237	\$24,621
Other					
School	\$31,816	\$32,552	\$977	\$326	\$33,855
Other [3]	\$46,278	\$47,348	\$1,420	\$473	\$49,241

c2_2019

[1] CCI average adjustment factor of San Francisco and 20-City average for May 2018 to May 2019.
 [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 (2019\$) [1]

Item	Amount
Advance Funding Charge per Acre (2018\$)	\$47,219
Adjustment Factor (May 2018-May 2019) [2]	2.31%
Adjusted Advance Funding Charge per Acre	\$48,311

advance_19

[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 2018 to May 2019.