

Memo

To: Brian Hoelscher
CC:
From: Brad Nevois
Date: Wednesday, June 01, 2011
Re: Evaluation of Staffing Levels for Watershed Consultant Program

You had requested the information that we put together on how we could staff the Watershed Consultant Program. The information I have included is based on the data as of June 2010. All the information attached except item 4, is based on evaluations done in late 2010 by Design Division managers.

Attached is the following information (items numbered on corner):

Item 1

This is a graph of the overall anticipated design load based on the June 2010 information. This graph was used to illustrate overall staff requirements as a starting point for the individual managers to evaluate staffing levels. The graph showed the average design capacity for the Capital Projects group. It should be noted that this group has handled as much as \$29 million in design.

Item 2

This is a graph that was produced by the Manager of Right-of-Way and Property to evaluate anticipated property rights acquisition needs compared to historical averages. This graph shows the fiscal years of property rights acquisition, which is one year before construction. Based on the estimated needs staff would not be sufficient in fiscal years 12 and 14. The Manager indicated that due to lack of funding for FY12 construction projects (both storm and sanitary) that many of the easements for FY13 construction projects could be acquired early in FY11, thus balancing staffing needs. Additionally, the graph indicated a shortfall in FY14. It was felt that if this gap still existing at that time the short fall could be filled with existing staff or with the help of either the Watershed Consultant or a GSA type contract. **The conclusion is that staffing in the ROW group should be sufficient at this time.**

Item 3

This is an analysis of the staffing levels for the Capital Projects Group. This analysis consists of two separate documents. The first document evaluated how projects are managed today compared to with the use of a Watershed Consultant. Based on the minimum level of management with only 6 of his staff being utilized for work related to the Watershed Consultant Program, it was estimated that the group could handle 50 individual projects at a given time. Early program estimates show FY13 having upwards of 50 design projects.

Item 4

In the last document titled Estimated PM Design Program, the manger went on to look at individual assignments for staff. This chart included work outside the Watershed Consultant Program, but still requiring staff needs. This chart took a somewhat conservative approach to overall need of individuals to manage projects. If you balance this information with actual demands on staff for particular projects in the early years of the program the current staffing levels look sufficient.

The conclusion is that staffing levels in the Capital Projects group should be sufficient and that there is really a three to four year window (FY13 - FY16) of high demand.

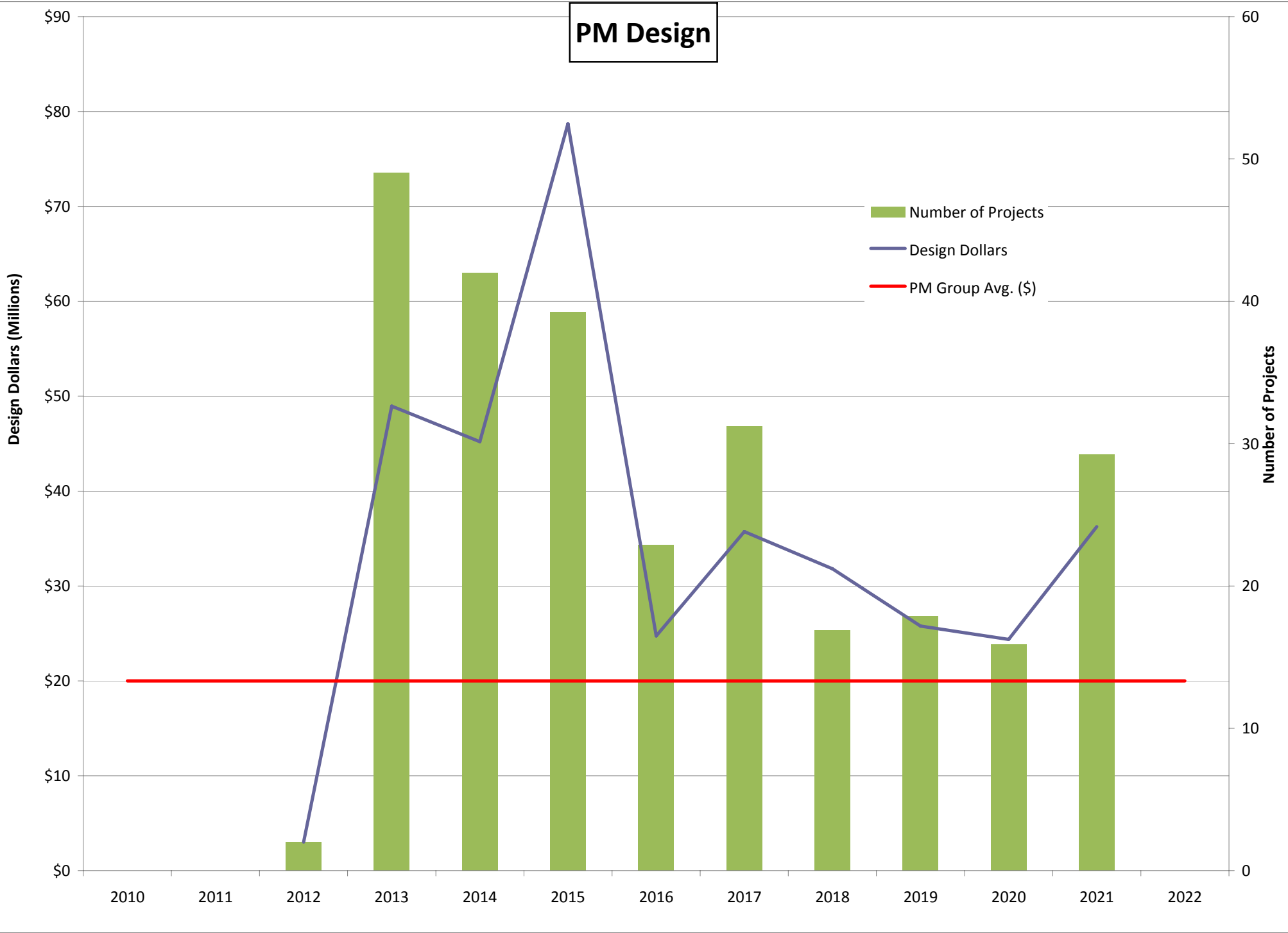
Item 5

This is a similar graph to Item 1 that has been updated with the latest information. Based on the latest information the program has begun to balance somewhat. Additionally, balancing of the program will be recognized as the Watershed Consultants are hired and advise us on delivery of the program.

All the information presented takes a somewhat conservative approach to estimating staffing needs and does not take into account efficiencies that will be recognized with the Watershed Consultant Program. **In conclusion, staffing levels will need to continue to be monitored and adjusted as necessary throughout the program life, but indications are that the overall program can be managed at existing staffing levels.**

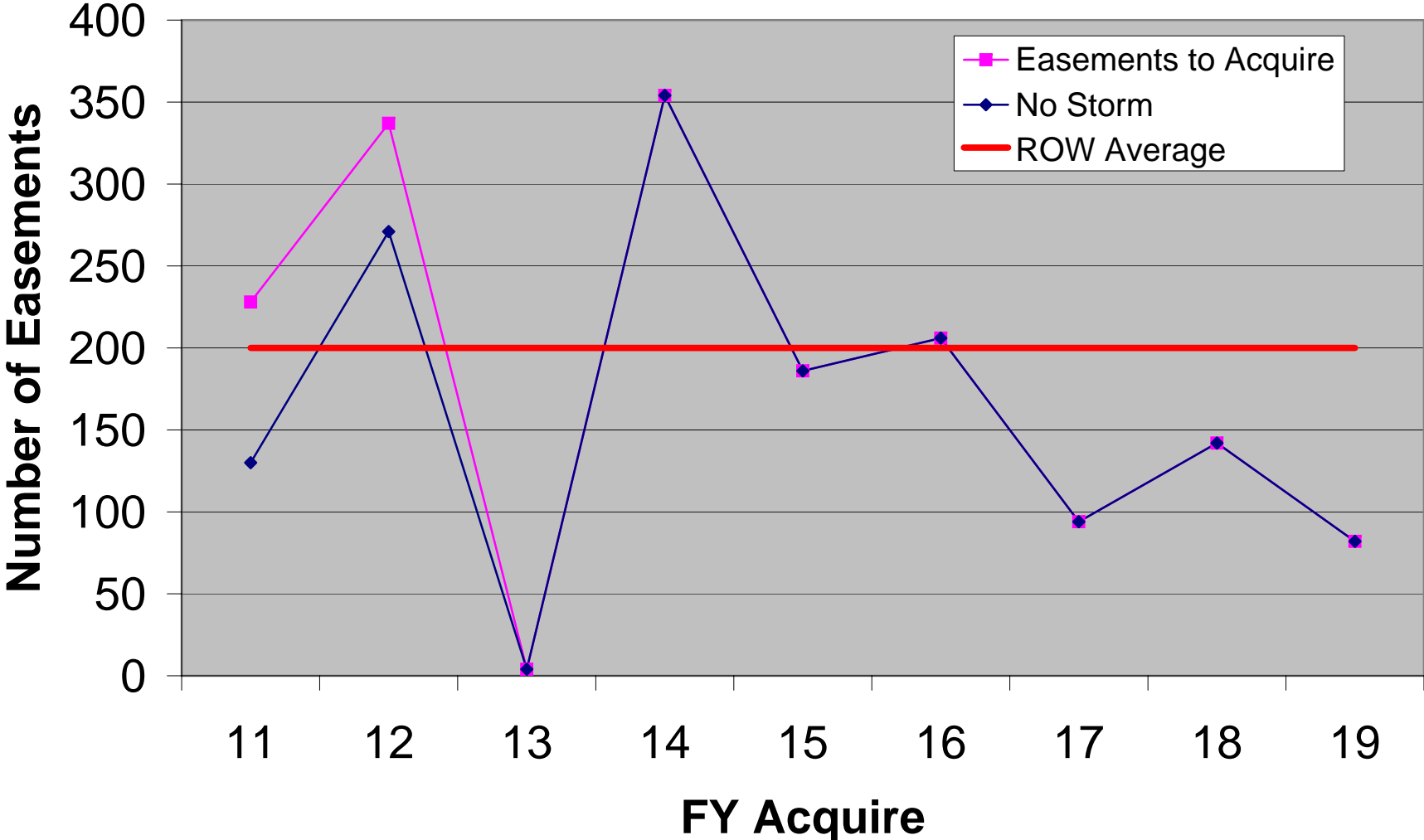
Please let me know if you would like the information electronically or in a different format.

PM Design



* Information is preliminary, does not include additional work outside CD Planning

ROW Acquisition



MSD PM Project Man-hour Requirements

Task Names	Man days - Design Only		Man days - With PIRR		Min Man-day for Program	
	Existing	New Program	Existing	New Program		
Design Selection/Award	7	3	7	3	3	Assume PIRR takes 120 days for 100 properties * - 8 days w/PIRR, 0 days w/out. Avg 4 days Des Study & Prel Plan combined in New Program Prelim Plan deleted from PM Consultant projects
Preliminary Conference/ Prep	5	4	5	4	3	
PIRR (if necessary)	N/A	N/A	18	12	*	
Design Study	9	8	10	9	4	
Preliminary Plan	6	N/A	6	N/A	N/A	
Plan Review	11	7	11	7	5	
Design Completion	10	6	10	6	4	
Total Man days	48	28	67	41	23	
Total Man-hours	360	210	503	308	173	
<u>Future MH requirements</u>						
Final Plans/Bidding	9	5	9	5	4	Inc discussing realignment w/ROW during acq.
Construction Phase Services	6	4	6	4	3	

***Additional hours will be required to bid projects designed in previous years
 (assume 36 projects bid/yr. by 6 PM's - 6 projects/MSD PM X 5 days/project x 7.5 hrs= 225 hours/person)**

New Projects/MSD PM/Year

1. Assume half projects include PIRR, half design only projects -(210 hrs+308 hrs)/2 = 259 PM hours/ project
2. **Projects/PM = (1,672Hrs/PM/yr-225 hrs for bidding) / (259hrs/project) = 5.6 projects**

Minimum Man days to Support New Program up to 61 design projects planned/year

1. Man-hours required =61 X 173hrs/project =10,553 hrs
2. **PM's required = 10,553 hrs/ [(1,672Hrs/PM/yr) -225 hrs for bidding]] = 7.3 PM's**
3. Using minimal PM involvement (173 man hours/project), 50 projects could be managed per year.

ITEM 3

ESTIMATED PM DESIGN PROGRAM

PM GROUP	Team Leader	Tentative PM	Number of Projects/ Project Managers																TOTAL				
			FY 12		FY 13		FY 14		FY 15		FY 16		FY 17		FY 18		FY 19			FY 20		FY 21	
			PROJ	PM	PROJ	PM	PROJ	PM	PROJ	PM	PROJ	PM	PROJ	PM	PROJ	PM	PROJ	PM		PROJ	PM	PROJ	PM
Cold/Bis/M0/LM	MDS	JAM	0	0.5	21	2	21	2	6	1	8	1	4	1	5	1	4	1	4	1	4	1	
CSO LRDP	PJH	PAP	1	1	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	
Deer Cr w/ SSO Tanks	MDS	JMS	1	1	12	1	9	1	6	1	3	1	3	1	2	1	1	1	1	1	1	1	
Lemay not Deer Cr	PJH	SMR	0	0.5	11	1	8	1	5	1	5	1	6	1	1	1	1	1	1	1	1	1	
U City - Deer Cr/LM Tunnels	PJH	FY15 Assign	0	0	0	0	0	0	1	1	1	1	2	1	1	1	1	1	2	1	2	1	
WWTP/Disenfection	GJT	GJT,JLJ	3	2	2	2	1	1	1	1	?	?	?	?	?	?	?	?	?	?	?	?	
Infra Repairs	MDS	TJF		1		1		1		1		1		1		1		1		1		1	
Asset Projects	PJH,MDS	JAF	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	
TOTAL PROJECTS			9		52		45		25		22		20		14		12		13		13	7	
Sewer Project			6		19		16		9		8		10		7		4		4		5		
Rehab Project					24		21		7		10		6		4		4		4		4		
Major Projects			3		2		3		6		3		4		3		2		3		4		
Predesign					7		5		2		1		0		0		0		0		0		
PM'S Required - Sewers			9		52		45		24		22		20		14		10		11		13		
Major Projects				7		9		8		8		7		7		7		7		7		7	
* Bidding				0.2		0.7		0.5		0		0		0		0		0		0		0	
TOTAL				7.2		9.7		8.5		8		7		7		7		7		7		7	

* Additional hours will be required to bid projects designed in years previous to Watershed Consultant Program

FY 12 (assume 7 projects X 5 days X 7.5 hrs/day = 263 hours/1672hr/yr = approx. 0.2 person)

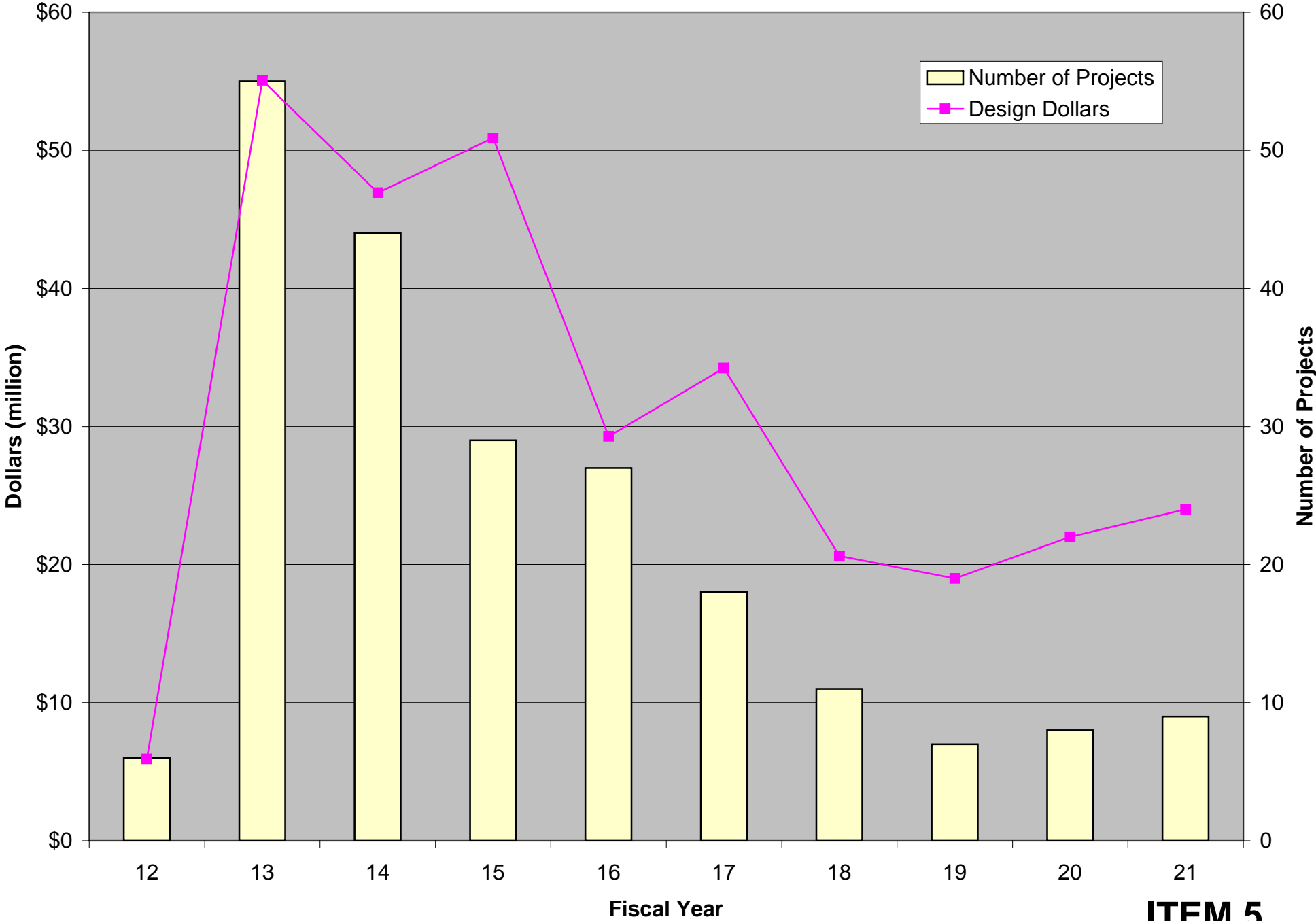
FY 13 (assume 28 projects X 5 days X 7.5 hrs/day = 1050 hours/1672hr/yr = approx. 0.65 person)

FY 14 (assume 22 projects X 5 days X 7.5 hrs/day = 825 hours/1672hr/yr = approx. 0.5 person)

Assumptions

1. There appears to be excess workload in FY 13 and 14. This will be made up with existing staff and overtime ..
2. The number of asset projects, and requirements for GSA projects to design Infrastructure Repair projects, is not known at this time.
Estimated 4 asset projects, and IR projects to be handled by one engineering equivalent, outside the Watershed Consultant program.
3. Need to bid a large number of projects that were designed in previous years
4. The FY 13 project managers will start preparing the Watershed Consultant RPQ/P and setting up the projects in mid FY 12
5. No major WWTP projects are included after the Lemay Secondary is completed in FY 15

Watershed Consultant Program (Design)



ITEM 5