

Appendix C

Gate Construction Assumptions

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Table C-1. Head of Old River Gate

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Clear and grub brush, trash, etc.	5	1	Grader				
		1	Dump Truck	Brush	741	5	5 at 5 miles RT
		1	Dozer				
Construct temporary and permanent access roads, staging areas and spoil ponds	30	1	Dozer	Aggregate Base	800	4	5 at 30 miles RT
		1	Backhoe	Backfill	1,200	5	10 at 30 miles RT
		5	Bottom-Dumps				
		1	Water Truck				
		1	Roller				
		1	Grader				
		1	Scraper				
Channel excavation for control structure/boat lock	15	1	Clamshell Dredge	Excavated Material	4,700	15	7 at 30 miles RT
		1	Barge Crane				
		1	Excavator				
		3	Dump Trucks (3)				
		1	Loader				
		2	Tugboat				
Drive sheetpiles, H-piles and pipe piles	60	1	Barge Crane	Piles		30	5 at 30 miles RT
			Pile Driver				
		1	Supply Barge				
		2	Tugboat				
		1	Truck Crane				

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Place riprap on channel invert	5	40	Dump Trucks	Rock	4,945	15	50 at 100 miles RT
		1	Loader				
		1	Excavator				
Float-in and install control gate structures	45	1	Barge Crane				
		3	Tugboat				
		1	Supply Barge				
		1	Batch Plant	Concrete	224	45	3 at 30 miles RT
		1	Concrete Pump				
			Truck Crane				
Construct control building/boat lock operator building	120	12	Concrete Pump	Concrete	50	3	2 at 50 miles RT
			Truck Crane	Backfill	650	20	10 at 30 miles RT
			Water Truck	Masonry		30	
			Roller				
			Backhoe				
			Dump Truck				
Construct fish passageway	45		Concrete Pump	Concrete	100	5	3 at 50 miles RT
			Concrete Trucks				
			Large Truck				
Install log boom, floating docks, warning signs	30		Truck Crane				
			Barge Crane				
			Large Truck				
Install control systems, utilities and microwave tower	90	10	Large Truck	Miscellaneous		60	2 at 50 miles RT
			Truck Crane				
Remove temporary rock barrier	10	3	Excavator	Spoil	300	10	2 at 5 miles RT
			Dozer				
			Dump Truck				
Testing and final construction grading/cleanup	60	1	Grader				
		4	Truck Crane				

RT = Round trip

Table C-2. Middle River Gate

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Clear and grub brush, trash, etc.	5	1	Grader				
		1	Dump Truck	Brush	741	5	5 at 5 miles RT
		1	Dozer				
Construct temporary and permanent access roads, staging areas and spoil ponds	30	1	Dozer	Aggregate Base	2,963	10	5 at 30 miles RT
		1	Backhoe	Backfill	1,315	5	10 at 30 miles RT
		5	Bottom-Dumps				
		1	Water Truck				
		1	Roller				
		1	Grader				
		1	Scraper				
Channel excavation for control structure	15	1	Clamshell Dredge	Excavated Material	5,325	15	30 at 5 miles RT
		1	Barge Crane				
		1	Excavator				
		3	Dump Trucks (3)				
		1	Loader				
		2	Tugboat				
Drive sheetpiles, H-piles and pipe piles	60	1	Barge Crane	Piles		30	5 at 30 miles RT
			Pile Driver				
		1	Supply Barge				
		2	Tugboat				
		1	Truck Crane				
Place riprap on channel invert	5	40	Dump Trucks	Rock	7,624	15	50 at 100 miles RT
		1	Loader				
		1	Excavator				

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Float-in and install control gate structures	45	1	Barge Crane				
		3	Tugboat				
		1	Supply Barge				
		1	Batch Plant	Concrete	129	10	3 at 30 miles RT
		1	Concrete Pump				
Construct control building	120	12	Concrete Pump	Concrete	300	20	2 at 50 miles RT
			Truck Crane	Backfill	750	20	
			Water Truck				
			Roller				
			Backhoe				
Construct boat ramp	30	5	Dozer	Backfill	1,315	10	10 at 30 miles RT
			Grader	Riprap	330	2	2 at 100 miles RT
			Dump Truck				
			Truck Crane				
			Excavator				
Install log boom, floating docks, warning signs	30		Truck Crane				
			Barge Crane				
			Large Truck				
Install control systems, utilities and microwave tower	90	10	Large Truck	Miscellaneous		60	2 at 50 miles RT
			Truck Crane				
Remove temporary rock barrier	10	3	Excavator	Spoil	300	10	2 at 5 miles RT
			Dozer				
			Dump Truck				
Testing and final construction grading/cleanup	60	1	Grader				
		4	Truck Crane				

RT = Round trip

Table C-3. Grant Line Canal Gate

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Clear and grub brush, trash, etc.	5	1	Grader				
		1	Dump Truck	Brush	2,368	5	15 at 5 miles RT
		1	Dozer				
Construct temporary and permanent access roads, staging areas and spoil ponds	30	1	Dozer	Aggregate Base	6,299	3	15 at 30 miles RT
		1	Backhoe	Backfill	1,200	5	10 at 30 miles RT
		5	Bottom-Dumps				
		1	Water Truck				
		1	Roller				
		1	Grader				
		1	Scraper				
Channel excavation for control structure/boat lock	15	1	Clamshell Dredge	Excavated Material	632	15	2 at 5 miles RT
		1	Barge Crane				
		1	Excavator				
		3	Dump Trucks (3)				
		1	Loader				
		2	Tugboat				
Drive sheetpiles, H-piles and pipe piles	60	1	Barge Crane	Piles		30	5 at 30 miles RT
			Pile Driver				
		1	Supply Barge				
		2	Tugboat				
		1	Truck Crane				
Place riprap on channel invert	5	40	Dump Trucks	Rock	4,620	15	50 at 100 miles RT
		1	Loader				
		1	Excavator				

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Float-in and install control gate structures	45	1	Barge Crane				
		3	Tugboat				
		1	Supply Barge				
		1	Batch Plant	Concrete	289	20	3 at 30 miles RT
		1	Concrete Pump Truck Crane				
Construct control building/ boat lock operator building	120	12	Concrete Pump	Concrete	300	20	2 at 50 miles RT
			Truck Crane	Backfill	1,175	20	
			Water Truck				
			Roller				
			Backhoe Dump Truck				
Install log boom, floating docks, warning signs	30		Truck Crane Barge Crane Large Truck				
Install control systems, utilities and microwave tower	90	10	Large Truck Truck Crane	Miscellaneous		60	2 at 50 miles RT
Remove temporary rock barrier	10	3	Excavator Dozer Dump Truck	Spoil	300	10	2 at 15 miles RT
Testing and final construction grading/cleanup	60	1	Grader				
		4	Truck Crane				

RT = Round trip

Table C-4. Old River at Delta-Mendota Canal Gate

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Clear and grub brush, trash, etc...	5	1	Grader				
		1	Dump Truck	Brush	741	5	5 at 5 miles RT
		1	Dozer				
Construct temporary and permanent access roads, staging areas and spoil ponds	30	1	Dozer	Aggregate Base	5,926	15	10 at 30 miles RT
		1	Backhoe	Backfill	1,315	5	10 at 30 miles RT
		5	Bottom-Dumps				
		1	Water Truck				
		1	Roller				
		1	Grader				
		1	Scraper				
Channel excavation for control structure/boat lock	15	1	Clamshell Dredge	Excavated Material	5,325	15	30 at 5 miles RT
		1	Barge Crane				
		1	Excavator				
		3	Dump Trucks (3)				
		1	Loader				
		2	Tugboat				
Drive sheetpiles, H-piles and pipe piles	60	1	Barge Crane	Piles		30	5 at 30 miles RT
			Pile Driver				
		1	Supply Barge				
		2	Tugboat				
		1	Truck Crane				
Place riprap on channel invert	5	40	Dump Trucks	Rock	7,624	15	50 at 100 miles RT
		1	Loader				
		1	Excavator				

Construction Activity	Duration (days)	Crew Size	Equipment	Truck Trips			
				Material	Quantity (cy)	Duration	Trips per day
Float-in and install control gate structures	45	1	Barge Crane				
		3	Tugboat				
		1	Supply Barge				
		1	Batch Plant	Concrete	146	10	3 at 30 miles RT
		1	Concrete Pump Truck Crane				
Construct control building/boat lock operator building	120	12	Concrete Pump Truck Crane	Concrete	300	20	2 at 50 miles RT
			Water Truck	Backfill	1,175	20	
			Roller				
			Backhoe				
			Dump Truck				
Construct boat ramp	30	5	Dozer	Backfill	1,315	10	10 at 30 miles RT
			Grader	Riprap	330	2	2 at 100 miles RT
			Dump Truck				
			Truck Crane				
			Excavator				
Install log boom, floating docks, warning signs	30		Truck Crane				
			Barge Crane				
			Large Truck				
Install control systems, utilities and microwave tower	90	10	Large Truck	Miscellaneous		60	2 at 50 miles RT
			Truck Crane				
Remove temporary rock barrier	10	3	Excavator	Spoil	300	10	2 at 5 miles RT
			Dozer				
			Dump Truck				
Testing and final construction grading/cleanup	60	1	Grader				
		4	Truck Crane				

RT = round trip