RECLAMATION

Managing Water in the West

San Luis Drainage Feature Re-evaluation

Feasibility Report

Appendix C

Pump and Pipeline Design Data

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

November 2007

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

San Luis Drainage Feature Re-evaluation

Feasibility Report

Appendix C

Pump and Pipeline Design Data
RO Treatment
Evaluation of Reuse Equilibrium Chemistry (feedwater to RO treatment plant)

U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California

November 2007

Appendix C

Pump and Pipeline Design Data

SAN LUIS DRAIN COLLECTION/CONVEYANCE SYSTEMS - SUMMARY SHEET

	Unit	Unit	Unit	Unit	Discharge	Air
NORTHERLY AREAS	Design	Design	Motor	Piping	Piping	Chamber
	Q	TDH	HP	Diam.	Diam.	Dia x H
PUMPING PLANT	(cfs)	(ft)	(hp)	(in)	(in)	(ft x ft)
DMC Drainage (Vert. turb. pumps)						
A/B (1 const-spd pump)	1.911	41	15	8	10	15 x 15
C (1 const-spd pump)	3.108	76	40	10	12	15 x 15
Conveyance PPs						
WCC03A (Typ. of 4 conventional style PPs)	4.68	131	60	12	20	15 x 15
- Config: 2 pumps w/ VSDs						
WCC09A					14	15 x 15
WCC10B					14	15 x 15
WCC06D					32	15 x 15
WCC03B (Typ. of 4 conventional style PPs)	13.75	86	200	18	24	15 x 15
- Config: 3 pumps w/ VSDs	8.25	64	75	16		
	4.90	55	20	12		
WCC11D					22	15 x 15
WCC02A					22	15 x 15
WCC01C					32	15 x 15
Drainage Canal PPs						
FC-5 (conventional canal-side PP)						
FC-5a (Config: 2 pumps w/ VSDs)	3.48	79	50	10	24	15 x 15
FC-5b (Config: 4 pumps w/ VSDs)	28.88	60	250	24	36	15 x 15
	17.16	32	100	18		
	10.25	24	40	16		
	6.02	20	20	12		
PCC16D (Typ. of 3 conventional canal-side PPs)	27.60	33	125	24	36	15 x 15
- 2 PP w/ & 1 PP w/o air chambers	16.50	16	40	20		
- Config: 4 pumps w/ VSDs	9.80	9	15	16		
	5.10	7	7.5	10		
PCC06D (PO Ditch PP)					36	15 x 15
PE-14					24	None

San Luis Drains
Northerly Area

Basic Layout of Pump/Pipe systems

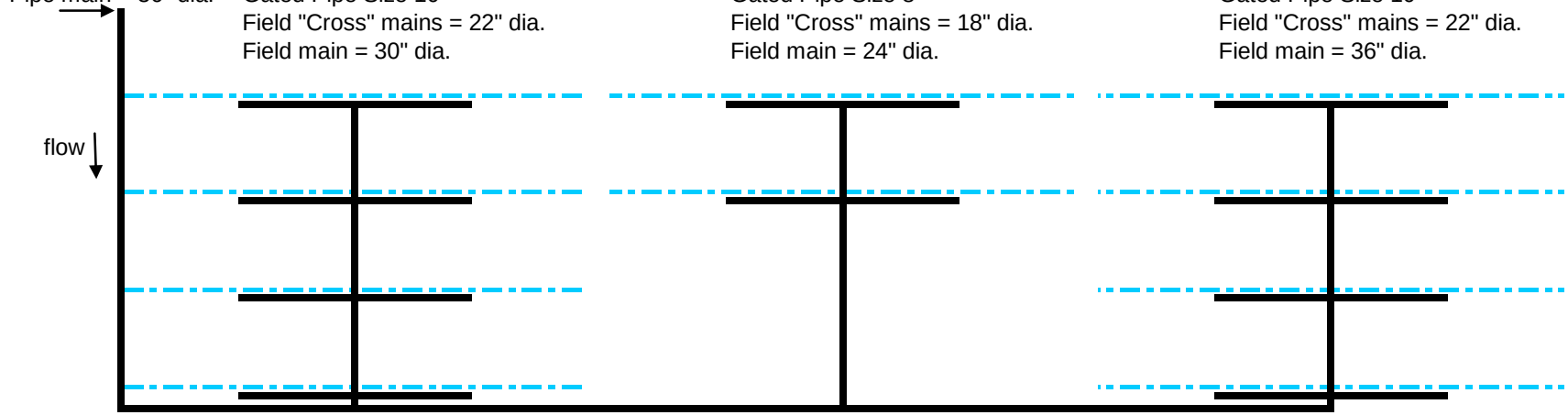
IRRIGATION
FC-5b

FC-5b
Qmax = 27.5 cfs
(Surface ditch water)
Pipe main = 36" dia.

Field 3
Q=11 cfs (1 unit)
Q=22 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 22" dia.
Field main = 30" dia.

Field 2
Q=6.6 cfs (1 unit)
Q=13.2 cfs (2 units)
Gated Pipe Size 8"
Field "Cross" mains = 18" dia.
Field main = 24" dia.

Field +
Q=11.3 cfs (1 unit)
Q=22.6 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 22" dia.
Field main = 36" dia.



Gated Delivery Pipe

Irrigation Main Pipe

San Luis Drains
Northerly Area

Basic Layout of Pump/Pipe systems

IRRIGATION
PO Areas

Field PO3
Q=10 cfs (1 unit)
Q=19 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 20" dia.
Field main = 28" dia.

Field PO2
Q=13 cfs (1 unit)
Q=19 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 20" dia.
Field main = 28" dia.

Field PO1
Q=10 cfs (1 unit)
Q=19 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 20" dia.
Field main = 28" dia.

Field PO6
Q=13 cfs (1 unit)
Q=19 cfs (2 units)
Gated Pipe Size 10"
Field "Cross" mains = 20" dia.
Field main = 28" dia.

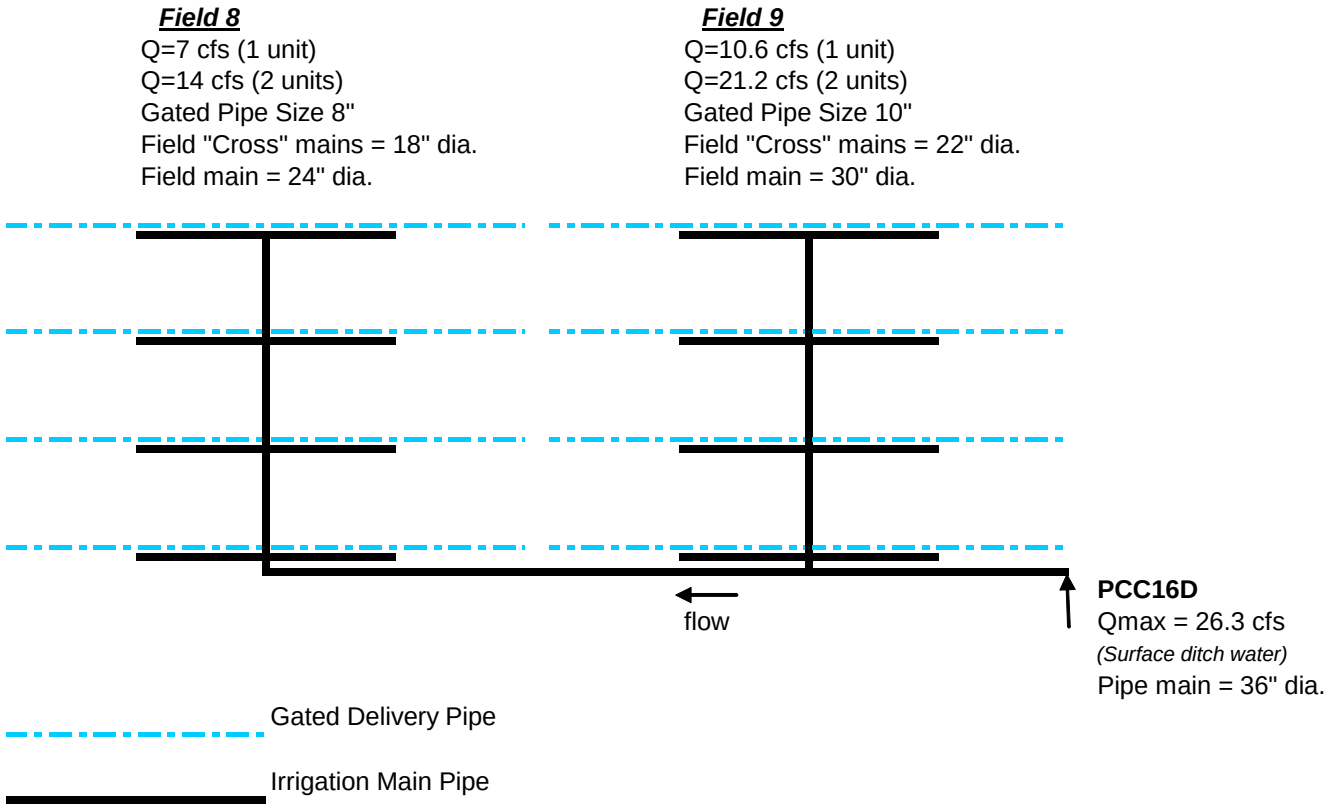
Gated Delivery Pipe

Irrigation Main Pipe

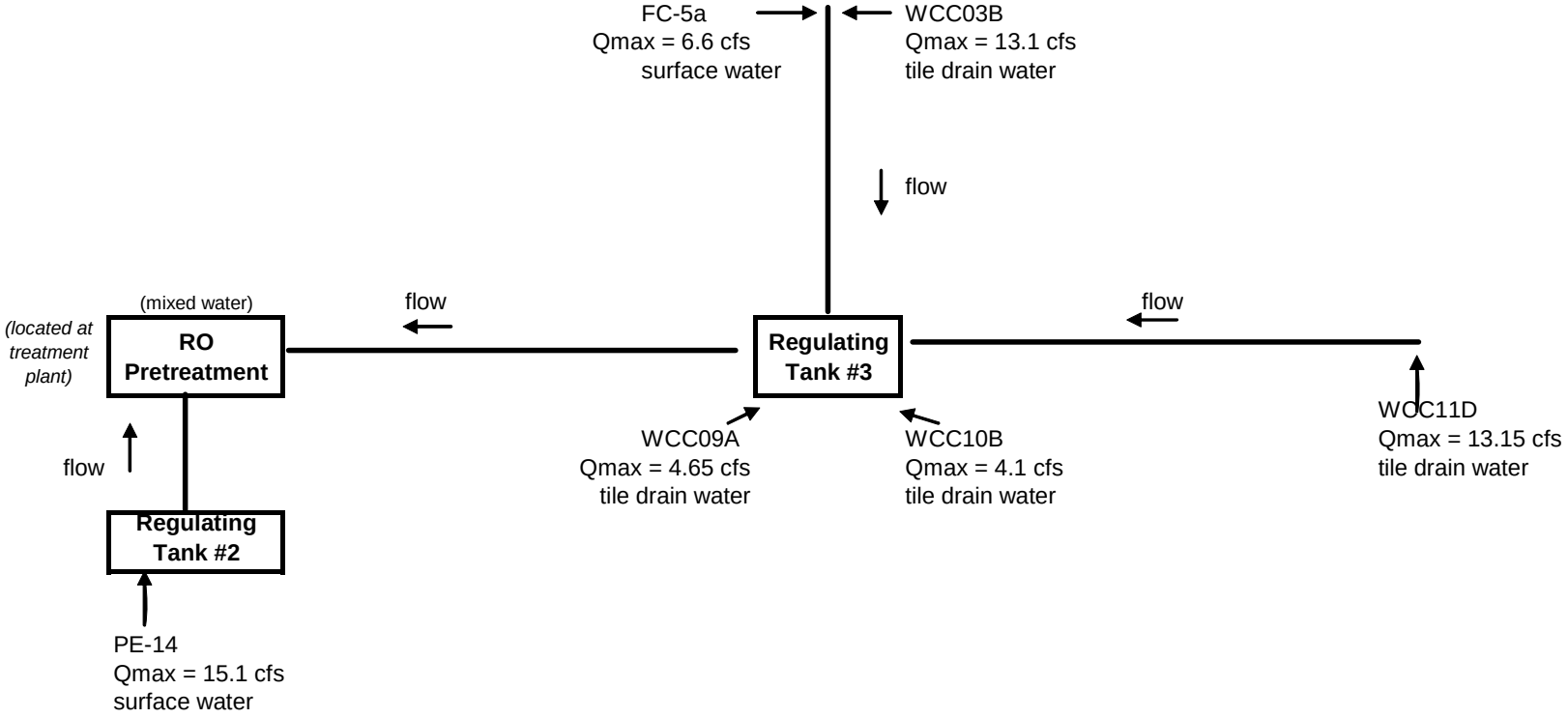
San Luis Drains
Northerly Area

Basic Layout of Pump/Pipe systems

IRRIGATION
Russell Ave.



San Luis Drains
Northerly Area
Basic Layout of Pump/Pipe systems
CONVEYANCE
FC-5 areas, and PE-14



San Luis Drains
Northerly Area

Basic Layout of Pump/Pipe systems

CONVEYANCE
PO Areas