

Kastania Pump Station Project Update

Operations Committee

December 17, 2021



Kastania Pump Station Project Update

- Background and History of Kastania PS
- Overview of Hydraulic Improvements
- Status of the Agreements
- Construction Progress and Photos
- Accomplishments
- Next Steps



Background and History

- Constructed in 1977 by MMWD
- Increase flow and pressure in North Marin Aqueduct
- MMWD owned and operated 1977 – 1999



Kastania Pump Station, Kastania Rd, Petaluma

Background and History

- MMWD transferred ownership to SCWA in 1999
- Taken offline in 2015
- Equipment:
 - Two 400 hp pumps
 - Motors, valves, electrical controls



Interior of Kastania Pump Station

Flows Available to North Marin Aqueduct – Existing Conditions (w/out Kastania)

Flowrate	~15 mgd (17-18 mgd intermittently)
North Marin Demand (Spring 2021)	<u>~11 mgd</u>
Available to MMWD	4 mgd

Flows Available via North Marin Aqueduct – Existing Conditions (with Kastania)

Available Flowrate with Kastania		ia	21.5 mgd			
	North	Available MMWD				
	Marin Demands	Without	With	limiting	MMWD	Difforonco
Condition	(mgd)	Kastania	Kastania	Limiting Factor	Capacity (mgd)	Difference, mgd (%)
Spring 2021	~11	4	10.5	MMWD System	10-12(1)	6.5 (160%)

Notes:

1. Capacity of MMWD distribution system

Future Capacity with Improvements to the MMWD Distribution System

Objective - Increase operational efficiency to realize contractual import allotments and/or additional winter water supply from the Sonoma County Water Agency.

Imported Water Capacity with Kastania* (MGD)	Current Capacity AF/Yr	Contractual Allotment AF/Yr	Minimum System Improvement**
10.5-11.2	12,500	14,300	1.6+ MGD

Notes:

- 1. Current capacity of MMWD distribution system
- 2. Additional Improvement needed to Import Winter Water

Kastania Pump Station Agreements

- Transfer Agreement: Provides for the transfer of the Kastania Pump Station From Sonoma Water to the District, and subsequent conveyance of easements.
- Interconnection Agreement: Mechanism between the District and North Marin Water District for sharing facilities to mutually benefit both District's customers.
- Operation MOU: Understanding between water service providers for the operation of the Pump Station.

Status On Agreements

- On November 2, Marin Water and Sonoma Water Boards authorized General Managers to Execute Transfer Agreement
- On December 7, North Marin Water District Board authorized General Manager to execute Transfer and Interconnection Agreements
- Currently finalizing agreements for signature and preparing real property documents

RTH I	MARIN WA	MENT, made this	ECTION AGREEMENT day of <u>Sectember</u> , 2021 by and between public body, herein called "North Marin," and f, a public body, herein called "Marin Municipal."
		WATER DISTRICT	, a public body, neteri caled imani municipal.
Α.	Fror		
А.	syst		
В.	Fror		SEPTEMBER XX, 2021 DRAFT
	syst		2021 KASTANIA PUMP STATION TRANSFER AGREEMENT
C.	Purs	TH	
	Cou Mun	made and	
	mete	the Marir District (*	
	any	District ("	
	loca		2021 MEMORANDUM OF UNDERSTANDING
D.	Purs	А. Pu	FOR
	Son Agu	The North	OPERATION OF THE KASTANIA PUMP STATION
	deliv	Portion O	AND
E.	Duri	(the "Initi at 4100 K	OPERATION OF THE ELY BOOSTER PUMP STATION
E.	Duri in th	Parcel Nu	This Memorandum of Understanding for Operation of the Kastania Pump Station and Operatio
		reference	of the Ely Booster Pump Station (hereinafter "MOU") is made and entered into by and betwee
F.	Nort	Water, ar	the Sonoma County Water Agency ("Sonoma Water"), the Marin Municipal Water District
	the I aque	Sonoma \	("Marin Water"), the North Marin Water District ("NMWD"), and the City of Petaluma
		Pipeline,"	("Petaluma") as of, 2021.
G.	Mari Nort	B. Ir	Background
	and	Kastania I	A. Pursuant to the terms of the "2021 Kastania Pipeline and Pump Station Transfer
	Rea	consumm Efficiency	Agreement" dated, 2021 ("Transfer Agreement"), Sonoma Water, NMWD
	rese	Station to	and Marin Water have agreed, among other provisions, to transfer ownership of Kastania Pum
Н.	Mari	relocation	Station from Sonoma Water to Marin Water, to transfer ownership of a portion of Kastania Pipeline from Sonoma Water to NMWD, and Marin Water has agreed to convey certain
	Nica	enabling	easements to NMWD and Sonoma Water. In accordance with the Transfer Agreement. Marin
	from	the pump	Water, effective as of the date of the transfer, has full responsibility for operation and
L.	Calt	D. U	maintenance of the Kastania Pump Station. The preceding sentence notwithstanding, NMWD
	Peta Nort	new segn	shall maintain operational control of the Kastania Pump Station by defining and transmitting real time set points from within the North Marin water distribution system to determine
	11010	enlarged Sonoma V	whether or not the Kastania Pumps can be operated by Marin Municipal and shall operate
		sonoma	same in accordance with this MOU.
		E. In	
_		rehabilita to increas	B. Sonoma Water's Ely Pump Station pumps water into the southern portion of the
		during dr	Petaluma Aqueduct, which serves Petaluma, NMWD, and Marin Water and delivers water to
		daring of	Sonoma Water's Kastania Tank, the North Marin Aqueduct, and Marin Water's Kastania Pump
			Station. Marin Water's Kastania Pump Station delivers water to Marin Water via the North
		kastania pump	Marin Aqueduct. Sonoma Water has full responsibility for operation and maintenance of the Ely Booster Pump Station and shall operate same in accordance with this MOU. It is recognized
			by the parties to this MOU that at times the Ely Pump Station may not have sufficient capacity
			to meet all of the water demands of the Petaluma Aqueduct customers. At those times,
			Kastania Tank may reach levels that will reduce the reliability of water service provided by the facility.
		I	lacinty.

Construction Progress



Complete:

- ✓ Isolated existing water pipeline in Kastania Road
- ✓ Installed 30-Inch piping
- ✓ Installed both butterfly valves on suction piping
- ✓ Hot-Tap of North Marin Aqueduct

Pending:

Testing and Disinfection

Tie-in to North Marin Aqueduct

Pump Station Start-up

















Accomplishments

- Completed design on October 12 and started construction on November 9.
- Completed Pump Station Agreements
- Completed over 80% of construction work
- Rapidly working towards commissioning pump station by beginning of January



- Complete right of way acquisition of the Pump Station and issue easements (week of Jan 3, 2022)
- Issue Notice of Substantial Completion and Pump Station Start-Up (week of Jan 3, 2022)
- Replace Motor for Pump No. 1 as Contract Change Order to expedite full pump station operation and redundancy (Jan/Feb 2022)
- Begin design of Phase II improvements under a traditional CIP delivery schedule for electrical and various civil improvements.

Questions?