AGENDA ITEM NO. 9-B

MONTEREY PENINSULA REGIONAL PARK DISTRICT
BOARD OF DIRECTORS MEETING

DATE:	**November 14, 2018**
TO:	**Board of Directors**
FROM:	**Jackie Nelson, Environmental Education Supervisor**
REVIEWED BY:	**Rafael Payan, General Manager**
SUBJECT:	**Board Presentation: The Effects of Pumping on Carmel River Low Flows, John Olson, California State University Monterey Bay**

RECOMMENDED ACTION:
The staff respectfully recommends that the Board receive the presentation which reports findings on a short-term study of the "Effects of Pumping on Carmel River Low Flows."

FISCAL IMPACT:
N/A

FUNDING SOURCE:
N/A

FUNDING BALANCE:
N/A

DISCUSSION:
Professor John Olson and students from California State University Monterey Bay's Advanced Watershed Science and Policy class (ENVS 660) investigated the effects of decreased pumping at two wells on the Rancho Cañada Unit of Palo Corona Regional Park. The class was designed to give graduate students a chance to work on real projects in a professional collaborative manner. Monterey Peninsula Water Management District and Trout Unlimited have been monitoring river flows and pumping rates around Rancho Cañada and asked the class to analyze the data to see if changes in pumping have made any detectable difference in flow in the river. An empirical model that related river flow at Highway 1 to up stream flow, precipitation, and pumping showed that reductions in pumping at the two Rancho Cañada wells do lead to small but detectible increases in flow within the Carmel River. These increases in flow are not enough however, to restore summer flows to that expected in a central coast river of this size. But decreases in pumping did correspond to slight improvements in the ecological health of the river determined from the California Stream Condition Index.