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## Central Valley Regional Water Quality Control Board

**TO:** Clay L. Rodgers  
Assistant Executive Officer

Dale W. Harvey  
Supervising Engineer

**FROM:** Joshua G. Mahoney  
Water Resource Control Engineer

**DATE:** 04 April 2017

**SUBJECT: DRAFT - COLLECTION OF FRUIT SAMPLES IRRIGATED WITH BLENDED PRODUCED WASTEWATER IN KERN-TULARE WATER DISTRICT**

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff collected fruit samples within the service territory of Kern-Tulare Water District. Sample locations was comprised of cropland that was irrigated with blended produced wastewater and cropland that has not been irrigated with produced wastewater.

### PRESENT PARTIES

#### Foreman / Manager from each property

#### Central Valley Regional Water Quality Control Board (Central Valley Water Board)

- W. Dale Harvey, Supervising Engineer
- Joshua Mahoney, Water Resource Control Engineer
- Mercedes Merino, Engineering-Geologist (Translator)

#### University of the Pacific (UOP)

- Ben Grafius, Assistant

### GENERAL SAMPLING PROCEDURES

#### Equipment:

1. Nitrile gloves.
2. Kimwipes.
3. 32 ounce glass sample containers from laboratory.
4. Ice chests.

#### Fruit Handling:

1. Nitrile gloves were used while handling fruit.
2. Cut fruit vine with trimmers.
3. Wipe the fruit.
4. Place the fruit in the sample container.

5. Seal the container and tape the lid.
6. Sample containers remain in the ice chest until delivered to the laboratory.

Fruit Selection Criteria:

1. Minimum distance from main road was five tree rows.
2. Minimum distance from access road was six trees.
3. Samples collected from the same tree were picked from different branches.
4. All samples were ripe.
5. No unfavorable features or colors.
6. Samples were representative of the fruit an average consumer would find at a store.

**CONTROL SAMPLE SITES**

Site 1

Site Name: Control-1\_Naval-1  
Fruit Type: Naval  
Fruits per Sample Container: 2

Sample Containers per Tree: 1  
Tree Row: 40 (from the west)  
Tree Count from the road: 10, 11, and 12

Sample Time for AEC: 08:15  
Sample Names:

JGM170404-1 (Water Board sample)  
Control-1 (UOP sample)

Notes: Irrigated with water from Kern-Tulare Water District that does not contain blended produced wastewater.

Site 2

Site Name: Control-2\_Valencia-1  
Fruit Type: Valencia  
Fruits per Sample Container: 2

Sample Containers per Tree: 1  
Tree Row: 40 (from the west)  
Tree Count from the road: 10, 11, and 12

Sample Time: 08:25 and 08:30 (duplicate)  
Sample Names:

JGM170404-2 (Water Board sample)  
JGM170404-3 (Water Board duplicate sample)  
Control-2 (UOP sample)

Notes: Irrigated with water from Kern-Tulare Water District that does not contain blended produced wastewater.

### Wastewater Sample Sites

#### Site 3

Site Name: Wastewater-3\_Naval-1  
Fruit Type: Naval  
Fruits per Sample Container: 2

Sample Containers per Tree: 1  
Tree Row: 31 (from the north)  
Tree Count from the road: 9, 10, and 12

Sample Time: 10:30 and 10:50 (duplicate)

Sample Names:

JGM170404-4 (Water Board sample)  
JGM170404-5 (Water Board duplicate sample)  
Control-3 (UOP sample)

Notes: Irrigated with blended produced wastewater from the Jasmin Ranchos Mutual Water Company Reservoir.

#### Site 4

Site Name: Wastewater-4\_Valencia-2  
Fruit Type: Valencia  
Fruits per Sample Container: 2

Sample Containers per Tree: 1  
Tree Row: 5 (from the south)  
Tree Count from the road: 8, 9, and 10

Sample Time: 11:18 and 11:20 (duplicate)

Sample Names:

JGM170404-6 (Water Board sample)  
JGM170404-7 (Water Board duplicate sample)  
Control-4 (UOP sample)

Notes: Irrigated with blended produced wastewater from the Jasmin Ranchos Mutual Water Company Reservoir.  
In 2009, Central Valley Water Board staff observed a discharge of oil from irrigation lines at this location.

#### Site 5

Site Name: Wastewater-5\_Lemon-1  
Fruit Type: Lemon  
Fruits per Sample Container: NA

Sample Containers per Tree: NA  
Tree Row: NA  
Tree Count from the road: NA

Sample Time: 11:40

Sample Names:

NA

Notes: Irrigated with blended produced wastewater from the Jasmin Ranchos Mutual Water Company Reservoir.  
Available sample locations were adjacent to roadways and were did not satisfy the fruit selection criteria.

**SITE PHOTOS**

Naval Trees



Valencia Trees



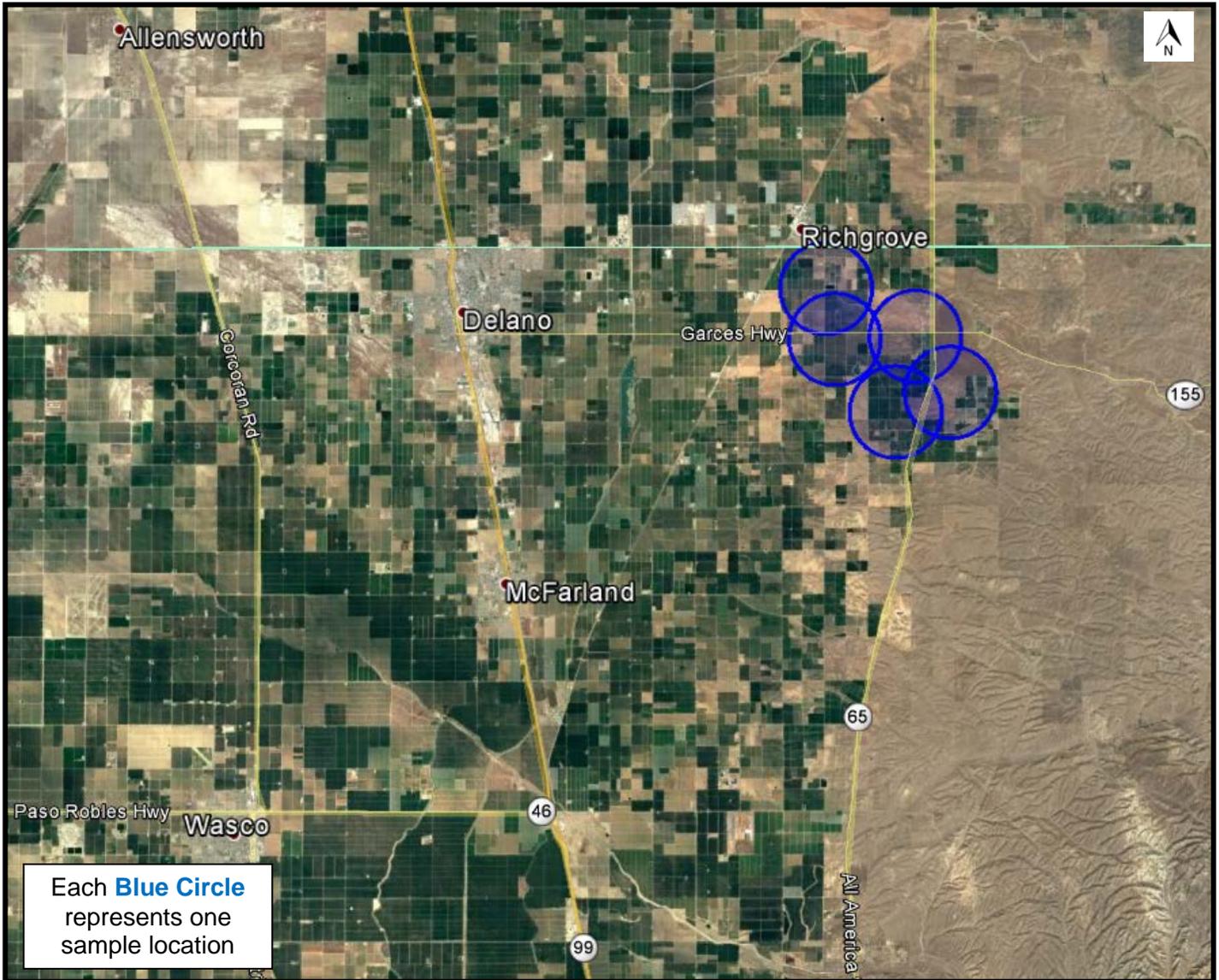
Collecting Samples



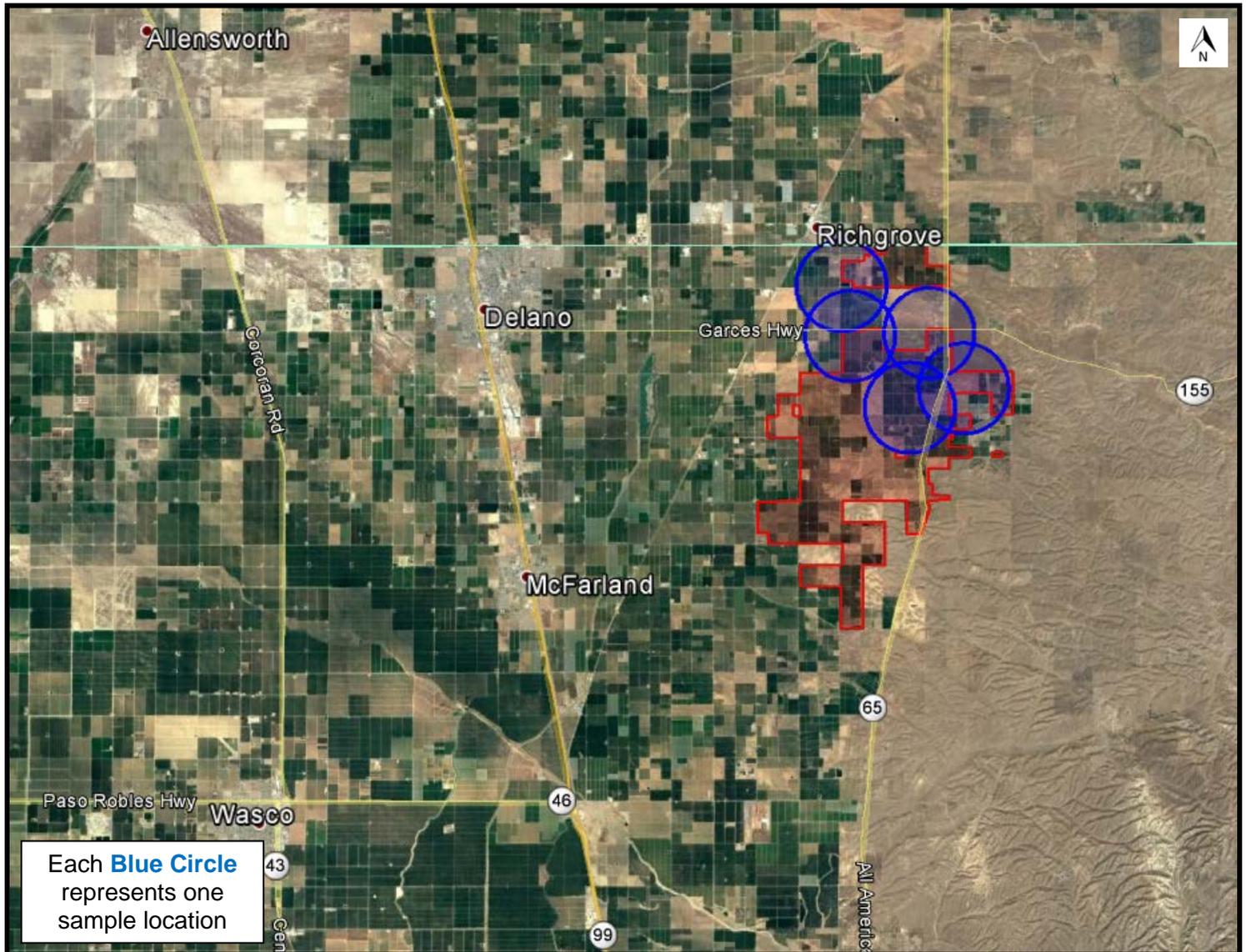
Fruit Samples



**SITE MAP**  
**Sample Locations**



**SITE MAP**  
**Sample Locations with Kern-Tulare Water District's**  
**Service Territory**



**SITE MAP**  
**Sample Locations with Produced Wastewater Storage Facilities**  
**and Kern-Tulare Water District's Service Territory**

