Santa Maria Integrated Plan
Protecting the Santa Maria Valley Groundwater Basin

June 2014
The City of Santa Maria drains via six sub-watersheds. Water moves from east of the City on a westerly route toward the Santa Maria River. Most of the water in the system is captured and infiltrated prior to reaching the River, except in very large storm events.
Betteravia Sub-watershed

Betteravia is the southernmost sub-watershed in the City, receiving flows from Orcutt, an urbanized area in Santa Barbara County, the Santa Maria Airport District property (enrolled separately under the Industrial General Permit), and agriculture. Surface water from this area flows west to an area known as the Betteravia Lakes two miles west of City limits.

Farming operations have long since claimed the Betteravia Lakes for crops. With a significant enough rain event, the Betteravia Lakes—along with Orcutt Creek, and Corralitos Canyon—ultimately flow to an ineffective watershed area south of the City of Guadalupe. An ineffective watershed area is a relatively small area where no stormwater discharge is produced and all runoff is confined.

In the more northern part of the Betteravia sub-watershed, where the Airport borders the City, the flows move north through a series of channels and basins to the groundwater recharge basins on “A” Street.

There are no known impairments in the Betteravia sub-watershed. The water treats and infiltrates either west or north of its boundaries, and surface water does not reach the Santa Maria River.
The Green Canyon sub-watershed begins east of Highway 101 and City limits. Agricultural flows east of the City are collected into the Prell Basin. If Prell Basin overflows, water travels under the freeway and into the City where it mingles with urban flows. Surface water moves through a series of basins and channels until it reaches terminal groundwater recharge basins on “A” Street.

With the rare exception of a very significant rain event, surface water almost never drains from this area. In the event of a major storm, in order to avoid flooding surrounding farms, surface water could be directed to the Unit II Ditch and the Santa Maria River. However, terminal basins have enormous capacity for capture and treatment via infiltration.

The City’s Wastewater Treatment Plant is located on Black Road northwest of the recharge basins. Treated wastewater percolates in a series of onsite percolation ponds. No surface or wastewater leaves that site.

There are no known impairments in the Green Canyon sub-watershed. Water is treated and infiltrates through a series of basins and channels and terminates at the recharge basins.
Main Sub-watershed

The Main Sub-watershed includes the City's downtown core, its oldest commercial areas and neighborhoods, and historic railroad tracks no longer in use. The northern border runs east and west just north of Main Street to the natural divide created by high curbs. To the south, a natural divide is created by historic railroad tracks, and to the east, Highway 101 creates a natural divide. The Main Sub-watershed extends west of the City into farm fields.

The urban core receives stormwater through a system of drop inlets and underground pipes. A large collector pipe daylights just west of City limits into the Main Street Canal, owned by Santa Barbara County Flood Control District ("Flood Control"). At the point the flow daylights, water becomes mingled with significant agricultural flows.

This co-mingled flow moves west in the ditch for approximately one mile, turns right, and culverts under Highway 166 (Main Street). It continues north to the Santa Maria River in what is called the Unit II Ditch, also owned by Flood Control, then outfalls to the Santa Maria River.

The California 2013 303(d) Combined List notes impairments in the Main Street Canal for nutrients, pesticides, sediment, toxicity, pathogens, and pH.
Flow begins in the agricultural fields east of the City, enters City limits via the Bradley Channel where some urban flow combines with more significant agricultural flow. Even in the dry season, this channel has tailwater flow. The water moves west and north until it enters the small manmade lake at Jim May Park, which is controlled by Flood Control. Flood Control detains water here during the dry season, and releases the water for flood control purposes during the wet season. Water then continues to the Santa Maria River.

To improve groundwater quality, and treat ag tailwater prior to discharge, the City has plans to build a tailwater denitrification system.

The Bradley sub-watershed has known impairments for pesticides, toxicity, nutrients, and bacteria.
The Blosser sub-watershed is bordered by the natural divide of Highway 101 to the east. Its southern border runs east and west just north of Main Street and is created by high curbs. To the north, it borders the Santa Maria River Levee, and to the south, the Blosser Channel. Urban runoff and nuisance flows from mostly residential area outfall into the Blosser Channel, which is an engineered concrete ditch that runs north and south along the western City limit.

Flood Control operates the Blosser Channel and the very large Blosser Basin. From October through April, the Blosser Channel is diverted from the Blosser Basin to continue on to the lower earthen portion of the Blosser Channel where it has further opportunity to infiltrate. During dry weather months, April through October, the Blosser Channel is diverted into the Basin where the water is retained. Dry weather flows are retained in the Blosser Basin during the summer months.

Eventually, combined flows from the Blosser and Bradley Channels discharge through the Santa Maria River Levee via a 5' by 5’ reinforced concrete box.

The City has received Proposition 84 funds to construct a bioretention system in the lower channel to provide treatment for combined urban and agricultural flows prior to Santa Maria River discharge. The Blosser Ditch Retention System (“Treatment Swale”) would be situated in the City right of way adjacent to the northern most segment of the Blosser Ditch between Canal Street and the Santa Maria River Levee.

The California 2013 303(d) Combined List notes impairments in the Blosser Channel for nutrients, pesticides, toxicity, pathogens, and pH.
The Santa Maria River sub-watershed is a narrow strip of land that butts up against the levee. It drains the Santa Maria Regional Landfill footprint (under the Industrial General Permit), agricultural lands, and a small urban neighborhood. The landfill monitors four outfalls through the levee and characterizes the flow in annual reports to the State Water Resources Control Board.

At great expense to the City, the City is closing the active landfill adjacent to the River and moving landfill operations to the Las Flores Ranch site south of the City. The City recently received approved WDRs for the new landfill. The move is anticipated to occur around the year 2020.

The Santa Maria River is impaired for bacteria, nutrients, pesticides, and toxicity.