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## **GROUND WATER MANAGEMENT PLAN**

FOR

## SOUTH WEST IRRIGATION DISTICT

AND

## **GOOSE CREEK GROUND WATER DISTRICT**

SUBMITTED TO

# **IDAHO DEPARTMENT OF WATER RESOURCES**

# IN COMPLETION OF IDAHO CODE

42-233a AND 42-1416b

**JUNE 15, 2016** 

# Approvals

Southwest Irrigation District and Goose Creek Irrigation District **Boards of Directors** 

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Randy Brown, Chairman - SWID

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Noland Critchfield, Chairman - GCID

6-15-2016

Date

State of Idaho

**Department of Water Resources** 

Director

Date

#### INTRODUCTION

In compliance with statutes Idaho Code 42-233a and 42-1416b South West Irrigation District (SWID) and Goose Creek Ground Water District (GCGWD) submit this Ground Water Management Plan for acceptance by the director of the Idaho Department of Water Resources. While the statutes are vague in description, Tim Luke, (IDWR, Water Compliance Bureau Chief) has repeated that the statutes refer to expanded acres contained in Critical Ground Water Areas (CGWA) only. Therefore, this management plan fully describes more mitigation than is required for SWID/GCGWD to meet the statutes.

SWID/GCGWD are ground water districts located in the geographical triangle of the Oakley Fan in south central Idaho. The districts were formed by the local farmers in response to the designation of CGWA within the basin. Since their formation the districts have been involved in efforts to maintain the groundwater resource.

SWID/GCGWD has performed several voluntary projects and practices to maintain the ground water production of the basin. They include: voluntary curtailment, installation of pipelines to deliver surface water to replace groundwater pumping, installation of headgates to deliver water to the pipelines, recharge projects on a grandiose scale, purchase of surface water rights, recapture of surface water in waste ponds and delivery of that water to groundwater irrigated lands. The district is constantly and consistently improving their position with the use of water.

The SWID/GCGWD currently has approximately 12,045.6 acres designated as "expansion acres" within the district boundaries. This total is derived from the water right acre limits.

This management plan is being submitted in behalf of the members of SWID and GCGWD. Water rights within the boundaries of SWID or GCGWD that are not members of either of those districts are not covered by this plan.

#### 1.1 Purpose and Scope

The main purpose of this GWMP is to ensure that the use of expanded water rights, located within the boundaries of the SWID/GCGWD, is legal and allowed within 2 years following the general adjudication. The purpose will be accomplished by establishing the facts that:

- CGWA's were declared in 1962 with little data or understanding of the geology and water resources of the area and it may be necessary to re-evaluate the CGWA distinction.
- Irrigation practices have become extremely efficient and recharge to the aquifer has diminished.
- The amount of surface water exchanged for groundwater more than mitigates the expanded acres within the district.

The average withdrawals are less than or equal to the average recharge within each CGWA and the SWID/GCGWD as a whole.

The scope of this report is to:

- 1. Locate and document the voluntarily curtailed acres.
- 2. Document the soft conversion programs.

- 3. Document the past and on-going re-charge efforts.
- 4. Identify the water rights within the district that meet the "expanded use" definition and ensure their mitigation.

#### 1.2 Critical Groundwater Area

Four CGWA's have been designated in the Oakley Fan; Oakley-Kenyon CGWA, West Oakley CGWA, Cottonwood CGWA, and Artesian City CGWA (see Figure 1). The dates of organization of each CGWA are January 16, 1962 for Oakley-Kenyon, Cottonwood, and Artesian City, and January 19, 1982 for West Oakley CGWA. The boundaries of the CGWA's were determined on geographical features not on geological or hydrological features.

The boundaries of each of the CGWA's do not delineate the natural conditions of the subsurface or the natural conditions of the ground water. For example, the aquifer types within the West Oakley Fan CGWA include basalt, rhyolite, limestone, and alluvium. All of the aquifer types vary greatly in hydrologic properties making it illogical to consider the CGWA's separately. However, the Cottonwood CWGA has been administered by the IDWR for several years. Limits have been set and monitored by them.

Therefore, it is the desire of SWID/GCGWD to include the remaining Oakley Fan CGWA's (Oakley-Kenyon CGWA, West Oakley CGWA, Artesian City) as one unit. Officials of the SWID/GCGWD have talked with Tim Luke (IDWR, Water Compliance Bureau Chief) and received confirmation that managing the remaining 3 CGWA's was the most plausible method.

#### **1.0 PROJECTS AND PRACTICES**

SWID/GCGWD has completed many projects and implemented many practices for conservation of the groundwater resource. The total amount of money spent on these projects and practices is in the hundreds of millions. The purpose of this section is to record their efforts.

#### 2.1 Voluntary Curtailment Acres

Voluntarily curtailed acres have valid water rights but the owner has voluntarily chosen to discontinue watering the acres. The total number of acres within the SWID/GCGWD that have a valid water right and are not being irrigated is 5,604. All voluntarily curtailed acres submitted with this plan were field checked in the summer of 2015. An electronic shapefile of the acres is presented with this plan.

A preliminary review of expanded acres, considering combined acre limits, yields 12,045.60 expanded use acres in the SWID/CGGWD. Subtracting the voluntarily curtailed acres from the total expanded acres leaves the remaining expanded acres within the districts requiring mitigation at 6,441.6.

#### 2.2 Soft Conversions

The term soft conversion was coined when SWID began using surface water in lieu of ground water. The wells remain active and are used when surface water supplies are short. SWID has been utilizing soft conversions for mitigation for many years. The IDWR is very familiar with the efforts of SWID's soft conversion program.

SWID has 3 main projects that include soft conversion; BID "J" canal, Milner Irrigation District, Twin Falls Canal Company and the West Cassia Pipeline, Inc. Each of these entities wheel SWID water, natural flow water, and privately leased water through their systems to SWID soft conversion participants.

Participants in the soft conversion programs have agreed to reduce their ground water usage equal to the volume they receive from the surface water source. All conversions are verified by SWID/GCGWD.

The IDWR has been analyzing the SWID/GCGWD soft conversion program for years. Each year the IDWR contacts SWID/GCGWD with the amount of mitigation received from the soft conversion program.

Water rights, points of diversion, and appurtenant acres of soft conversions have recently been submitted to IDWR.

#### 2.3 Recharge

SWID/GCGWD have many wells permitted to inject surface water to recharge the aquifers. The wells are strategically located throughout the CGWA's. Water from surrounding tributaries and the Snake River is recharged when available.

The volume of recharge is also verified by SWID and reviewed by IDWR. The volume of water recharged each year by SWID/GCGWD has recently been submitted to IDWR.

#### **2.0 CONCLUSION**

Review of the text presented above and the data recently submitted to IDWR will convince all concerned that the SWID/GCGWD's have more than mitigated for the expanded acres described in Idaho Code 42-233a and 42-1416b.