

# **GLENN-COLUSA IRRIGATION DISTRICT**

## **Water Distribution System Operation and Maintenance Policy**

### **1.0 BACKGROUND**

Glenn-Colusa Irrigation District's (District or GCID) water distribution system is comprised of approximately 65 miles of main canal, 608 miles of laterals and pipelines, 48 miles of creek channels used to deliver irrigation water, and approximately 534 miles of constructed drains and creek channels used to drain and recycle water from 153,733 acres of agricultural land.

This *Water Distribution System Operation and Maintenance Policy* (Policy) establishes rules, practices and responsibilities for the operation and maintenance (O&M) of the water distribution system and supersedes the District's *Drainage Maintenance Policy* (adopted May 5, 1994), the District's *Policy for the Use and Maintenance of District Canals, Laterals, Drains, Rights-of-Way and Adjacent Roadway Areas* (adopted December 16, 1999), and the District's *Seepage Policy* (adopted May 16, 1996).

### **2.0 DEFINITIONS**

#### **Abandoned**

A District facility that has not been operated by the District in at least five years and is no longer in functional condition.

#### **Conduit**

A canal, drain, or lateral, as defined in this Policy.

#### **Distribution System**

Consists of 65 miles of main canal, 608 miles of laterals and pipelines, and 48 miles of creek channels used to deliver irrigation water, and approximately 519 miles of constructed drains and creek channels used to drain and recycle water from 153,733 acres of agricultural land.

#### **District Lateral**

A lateral, as defined in this Policy, for which the District has documented responsibility.

#### **Documented Responsibility**

District O&M responsibility documented in the District's Principal Deeds (including the Franklin Deed), Grantors of Rights-of-Way Index and

associated maps, and agreements; the District's *Rules and Regulations*, the California Water Code, including § 22438, and this Policy.

**Drain**

A constructed drain or creek channel used for drainage, conveyance, and recycling of irrigation water.

**Encroachment**

Permanent or temporary private conduits, facilities, buildings, fences, equipment, and other appurtenances that extend into, under, over, or are located within District property or rights-of-way.

**Facilities**

Roadways, bridges, and pipeline crossings in, under, over, or parallel to a conduit that is required for ingress and egress from a District right-of-way Structures used to control water flow, maintain water delivery elevation and deliver water for irrigation purposes, including check structures, siphons, flumes, operational spills, field delivery turnouts, and gravity and pump recapture installations

**Five-Party Agreement**

The contract dated June 2, 1953, as supplemented on July 16, 1954, among GCID, Maxwell Irrigation District, Compton-Delevan Irrigation District, Provident Irrigation District, Princeton-Codora-Glenn Irrigation District, Jacinto Irrigation District, and Reclamation District No. 2047.

**Franklin Deed**

That certain deed dated July 11, 1921 in which Thomas J. Franklin, as Special Master appointed by the United States District Court for the Northern District of California in the action entitled *The Equitable Trust Company of New York and Joseph N. Babcock v. Sacramento Valley Irrigation Company, et al.* , conveyed laterals, ditches and drains and associated rights-of-way to GCID.

**Operation**

Management and delivery of irrigation water flows in conduits  
Coordination and delivery of water into private laterals

**Landowner**

An owner of land in the District.

**Lateral**

An open channel, pipeline, or natural creek channel used for conveyance and delivery of irrigation water, typically where the District has a documented or prescriptive right-of-way.

**Main Canal**

The District's 65-mile long main canal, for which the District owns the land under the canal in fee title.

**Maintenance**

Construction, refurbishment, and replacement of conduits, facilities and roadways. Silt removal to preserve open-channel invert, cross-sectional area, and profile Aquatic and terrestrial weed management.

**New Service**

Any change in crop or field use that would require a new point of water delivery, change in flow rate, or field elevation change.

**Private Lateral**

Any lateral, as defined in this Policy, for which the District does not have documented responsibility.

**Rights-of-Way**

Physical geographic location over which the District holds a legal right of passage either by grant of fee or easement, or by license.

**Water User**

A user of District water, including a tenant holding or possessing land within the District.

**3.0 OPERATION AND MAINTENANCE OF THE MAIN CANAL, LATERALS, FACILITIES AND ASSOCIATED RIGHTS-OF-WAY**

The District has documented responsibility for the main canal, and 366 miles of District laterals. Approximately 242 miles of laterals located in the District service area are private laterals.

**3.1 Purpose**

- 3.1.1 To identify rights-of-way and access rights to ensure the District's right of ingress and egress for O&M activities on private property.
- 3.1.2 To limit District liability and costs by conducting O&M activities only where the District has documented responsibility.

- 3.1.3 To identify and distinguish District and private O&M responsibilities.
- 3.1.4 To ensure access to all land in the District necessary for the purpose of inspecting, operating, and maintaining the main canal, laterals and facilities; for water conservation monitoring, and crop acreage measurement (Rule 10 - *GCID Rules and Regulations*).
- 3.1.5 To establish a process for the District to obtain rights to laterals, facilities and rights-of-way and access to private property, where they do not currently exist, for main canal and lateral system O&M activities.
- 3.1.6 To establish design specifications and water flow capacities for laterals and facilities.
- 3.2 District Laterals, Facilities, and Associated Rights-of-Way - General O&M Responsibility
  - 3.2.1 The District is responsible for the O&M of District laterals, facilities, and associated rights-of-way only where the District has documented responsibility.
  - 3.2.2 The District is responsible for the O&M of District laterals, facilities, and associated rights-of-way as the District deems necessary, to provide reasonable irrigation water delivery service and to preserve the long-term function of District laterals and facilities.
  - 3.2.3 The District is solely responsible for the O&M of District laterals, facilities, and associated rights-of-way unless the District authorizes a landowner or water user to perform such activities (Rules 1 and 12 - *GCID Rules and Regulations*).
  - 3.2.4 The District shall minimize its O&M costs and responsibilities by:
    - 3.2.4.1 Limiting the number of field delivery turnouts to one turnout per parcel unless field elevation conditions require additional turnouts.
    - 3.2.4.2 Removing abandoned or unused facilities within a District right-of-way, at the District's discretion.

- 3.2.4.3 Requiring landowners and water users to bear responsibility for the distribution of water from a single field delivery turnout to all fields within the served parcel.
- 3.2.4.4 Requiring that new service and turnouts be initiated and installed at the expense of the landowner or water user, as determined by the District.

### 3.3 District Laterals, Facilities and Associated Rights-of-Way - Specific O&M Responsibility

#### 3.3.1 Right-of-Way Encroachments

- 3.3.1.1 District rights-of-way are for performing District O&M activities only.
- 3.3.1.2 Public use of a District right-of-way is prohibited. Such prohibited public uses, include, but are not limited to:
  - 3.3.1.2.1 Placement of fencing and gates
  - 3.3.1.2.2 Vehicular travel
  - 3.3.1.2.3 Equipment travel and parking
  - 3.3.1.2.4 Placement and storage of bee hives
  - 3.3.1.2.5 Livestock grazing and watering
  - 3.3.1.2.6 Placement of Encroachments
  - 3.3.1.2.7 Residential and agricultural drainage
  - 3.3.1.2.8 Hunting, fishing and swimming
  - 3.3.1.2.9 Parking of chemical mixing and storage equipment
- 3.3.1.3 The District, at its discretion, may permit public access and use of District rights-of-way by issuing an encroachment permit or agreement consistent with the District's property and use rights, and the rights of the underlying fee owner. Those uses may include, but are not limited to:
  - 3.3.1.3.1 Gaining access to "landlocked" private land
  - 3.3.1.3.2 Cultivation of District land or rights-of-way
- 3.3.1.4 Landowners and water users shall install and maintain fencing on private property adjacent to the District's rights-of-way where livestock can encroach upon the rights-of-way.

- 3.3.1.5 Installation or maintenance of a private lateral or facility within District rights-of-way requires an encroachment permit or agreement from the District that is consistent with the District's property and use rights, and the rights of the underlying fee owner.
- 3.3.1.6 Laterals and facilities, or portions thereof, located outside of a District right-of-way are the responsibility of the landowner or water user where the lateral or facility is located.
- 3.3.1.7 Crossing pipelines and bridges, in or adjacent to District laterals, that are used for private access across the District lateral and are not a documented responsibility of the District, are a private maintenance responsibility of the landowner or water user. Said facilities shall be permitted with an encroachment agreement or permit from the District, consistent with the District's property and use rights, and the rights of the underlying fee owner.

### 3.3.2 Installation of Facilities in District Rights-of-Way

- 3.3.2.1 Landowners and water users may not install delivery gates, structures or other facilities within or through a District right-of-way, unless such installation is approved in advance by the District. The cost of an approved installation shall be borne by the landowner or water user (*Rule 1 - GCID Rules and Regulations*).
- 3.3.2.2 An encroachment permit or agreement is required prior to the installation of District-approved private facilities within or across District rights-of-way. The District may permit said use by issuing an encroachment agreement or permit consistent with the District's property and use rights, and the rights of the underlying fee owner.
- 3.3.2.3 Landowner or water user installed facilities within a District right-of-way shall, at the discretion of the District, become the property and responsibility of the District.

### 3.3.3 The Main Canal and Lateral Bank Roadways

3.3.3.1 The Main Canal and lateral bank roadways are maintained for the use of the authorized agents, employees, and officials of the District, in the discharge of their official duties. All other uses of these roadways are at the sole risk of the user, and such use is prohibited where signs, gates, chains, or other barricades so indicate (Rule 23 - *GCID Rules and Regulations*).

3.3.3.2 The District, at its discretion, may prohibit public access and use of the main canal and lateral rights-of-way roadways during certain periods of the year due to weather, maintenance, or other issues. The District shall maintain road crossings and bridges in or over laterals only where the District has documented responsibility for a road crossing or bridge. In certain circumstances, the District, at its discretion, may assume maintenance responsibility for private road crossings or bridges, commensurate with the District's historic use of those private facilities.

#### 3.3.4 Lift Pumps

3.3.4.1 Permanent lift pumps and channels located within District rights-of-way that are used to serve private lands are non-District owned facilities and shall be maintained by the benefitting landowner or water user. An encroachment permit or agreement issued consistent with the District's property and use rights, and the rights of the underlying fee owner, is required prior to the installation of a lift pump within District rights-of-way (Rule 22 - *GCID Rules and Regulations*).

3.3.4.2 Non-permanent or portable lift pumps serving private lands shall draw water from the field delivery discharge normally used to serve the field. The non-permanent or portable lift shall be located outside of the District's rights-of-way. Pumps may be placed within the District's rights-of-way for short periods of time, if approved by the District.

#### 3.3.5 Sprinkler and Drip Irrigation Facilities

3.3.5.1 Private laterals and facilities associated with sprinkler, micro-sprinkler, or drip irrigation shall be located outside

of the District's rights-of-way, including permanent booster pumping, filtration, and backwash piping equipment.

3.3.5.2 At the discretion of the District, backwash piping may discharge into a District lateral, pursuant to an encroachment permit issued by the District consistent with the District's use rights, and the rights of the underlying fee owner, prior to installation of backwash piping. Backwash equipment shall be equipped with a backflow prevention device to prevent backflow of chemicals into the District lateral, whether or not the chemicals are in concentrated or mixed form.

3.3.5.3 Non-permanent sprinkler pumping equipment shall be located outside of the District's rights-of-way and shall draw water from the field delivery discharge normally used to serve the field.

### 3.3.6 Chemical Application Equipment

3.3.6.1 Prior to locating chemical mixing equipment used for agricultural chemical applications, in a District right-of-way, a landowner or water user must obtain approval from the District. The District may approve said use by issuing an encroachment permit or agreement consistent with the District's property and use rights, and the rights of the underlying fee owner.

3.3.6.2 Equipment shall not obstruct travel or interfere with O&M activities within the District's rights-of-way.

3.3.6.3 Chemical mixing equipment shall be equipped with a backflow prevention device to prevent the backflow of chemicals into a District lateral, whether or not the chemical is in concentrated or mixed form.

### 3.3.7 Natural Creek Channels Used for Conveyance and Delivery of Water

3.3.7.1 Where a District lateral is a natural creek channel, the District's O&M responsibilities shall include:



- 3.3.7.1.1 The water prism area of the natural creek used for the conveyance and delivery of irrigation water.
    - 3.3.7.1.2 Adjacent roadways commensurate with the level of District use.
  - 3.3.7.2 The District shall not be responsible for flood-flow related natural creek channel and bank degradation, including:
    - 3.3.7.2.1 Bank erosion due to high-water flow.
    - 3.3.7.2.2 Loss of adjacent roadways due to high-water flow.
- 3.3.8 Laterals that Cross Federal, State, County or City Rights-of-Way
  - 3.3.8.1 Counties are responsible for the maintenance, repair and improvement of laterals which cross their respective highways (California Water Code §7034). Where a lateral crosses a highway and there is no record the highway rights-of-way existed prior to the lateral rights-of-way, then it is conclusively presumed the lateral rights-of-way existed first, and the lateral shall be repaired, improved and replaced, if necessary, by the public agency(California Water Code § 7035).
  - 3.3.8.2 The District shall be responsible for the maintenance of laterals and facilities, or portions thereof, located within the District's rights-of-way.
  - 3.3.8.3 Specific responsibilities may be established by agreement.
- 3.4 District Assumption of O&M Responsibility for Private Laterals
  - 3.4.1 Regardless of historic lateral O&M practices, all laterals that are not a documented responsibility of the District shall be considered private laterals.
  - 3.4.2 The District's Board of Directors may consider District assumption of O&M responsibility for a private lateral only when all of the landowners adjacent to the entire reach of a private lateral and all owners of land receiving water service from the lateral submit a petition requesting such action.

- 3.4.3 Only private laterals that serve multiple users shall be eligible for District assumption of O&M responsibility; private laterals that serve single users are considered on-farm distribution laterals and are not eligible for District O&M responsibility.
- 3.4.4 Upon approval by the Board of Directors, the petitioning landowners shall convey all right, title and interest in and to a private lateral and associated facilities, and grant a right-of-way to the District for O&M purposes.
- 3.4.5 Prior to the District assuming O&M responsibility, all private laterals, facilities, and associated rights-of-way shall meet District standards, as established by the District, including:
  - 3.4.5.1 Right-of-way dimension, lateral capacity, and roadway widths.
  - 3.4.5.2 Structure design, condition and location.
  - 3.4.5.3 Removal of existing encroachments upon the granted rights-of-way.
  - 3.4.5.4 Removal of trees and vegetation from the rights-of-way.
  - 3.4.5.5 Installation of fencing or containment facilities sufficient to prevent livestock from entering upon the District's rights-of-way.
- 3.4.6 All costs of bringing laterals, facilities, and associated rights-of-way up to District standards shall be borne by the petitioning landowners.
- 3.4.7 Once the petitioning landowners convey the necessary interests in a private lateral and associated facilities, and grant the necessary rights-of-way, and the District assumes O&M responsibility for a private lateral pursuant to this section, the lateral, and associated rights-of-way are a documented responsibility of the District.
- 3.4.8 Owners of land annexed under future reorganization programs, or subdivided, shall be required to convey all right, title and interest in and to any private lateral and associated facilities that meet the requirements of Section II.D.3, grant the District rights-of-way for O&M activities, and meet the requirements of Section II.D.5, as a condition of reorganization or subdivision.

### 3.5 Design Specifications and Water Flow Capacities for Private Laterals and Facilities

- 3.5.1 Private laterals and facilities shall be constructed and maintained in accordance with District standards and specifications.
- 3.5.2 Private lateral, facility, and field delivery turnout water flow capacity shall adhere to capacities as determined by the District's Engineer.

### 3.6 O&M Responsibility for Private Laterals

- 3.6.1 Landowners and water users on private laterals shall be responsible for the operation of private laterals, including:
  - 3.6.1.1 Ordering water flows from the District.
  - 3.6.1.2 Receiving ordered water flows from the District at the point-of-delivery, located at the downstream end of the District's reach of the lateral.
  - 3.6.1.3 Conveyance and management of water flows from the point-of-delivery to the field delivery turnout(s).
- 3.6.2 Landowners and water users shall be responsible for the maintenance of private laterals and facilities to maintain a condition that provides adequate water flow capacity, prevents flooding, and minimizes seepage damage to adjacent land. The District, at its discretion, may discontinue water delivery to a private lateral not meeting these requirements, until the deficient conditions are remedied and accepted by the District (Rule 25 - *GCID Rules and Regulations*).
- 3.6.3 Landowners and water users shall maintain an operational spill at the downstream end of the private lateral of sufficient size and flow capacity to convey operational flows in excess of the combined irrigation demand from both the District lateral(s) and the private lateral.
- 3.6.4 Landowners and water users shall bear all costs for the O&M of private laterals.

### 3.7 Private Work and Contracts for District Services

- 3.7.1 The District, at its discretion, may perform lateral and facility-related private construction and maintenance work on a timetable established by the District (Rule 28 - *GCID Rules and Regulations*).
- 3.7.2 Landowners and water users shall be responsible for all costs associated with the private work, as provided in an Agreement for Services and Materials.

#### **4.0 DRAIN SYSTEM OPERATION AND MAINTENANCE**

Currently, the District's documented responsibility for drain system maintenance applies to approximately 534 miles of constructed drains and natural creek channels within the District's boundaries. The District's current drain system maintenance obligations are documented in the Five-Party Agreement, the District's Principal Deeds and Grantors of Rights-of-Way Index and associated maps, the District's *Rules and Regulations*, the California Water Code, and this Policy.

##### **4.1 Purpose**

- 4.1.1 To identify District drains and define drain maintenance responsibility.
- 4.1.2 To ensure District drain channel capacity is adequate to convey irrigation water.

##### **4.2 District Responsibility**

- 4.2.1 The District's drain maintenance obligation is identified on its District Facility Map.
- 4.2.2 One of the following criteria must be met for the District to expand its drain maintenance responsibility:
  - 4.2.1.1 A written and/or recorded deed, easement or agreement identifying a drain facility as a District obligation.
  - 4.2.1.2 Any private drain reach, commencing from an active District lateral spill structure to the point of intersection with a District operated and maintained facility.
  - 4.2.1.3 The District's Board of Directors may consider District assumption of O&M responsibility for a private drain

only when all of the landowners adjacent to the entire reach of a private drain submit a petition requesting such action. Upon approval by the Board of Directors, the drain shall become a District drain.

- 4.2.3 Existing drains that meet the criteria in Section III.B.1. shall be included on the District's Drain Map. The Drain Map shall represent the full extent of the District's drain maintenance responsibility.
  - 4.2.2.1 The District's Drain Map shall become effective upon adoption of this Policy, and shall remain in effect, unaltered, until revised and approved by the Board of Directors.
  - 4.2.2.2 Any drain not on the approved Drain Map that is associated with newly annexed or subdivided land shall be a private maintenance responsibility whether or not the drain meets the criteria in Section III.B.1.
- 4.2.4 The District shall not have an obligation or duty to maintain those drains where the District has been relieved of such responsibility by contract, or by consolidation or reorganization proceedings.
- 4.2.5 The District shall maintain unobstructed channel flow in District drains, as the District deems necessary, by removing obstructions from the area of the water prism used to convey surface drainage of District-supplied irrigation water.
- 4.2.6 The District shall not maintain road crossings and bridges in or over drains that are not on the Drain Map.
- 4.2.7 In certain circumstances, the District, at its discretion, may assume maintenance responsibility for private road crossings and bridges over private drains, commensurate with the District's historic use of the private road crossing or bridge.
- 4.2.8 The District shall not undertake additional maintenance responsibilities as a result of a landowner's or water user's changes in agricultural practices.
- 4.2.9 The District shall have sole responsibility for the O&M of water control and recapture facilities located in District drains.

### 4.3 Landowner and Water User Responsibility

#### 4.3.1 Landowners and water users, where applicable, shall:

- 4.3.1.1 Maintain each drain under their ownership or control, not identified as a District responsibility in Section III.B.1.
- 4.3.1.2 Maintain each drain under their ownership or control in a condition that adequately conveys agricultural runoff flows, does not cause flooding, minimizes seepage onto adjacent property, and does not constitute a waste of water.
- 4.3.1.3 Maintain crossing pipelines and bridges, in or adjacent to drains, that are used for private access across the drains and are not a documented responsibility of the District.
- 4.3.1.4 Discharge water to the drainage system in a safe manner so as not to cause flooding or seepage to downstream properties, or waste water.

### 4.4 Drains Crossing Federal, State, County or City Rights-of-Way

- 4.4.1 Counties are responsible for the maintenance, repair and improvement of drains that cross their respective highways (California Water Code §7034). Where a drain crosses a highway and there is no record the highway rights-of-way existed prior to the drain rights-of-way, then it is conclusively presumed the drain rights-of-way existed first, and the drain shall be repaired, improved and replaced, if necessary, by the public agency (California Water Code § 7035).
- 4.4.2 All costs associated with the installation and maintenance of facilities in drains that cross these rights-of-way shall be the responsibility of the public agency owning the highway rights-of-way.

## 5.0 **WATER DISTRIBUTION SYSTEM SEEPAGE**

Ordinary and natural seepage is reasonably expected to occur along certain reaches of the District's conduits and facilities due to the natural characteristics of the conduits, facilities, and adjacent lands, and as a result of the District's normal operation of its conduits and facilities.

The District possesses recorded and prescriptive easements and rights-of-way for the purpose of operating its conveyance system. Seepage on adjacent lands along these easements and rights-of-way were reasonably anticipated and expected when the District's system was constructed, for which no claim or action for any damage or losses would be sustained. The District will maintain water elevations in its conveyance system as it deems necessary to provide irrigation service to its water users. Adjacent landowners may need to modify their operations to minimize impacts that may occur from seepage from the District's conveyance system.

## 5.1 Water Distribution System Operation

- 5.1.1 The District shall operate its conduits and facilities as it deems necessary to meet irrigation water delivery requirements.
- 5.1.2 Where the District deems possible, during certain times of the year, water elevations in certain reaches of the District's conduits and facilities shall be maintained at lower elevations in an attempt to minimize potential seepage. These alternative operations shall not diminish downstream irrigation water delivery capability.
- 5.1.3 Where seepage ditches have been constructed within District rights-of-way, the District shall monitor and manage the flow and drainage of intercepted seepage water, as determined by the District.
- 5.1.4 Seepage ditches located outside of the District's rights-of-way shall be the responsibility of the landowner or water user.
- 5.1.5 Construction of additional seepage ditches shall be at the discretion of the District as conditions warrant.