

## PLANNING GUIDELINE #1

Amendments to the CAAG Areawide Water Quality Management Plan should take into consideration the creation and development of Regional wastewater treatment and reclamation systems, rather than numerous smaller facilities or large on-site collection systems, where feasible.

The definition of a Regional system is a system that will either:

- a) Provide service to a significant number of homes, properties, and/or residents that will generate a minimum average daily flow of 25,000 gallons per day in an isolated or other such area that has precluded the development of significant wastewater infrastructure.
- b) Provide service to a significantly populated area, or area projected to have a significant population, and currently does not have significant wastewater infrastructure. A definition of this area should take into consideration hydrology, topography, and geology.
- c) A Regional system may include multiple treatment works, provided they are of substantial size. This network of treatment works should take into consideration hydrology, topography, and geology.
- d) Any system shall take into consideration the whole of the population in an area and not pick and choose which properties to serve.

A Regional system does not include:

- a) Individual lots or a small number of lots that are planned to be served by small treatment works.
- b) A subdivision or small group of subdivisions that is part of a larger concentration of population that plans to be served by individual treatment works.
- c) An area that elects to develop treatment works despite the fact that another facility is readily available to serve that area

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Rationale:

A version of this guideline is currently in the 1994 Areawide Water Quality Management Plan. This guideline further defines "Regional" facilities.

One of CAAG and ADEQ's main goals is the reduction of point-source pollution. Having multiple facilities within a close range not only diminishes the amount to options for treatment and disposal options, but could jeopardize aquifer health. Regional facilities assists in the elimination of numerous point-source pollution areas and the potential for contamination, whether accidental or through inattention.

It has been difficult to truly define a Regional facility, but through CAAG's 208 process, some precedents have been set:

- a) Utilities, public or private, should be inclusive rather than exclusive. Excluding lots, residences, or people from an area encourages inappropriate or illegal waste disposal practices.
- b) Planning for sewer service should not necessarily be predicated upon political boundaries.
- c) In both Gila and Pinal Counties, there are isolated pockets of population that will require some sort of sewer service. Regional infrastructure may be difficult to obtain due to distance from a centralized system, geography, topography, or other similar issues. These pockets of population may make a facility environmentally and economically feasible.

This guideline sets the stage for all other guidelines. Wastewater planning should not be a provider "looking out for its own," but take a broader, regionally based view.

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## PLANNING GUIDELINE #2

When considering the development of wastewater treatment or wastewater reclamation facilities, planners should work not only with their local community, but with surrounding communities to develop Regional solutions. At a minimum, wastewater operators should engage neighboring communities and/or jurisdictions in discussions regarding plans and intent with to construct wastewater treatment works.

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### Rationale:

CAAG's AWWQMP has a public review process that requires those potentially effected jurisdictions to be noticed on the construction of new treatment works. Although the CAAG process does facilitate this guideline, the responsibility of initiating this process should be the responsibility of the provider prior to submission to CAAG. Wastewater planning should be done on a regional basis and can only be accomplished through communication and cooperation. Providers must look at a larger picture and think beyond their property and consider the effects of their operations on their neighbors.

### **PLANNING GUIDELINE #3**

Packaged plants should not be used as a long-term solution to wastewater treatment.

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#### Rationale:

Packaged plants, or “out of the box” plants are defined as plants that are pre-constructed and readily available for instantaneous or near-instantaneous implementation. These plants are easily put together and integrated into a system. Although these plants are easy to implement, the shelf life on most packaged plants are only a few years.

Packaged plants, like many small treatment works, are short-term solutions to an immediate issue. While they are effective when implemented as part of a temporary fix, prolonged use typically results in failure. Packaged plants should only be used as an immediate step to protect water quality while long-term solutions are being drafted.

## PLANNING GUIDELINE #4

Effluent produced by treatment works should be managed in a manner that will promote water quality protection, sustainability, and conservation of potable water supplies. Specifically, operators should, through advanced planning, endeavor to use effluent for beneficial reuse or recharge into an aquifer.

The priority of the use of effluent should be:

- 1) Beneficial reuse, either through irrigation, dust control, water features that may use effluent as a primary source of water, or any other reuse option permitted under Arizona Administrative Code
- 2) Recharge into an aquifer either through deep injection wells, vadose zone wells, or other technology approved by the Arizona Department of Environmental Quality and/or Arizona Department of Water Resources
- 3) Recharge through the use of infiltration ponds. These ponds, however, should demonstrate a high degree of percolation, and not be located inside an ephemeral or perennial wash, stream, creek, river, etc. Ideally, these infiltration ponds should not require an Arizona Pollution Discharge Elimination System (AZPDES) permit.

Effluent for reuse and recharge should be treated to A+ water quality standards, and treated to the highest degree possible, as a means to protect water quality. In the event a provider elects to treat effluent to a lesser quality, it should be treated to no less than B+ quality, and adhere to the following guidelines:

- 1) Effluent should be used for 100% reuse and recharge only
- 2) B+ quality effluent should only be reused for applications listed by Arizona Administrative Code, which limits the use for non- or extremely limited-partial body contact
- 3) If B+ quality effluent is recharged, it should be a minimum of 200 feet away from a water body, either ephemeral, perennial, or surface water
- 4) B+ quality effluent should not be discharged into a Waters of the U. S.

Discharge into a Waters of the U. S. should only be used as a last resort and, preferably, as an emergency option in the event of a wet/rainy condition that prevents effective recharge/percolation. In the event of a discharge, operators should adhere to the following guidelines:

- 1) Effluent should only be treated to A+ water quality standards
- 2) Discharge should first be used as a way to enhance an existing riparian area, rather than creating new riparian areas
- 3) The discharge should not be destructive to the surrounding environment, including the cause of flooding, excessive erosion, or impinging upon culturally sensitive areas
- 4) Prior to approval of an amendment to the CAAG 208 AWWQMP, letters

of support or no objection should be obtained by agencies/jurisdictions that could potentially be affected by the discharge, including local forms of municipal government, county government, Arizona State Land Department, and/or Arizona Game and Fish Department

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Rationale:

Water in Arizona is precious, and water providers are looking for new ways to provide water, or at a minimum, find ways to conserve existing supplies. Creative use for effluent can be a way to renew aquifer supplies or preserve supplies by using effluent for acceptable reuse purposes. Reuse and recharge should be the primary focus of new treatment works and upgrades to existing facilities.

The practice of discharging effluent has become less acceptable. However, in some instances, the discharge into a water body is beneficial, such as in Kearny. The discharge of effluent into the Gila River serves as recharge, and provides additional water credits to the Town, who uses water administered by the Gila River Indian Community through the Globe Equity Act/Indian Community Water Settlement Act.

Discharge may also be used to enhance an existing riparian area, however, shouldn't be used to create new areas. The creation of new riparian areas, whereas aesthetically pleasing, may either cause harm to a downstream property owner, or create a nuisance for a local jurisdiction who may be obligated to maintain the area.

In the event of any discharge, local jurisdictions should be notified and allowed the opportunity to participate in the public process.

## PLANNING GUIDELINE #5

In the event of discharge, an operator should ensure that:

- 1) The discharge does not cause damage or irreparable harm
- 2) The number of discharge locations should be minimized to the fewest number of points necessary
- 3) The location of all potential discharge points and the likelihood of those points being used should be fully disclosed at the time of the submittal of the amendment

Additionally, it is recommended that hydrology studies be conducted to determine the course and distance of a potential discharge along a body of water.

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Rationale:

As a benefit and protection mechanism to property owners and/or jurisdictions, the number of discharge points should be as minimal as possible. This will allow those affected to understand where discharges are coming from with as little confusion as possible. Operators should also disclose where these points are, the number of points, by coordinates, and the likelihood that these points will be used, if any.

## **PLANNING GUIDELINE #6**

All local municipalities in the CAAG Region should become a Designated Management Agency where feasible and allowed by State Statute.

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Rationale:

This recommendation is currently in the CAAG 208 AWWQMP.

As a Designated Management Agency, a municipality, sanitary district, community facilities district, or other body with elected body or electoral oversight has the ability to adopt water quality standards within their jurisdiction, provided they are not less-stringent than State Law. This also allows the jurisdiction to have control over the planning and administration of wastewater services within their boundary.