

REVISED P. 2-2

- **Best Practices for non-potable reuse:** The District discourages non-potable reuse when its application increases net water use. However, the District recognizes a number of best practices for non-potable reuse that can help extend the life of water supplies (see box at right).
- **Consider return flows:** Local wastewater providers should consider the need for returns of highly treated wastewater to local water bodies within the basin of origin as well as opportunities to enhance available water supplies through indirect potable reuse and the generation of “made inflows” to federal reservoirs (see box at right). GAEPD’s planning guidance for this Plan further states that returning highly treated wastewater to Lakes Lanier and Allatoona (and their watersheds) and to the Upper Flint River Basin shall be encouraged, where feasible, to support long-term sustainable water use from these basins.
- **Make appropriate use of reclaimed water:** The use of highly treated effluent for indirect potable reuse and non-potable reuse plays an important role in sustaining the District’s potable water supplies. Maximizing return flows to local water supply sources is encouraged when feasible. This Plan has a strong focus on indirect potable reuse returns to the river basins and lakes that provide the District’s water

Non-Potable Reuse Policy: With respect to non-potable reuse, this Plan generally sets a preference for return flows to local water supply sources where assimilative capacities are available. While other areas of the country seek to maximize non-potable reuse for a variety of uses, including irrigation, the District must balance its own needs with the needs of instream water quality and downstream uses. While non-potable reuse water is currently offered by a small number of utilities in the District, usually for irrigation, the District discourages these and other uses when they increase net water use. However, some non-potable reuse may reduce demand and extend the life of surface water supplies. Therefore, the District recognizes the following forms of non-potable reuse as best practices:

- Flushing toilets and urinals
- Irrigation when offsetting an existing potable water supply source and combined with a conservation pricing strategy
- Industrial reuse opportunities (cooling towers, boilers, non-contact cooling water)
- Commercial reuse opportunities (car washes, construction)

Greywater, another form of reuse, may also provide additional opportunities. In accordance with current state plumbing code, greywater may be used only for flushing toilets and urinals and for subsurface irrigation.

Return Flows, Indirect Potable Reuse and Water Supply Augmentation in Allatoona Lake and Lake Lanier: Return flows play a critical role in maintaining stream flows and in augmenting available water supplies through indirect potable reuse. In the District, indirect potable reuse occurs when water is returned to a river above a downstream water supply intake and when water is returned to a storage reservoir for later withdrawal.

Certain return flows to federal storage reservoirs (e.g., Lake Lanier) may qualify as “made inflows to a reservoir,” which are defined by the Georgia Department of Natural Resources (GADNR) to include both wastewater effluent return flows discharged to increase flows to the reservoir and water that flows into a reservoir after being released from another storage project upstream. A GADNR rule authorizes the GAEPD Director to allocate “made inflows” to the federal reservoirs to specific users that have contracted for storage in the federal project.

Indirect potable reuse and made inflows to federal reservoirs are an important part of Metro Atlanta’s long-term water supply plan. The degree to which such flows can be used for indirect potable reuse to increase the total available water supply for Metro Atlanta, however, depends to a significant degree on the U.S. Army Corps of Engineers crediting “made inflows” in a manner consistent with Georgia law. Assuming the U.S. Army Corps of Engineers takes steps to do so in the future, then for many users the best alternative to increase supply will be to increase returns. Because substantial investments are needed to return water to federal storage projects, however, this alternative will rarely make sense for any jurisdiction that is not permitted to store and use the water it creates.

supplies. The District's policy on the use of reclaimed water is explained in more detail in the box on the right.

- **Continue to protect water quality:** Water quality protection is essential to ensuring the quality and availability of existing and future drinking water supplies, in-stream aquatic health, recreational opportunities and availability of wastewater assimilative capacity.
- **Support adoption of advanced treatment technologies:** New technologies will advance our abilities to augment water supplies, ensure safe drinking water and reduce pollutant loadings to our waterbodies.

REVISED P. 5-3

- **Corps Reservoirs – Storage, Withdrawals and Returns** (*Action Item INTEGRATED-13 [HYPERLINK]*): This Action Item emphasizes an integrated, regional approach for the efficient and sustainable use of Allatoona Lake and Lake Lanier.
- **Encouraging the Return of Highly Treated Wastewater to the Chattahoochee and Flint River Basins** (*Action Item INTEGRATED-14 [HYPERLINK]*): This Action Item outlines the requirements for amendments to this plan by local wastewater providers relating to the treatment of water sourced from the Chattahoochee River Basin below Buford Dam or Upper Flint River Basin.

ACTION ITEM

INTEGRATED-13: CORPS RESERVOIRS - STORAGE, WITHDRAWALS AND RETURNS

<p>Intent: To develop an integrated, regional approach for the efficient and sustainable use of water supply storage in Allatoona Lake and Lake Lanier, considering both the availability of water and storage, the return of highly treated wastewater to these reservoirs, and the potential to expand future water supplies through indirect potable reuse.</p> <p>Points of Integration: The feasibility of returning highly treated wastewater to these reservoirs for indirect potable reuse depends to a significant degree on policies ensuring that returned water is stored and accounted for so that water supply benefits are realized and compliance with water quality requirements, including any applicable TMDLs.</p>	<p>Responsible Parties:</p> <p>Local Water Provider (Allatoona and Lanier)</p> <p>Local Wastewater Provider (Allatoona and Lanier)</p>	<p>In Coordination With:</p> <p>Local governments (Allatoona and Lanier)</p> <p>Elected Officials</p> <p>Neighboring local governments, local water providers and local wastewater providers</p> <p>Relevant regulatory agencies</p>
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Action Item: Coordinate integrated water supply uses and the return of highly treated wastewater to Lake Lanier and Allatoona Lake to support the long-term, sustainable use of water from these reservoirs and their watersheds.

Sub-Tasks: Each local water provider that withdraws or plans to withdraw water from Allatoona Lake or Lake Lanier shall, after the date of this plan, coordinate with the State of Georgia through its designated implementing agenc(ies) in any requests for water supply storage from the Corps in either Allatoona Lake or Lake Lanier

Each local wastewater provider that returns or may in the future return highly treated wastewater to Allatoona Lake, Lake Lanier, or any tributary to these reservoirs shall:

1. Ensure that treatment capacity developed by the local wastewater provider and permitted wastewater discharges are consistent with the projected wastewater treatment capacities and wastewater discharges included in this Plan (as it may be amended from time to time).
2. If due to changed circumstances or an increase in projected wastewater flows compared to what is included in this Plan a local wastewater provider plans to (a) increase its wastewater treatment capacity by building a new or expanded wastewater treatment plant, (b) change the location of a currently permitted wastewater discharge or (c) enter into a new or expanded intergovernmental agreement to send wastewater flows to another local wastewater provider - then the local wastewater provider shall request an amendment to this Plan reflecting such

changes. Any requested amendment must be approved by the District prior to submitting any required request or permit application to Georgia EPD.

3. Any local wastewater provider seeking an amendment to this Plan as described above shall meet with staff for the District and provide any information necessary to support an amendment to this Plan. Such information may include, but is not limited to, current wastewater discharge information, projected future wastewater flows, and capital improvement plans. In reviewing the requested amendment, the District's governing board shall consider, among other factors, whether the local wastewater provider's requested amendment includes returning, where feasible, highly treated wastewater to Allatoona Lake, Lake Lanier and their tributaries.

Description:

Returning highly treated wastewater to Lake Lanier, Allatoona Lake, and the tributaries to these reservoirs, where feasible, is a priority within the District and necessary to support the long-term sustainable use of these water supply sources.

The return of highly treated wastewater to Lake Lanier and Allatoona Lake is a critical component of the District's water supply planning, which relies on indirect potable reuse to enhance and extend the region's water supplies to meet the region's long-term water needs. Indirect potable reuse is a water supply strategy in which highly treated wastewater is returned to a water supply source, so that the returned water can be withdrawn and reused. Within the District, indirect potable reuse occurs on a significant scale at Lake Lanier and Allatoona Lake, the region's primary water supply sources.

Indirect potable reuse is an environmentally sound water supply strategy that maximizes the use of existing infrastructure and that avoids unnecessary environmental impacts and economic costs from the construction of additional, unnecessary water supply infrastructure. However, the continued development and reliance on indirect potable reuse at Allatoona Lake and Lake Lanier depends to a significant degree on the adoption of appropriate policies by the Corps that ensure returned water is available to meet water supply needs.

Extensive infrastructure investments will be required to continue and expand indirect potable reuse at Lake Lanier and Allatoona Lake. Further, returning highly treated wastewater to these sources for indirect potable reuse will increase treatment and pumping costs relative to other wastewater treatment options. In many instances, these investments and added costs would only be justified if the full additional water supply benefits are realized. Thus, in the absence of appropriate Corps policies that recognize and honor the State of Georgia's permitting decisions and allocation of water rights, water providers and wastewater providers may pursue other alternatives that ensure returned water is available to meet water supply needs in the District.

Securing needed water supplies and managing water supply withdrawals from Lake Lanier and Allatoona Lake present unique challenges owing to the reservoirs' ownership and operation by the Corps. The State of Georgia and local water providers have been working for many years to secure needed water supply storage in these reservoirs. In support of these efforts, detailed projections of water supply needs from these sources, and wastewater returns to these sources, have been prepared by the District and Georgia EPD. These projections, which are based upon and reflect information included in the development of this Plan, have been submitted to the Corps by the State of Georgia. This information has been utilized by the Corps in lengthy administrative processes to reallocate storage in these reservoirs to water supply.

Consistent with its authority to regulate the impoundment and use of surface water in Georgia, the State of Georgia has promulgated rules under which the Director of Georgia EPD may grant users the right to impound or withdraw “made inflows” to Lake Lanier and Allatoona Lake, among other waters. The State of Georgia, through Georgia EPD, has exercised this authority at Allatoona Lake to allocate certain made inflows to the Cobb County-Marietta Water Authority. Additional allocations of made inflows at Lake Lanier will be addressed by Georgia EPD in the future, as warranted by conditions at the time. However, the return of highly treated wastewater to Lake Lanier and Allatoona Lake—and the investment by local water and wastewater providers in developing the infrastructure necessary to return large volumes of water to these sources—will be incentivized if the Corps recognizes the State of Georgia’s allocation decisions and accounts for made inflows in a manner consistent with Georgia law.

Implementation Guidance: Successful implementation of large-scale indirect potable reuse at Lake Lanier and Allatoona Lake requires close coordination among local water providers, wastewater providers, District staff, and relevant regulatory agencies. The amount of water supply available to local water providers, depends, in part, on the volume of water that is returned to the water supply source. At the same time, the return of highly treated wastewater to water supply reservoirs implicates complex wastewater discharge permitting considerations, including applicable water quality requirements for the receiving waterbodies, available assimilative capacity, and compliance with any applicable Total Maximum Daily Limits, wasteload allocations, and permit limits. Furthermore, due to the geography of the region and the applicable treatment requirements, there are special considerations and potential additional costs associated with planning for, developing, and operating wastewater treatment infrastructure necessary to return water to these sources. For example, increasing wastewater returns to Allatoona Lake and Lake Lanier may mean lower permit limits or reductions in nonpoint source loads.

Meeting water supply demands to be met from Lake Lanier or Allatoona Lake, or changing the location or amount of wastewater discharges to Lake Lanier, Allatoona Lake or their tributaries, requires careful coordination and planning. The requirements included in the Sub-Tasks above are intended to facilitate that effort. They will ensure that necessary information is provided to the relevant entities in a timely manner, and that the region’s water and wastewater infrastructure is developed in a careful and balanced manner that ensures adequate water supplies and wastewater capacity will be available throughout the planning horizon and beyond.

A local wastewater provider seeking an amendment to this Plan should provide supporting information showing its decision-making-process and its evaluation of the feasibility of returning highly treated wastewater to Allatoona Lake, Lake Lanier and their respective watersheds. The District may make reasonable requests for additional supporting information. It is recommended that a local wastewater provider seek an amendment as early as possible in its local wastewater planning process. Determining what is feasible involves a variety of factors that will vary among local wastewater providers based on the specific facts and circumstances presented.

The District will provide notice of amendment requests pursuant to this Action Item to Georgia EPD prior to the District’s governing board acting on such amendment requests.

Resources:

- Georgia 2015 Water Supply Request
- USACE ACF Final EIS and WCM
- USACE ACT Final EIS and WCM
- TMDL Information

ACTION ITEM

INTEGRATED-14: Encouraging the Return of Highly Treated Wastewater to the Chattahoochee and Flint

<p>Intent: Support the long-term sustainability of water use from the Chattahoochee River Basin below Buford Dam and the Upper Flint River Basin by encouraging, where feasible, returns of highly treated wastewater to these basins.</p> <p>Returns above Buford Dam are addressed in Integrated-13 above.</p> <p>Points of Integration: Decisions made by local wastewater providers affect the future potential for indirect potable reuse and watershed management in these basins.</p>	<p>Responsible Parties:</p> <p>Local Wastewater Provider (Chattahoochee and Flint Only)</p>	<p>In Coordination With:</p> <p>Local Water Provider</p>
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Action Item: Consider, where feasible, returning any water sourced from the Chattahoochee River Basin below Buford Dam or Upper Flint River Basin as highly treated wastewater to these basins when making future decisions regarding wastewater treatment plants and related sewer lines, pump stations and other conveyance infrastructure.

Sub-Tasks: Each local wastewater provider that is treating water sourced from the Chattahoochee River Basin below Buford Dam or Upper Flint River Basin shall:

1. Ensure that treatment capacity developed by the local wastewater provider and permitted wastewater discharges are consistent with the projected wastewater treatment capacities and wastewater discharges included in this Plan (as it may be amended from time to time).
2. If due to changed circumstances or an increase in projected wastewater flows compared to what is included in this Plan a local wastewater provider plans to (a) increase its wastewater treatment capacity by building a new or expanded wastewater treatment plant, (b) change the location of a currently permitted wastewater discharge or (c) enter into a new or expanded intergovernmental agreement to send wastewater flows to another local wastewater provider - then the local wastewater provider shall request an amendment to this Plan reflecting such changes. Any requested amendment must be approved by the District prior to submitting any required request or permit application to Georgia EPD.
3. Any local wastewater provider seeking an amendment to this Plan as described above shall meet with staff for the District and provide any information necessary to support an amendment to this Plan. Such information may include, but is not limited to, current wastewater discharge information, projected future wastewater flows, and capital improvement plans. In reviewing the requested amendment, the District’s governing board shall consider,

among other factors, whether the local wastewater provider's requested amendment includes returning, where feasible, highly treated wastewater to the Chattahoochee River Basin below Buford Dam and Upper Flint River Basin.

Description: Returning highly treated wastewater to the Chattahoochee River Basin and Upper Flint River Basin can affect the future potential for indirect potable reuse, increase base flows and improve overall watershed management in these basins. To support the sustainable use of these river basins, the return of highly treated wastewater, where feasible, is an important planning principle to be considered by local wastewater providers when preparing and implementing local wastewater master plans and by the District's governing board when it considers future amendments to this Plan.

Implementation Guidance: A local wastewater provider seeking an amendment should provide supporting information showing its decision-making-process and its evaluation of the feasibility of returning water sourced from the Chattahoochee River Basin below Buford Dam or Upper Flint River Basin as highly treated wastewater to these basins. The District may make reasonable requests for additional supporting information. It is recommended that a local water provider seek an amendment as early as possible in its local wastewater planning process.

Determining what is feasible involves a variety of factors that will vary among local wastewater providers based on the specific facts and circumstances presented. The historical development of wastewater systems has resulted in a net transfer out of the Upper Flint River Basin. Due to the unique flow characteristics of the Upper Flint River Basin, local wastewater providers should prioritize future return of water withdrawn from the Upper Flint River Basin to the basin of origin, where feasible, as described in this Action Item. Additionally, local wastewater providers should consider the return of water withdrawn from other sources to the Upper Flint River Basin, where feasible and taking into account impacts on the source watershed, where such returns could offset existing interbasin transfers consistent with the District's long-term objective of reducing net losses from the Upper Flint River Basin.

For local wastewater providers that currently return highly treated wastewater to both Lake Lanier and the Chattahoochee River Basin below Buford Dam, they may continue doing so in accordance with prior arrangements as reflected in this Plan. If an amendment to this Plan is needed as outlined in Subtask 2, then the local wastewater provider shall as a first priority consider returning, where feasible, to Lake Lanier, as outlined in INTEGRATED-13 and then as a second priority returning, where feasible, to the Chattahoochee River Basin below Buford Dam as outlined in this INTEGRATED-14.

The District will provide notice of amendment requests pursuant to this Action Item to Georgia EPD prior to the District's governing board acting on such amendment requests.