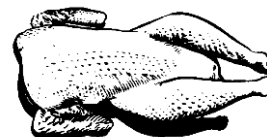




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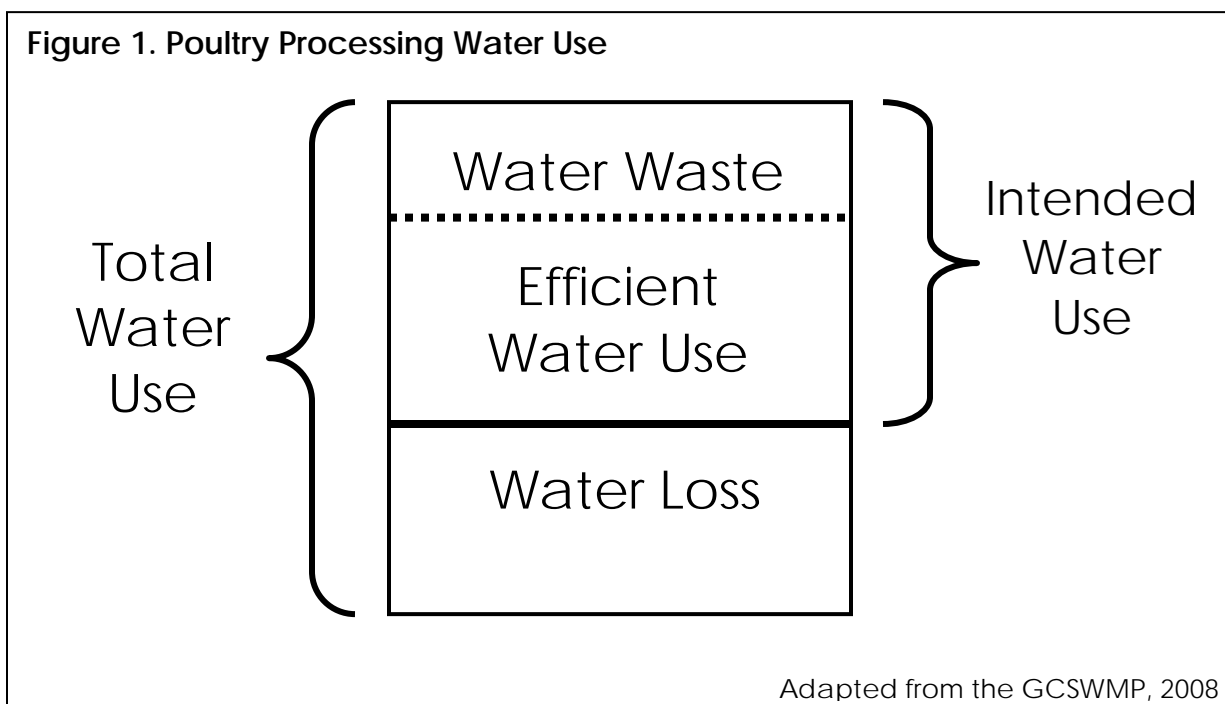
PROCESSING TIP . . .



WATER CONSERVATION MAKES SENSE, BUT WHERE TO START IN YOUR PROCESSING PLANT?

Whether it is limited water supplies due to urban growth or drought conditions, or simply the rising cost of purchasing potable water, most poultry processing plants today are expending resources of time and money on water conservation efforts. It is logical that **the goal in water conservation is to consume less water in the processing of poultry**, but the question arises *...Where Do I Start?*

To answer this question, we need to begin with an understanding of the concepts of *Water Loss*, *Water Waste*, *Efficient Water Use*, *Intended Water Use* and how each of these relates to *Total Water Use* in a poultry processing plant as represented in Figure 1 below.



Reference:

GCSWMP, 2008. Georgia Comprehensive State-Wide Water Management Plan. Georgia Environmental Protection Division. Georgia Department of Natural Resources.

PUTTING KNOWLEDGE TO WORK

Total Water Use is simply the entire volume of potable water that a poultry processing plant utilizes, either through purchase from a municipal supplier or on-site water wells. Once potable water enters a poultry processing plant it can be subdivided into two basic categories:

- **Intended Water Use** – the water that makes it to where it is needed, and
- **Water Loss** – the water that never makes it to where it is needed.

The largest source of **Water Loss** in poultry processing plants is found in the form of leaks. Most people understand that a water leak equals **Water Loss**, but most people don't understand that even small leaks can lead to large amounts of lost water. Figure 1 shows the delineation between **Water Loss** and **Intended Water Use** as a solid line. This solid line represents the physical separation between the two categories. Every gallon of potable water that enters a poultry processing plant either makes it to its intended use or is lost. **The first objective to any effective water conservation plan is to minimize Water Loss (e.g., fixing leaks).**

The water that does make it to where it is needed (**Intended Water Use**) can be further sub-divided into two categories:

- **Efficient Water Use**, and
- **Water Waste**.

All operations involving the use of potable water in a processing plant require a minimum amount of water needed to accomplish tasks. These same operations will also contain some amount of **Water Waste**, which can be defined as any amount of water used to complete a task above the required minimum. One of the most common forms of **Water Waste** in poultry processing plants is using wash down hoses as brooms. These are cases where instead of using a broom to gather material that has fallen to the floor, high-pressure water hoses are used to move material across the floor to a drain.

Figure 1 shows the delineation between **Efficient Water Use** and **Water Waste** as a dotted line. This is because unlike the delineation between **Intended Water Use** and **Water Loss**, the delineation between **Efficient Water Use** and **Water Waste** is much more subjective. Individual opinions may vary on just where the line between the most efficient water use and water waste lies. However, regardless of the subjective nature of **Efficient Water Use** and **Water Waste**, **the second objective of any effective water conservation plan is to minimize Water Waste (e.g., using water as a broom).**

In most cases solutions to **Water Loss** involve physical repairs (e.g., fixing leaks), while solutions to **Water Waste** often involve not only physical changes to plant facilities (e.g., installing water flow restricting devices) but changes in the plant operations. These changes will involve revising or reemphasizing existing SOPs (standard operating procedures) to ensure the minimum efficient volume of water is used in each plant operation. If you have questions about starting a water conservation plan or need on-site technical assistance identifying and reducing water loss or water waste at your plant, contact your local county extension agent who will work with University of Georgia extension specialists to meet your needs.



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“Your local County Extension Agent is a source of more information on this subject.”