Georgia
Association of
Water
Professionals
1932

Best Practice
Master Planning Guidelines
& Resources Document

Acknowledgements

The Georgia Association of Water Professionals Integrated Master Planning Committee was established in December 2009. The purpose of the Master Planning Committee is to identify, discuss, and promote approaches to sustainable water resources master planning efforts.

The Master Planning Committee developed this set of Best Practice Master Planning Guidelines and Resources to provide utilities and municipalities serving communities of all sizes and locations within the State of Georgia with best practice approaches and strategies to developing and implementing master plans. The following individuals contributed to the development of the initial issue of these Guidelines in 2011:

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Disclaimer

It is very important to understand several assumptions when using the *Best Practice Master Planning Guidelines and Resources Document*:

- The master planning process described is generalized and one size doesn't fit all. Utilities in Georgia take many different organizational forms, not only in the service types they provide (water, wastewater, and/or stormwater), but also in their jurisdictions and forms of governance.

- Parts of the process may apply to your utility, other parts may not. The Committee's intent is to offer a buffet of master planning practices, so please feel free to pick and choose the ones applicable to your needs.

- Nothing in these documents should be assumed to have any regulatory intent or to specify any standards. The Guidelines and Outline are offered for information only, with the hope of improving the practice and efficacy of master planning in water-related fields.

- Neither the Georgia Association of Water Professionals nor the Integrated Master Planning Committee or any of its members is liable for use or misuse of the *Best Practice Master Planning Guidelines and Resources Document*.

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Forward

I have to admit that the concept of master planning has gotten kind of a bad reputation with me. It wasn't always that way. In fact, I went to college, with stars in my eyes, to become a community planner. One of the few things I remember about that schooling is that most of the time, the "science of muddling through" is the actual planning process used, no matter what we put down on paper. In the ensuing years, I've learned that most of the time, the following correlations apply to formal utility planning:

- The master plan is undertaken because a higher authority made you do it, not because you thought it was a good idea.
- The eyes of the council, board, or staff immediately glaze over when the words "master plan" are spoken.
- The master planning process becomes a tedious exercise that has very little to do with the real-life operations of the system.
- The money spent on the master plan could have been better used getting on with what you knew you needed to do anyway.

If you're wondering why a bah-humbug plan-basher is writing a forward to this document, it's because I'd rather be honest than be bureaucratically correct, and I want even the most reluctant plan writer to know that someone understands where they're coming from. It's also because I still suspect that if one uses a reasonable procedure, master planning can do a better job than simply muddling through.

The GAWP Integrated Master Planning Committee has undertaken the formidable task of assembling a set of Best Practice Master Planning Guidelines and Resources that can be used to put together a master planning procedure for your system. This is something we've needed for a long time. It is based upon previous processes that worked. It is a great starting point. In the coming years, the committee will continue to refine the guidelines and to provide great training on what has been done by other Utilities/municipalities.

Review the guidelines, and tinker with them until you have an outline for a master planning process that makes sense for your system. Understand that the process can, and should, be adjusted to fit system size and complexity. Don't give your process away to a consultant, but do use the consultant to fill in the voids where there is not sufficient local staff time or expertise to get the job done. Think about efficiency, communication, and the involvement of as many people as possible. Don't expect that everyone who should be involved will think the process is all that important, but do work to wind up with a plan that at least everyone knows about and that most everyone supports. All of us on the GAWP Master Planning Committee send our best wishes for your planning efforts.

-Marcie Seleb, Butts County et al. Water & Sewer Authority

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Current versions of this and related master planning documents can be found on the GAWP Technical Resources Page, accessed at http://gawp.org/

The Integrated Master Planning Committee hopes that this document is useful to you. Please feel free to contact the committee chairperson through the GAWP Integrated Master Planning Committee web page (www.gawp.org) if you have questions or feedback, or desire more information about the Integrated Master Planning Committee.

Chapter 1: Introduction

The *Best Practice Master Planning Guidelines and Resources Document* has been prepared by the Georgia Association of Water Professionals Integrated Master Planning Committee (Master Planning Committee). This document is intended to help educate and empower utility managers, directors, and governing boards to prepare and implement master plans that set the vision and direction for maintaining and managing various water system assets and organizational components. Some of the assets and organizational issues often addressed in a master plan include raw water supplies (ground and surface waters), reservoirs, treatment facilities, distribution and collection systems, reclaimed water use and disposal, and financial impacts and rate setting.

The *Best Practice Master Planning Guidelines and Resources Document* was developed to serve as a "tool box" for water, wastewater, and stormwater master planning efforts undertaken by utilities of varying sizes. It is recognized that every utility is unique, so the ideas presented in this document will most likely have to be adapted to fit a unique circumstance or condition. In this document you will find information about the following aspects of master planning:

- What generally triggers the need for a master plan?
- A best practice master plan development and implementation process
- General information and data needed to develop a master plan
- References to tools and resources that can be used to support you through each step of the master planning process
- Lessons learned/challenges that helped shape these guidelines and resources

When prepared and implemented using a process that fits an organization, a master plan should reflect a vision and include a strategic plan for achieving that vision over a specified period of time (i.e., 5 years, 10 years, 25 years). A master plan can provide justification for a rate increase, help ensure that different departments understand and identify the best time for activities, and coordinate utility-wide and jurisdiction-wide planning and development efforts.

The planning process should include the multiple stakeholders internal and external to the organization. These stakeholders should work together to make decisions using data generated from their respective areas at a specified interval that aligns with how frequent the master plan drivers change.

Typical drivers for developing or updating a master plan are listed in **Chapter 2, Master Plan Drivers**. Implementing a process that involves frequent communication among stakeholders helps to change the use of a master plan from an "on-the-shelf" document to dynamic decision-making tool.

Chapter 3, Best Practice Master Planning Development and Implementation Process includes a process that encourages a more comprehensive and dynamic approach to master planning than has traditionally been followed. The process outlined in Chapter 3 also supports frequent communication among stakeholders and checking of assumptions associated with data inputs to maintain the master plan as a dynamic decision-making tool.

Chapter 4, Data Inputs lists the data to be considered when developing a master plan and the major activities associated with that data input to assist with keeping the master plan updated over time.

Chapter 5, Master Planning Steps lists the major activities, supporting tools, considerations, and resources to assist you with implementation of each step in the best practice master planning development and implementation process.

Chapter 2: Master Plan Drivers

A water, wastewater, or stormwater master plan may be developed or updated for a variety of reasons. The following is a list of common drivers that typically trigger the need for development of or update to a master plan:
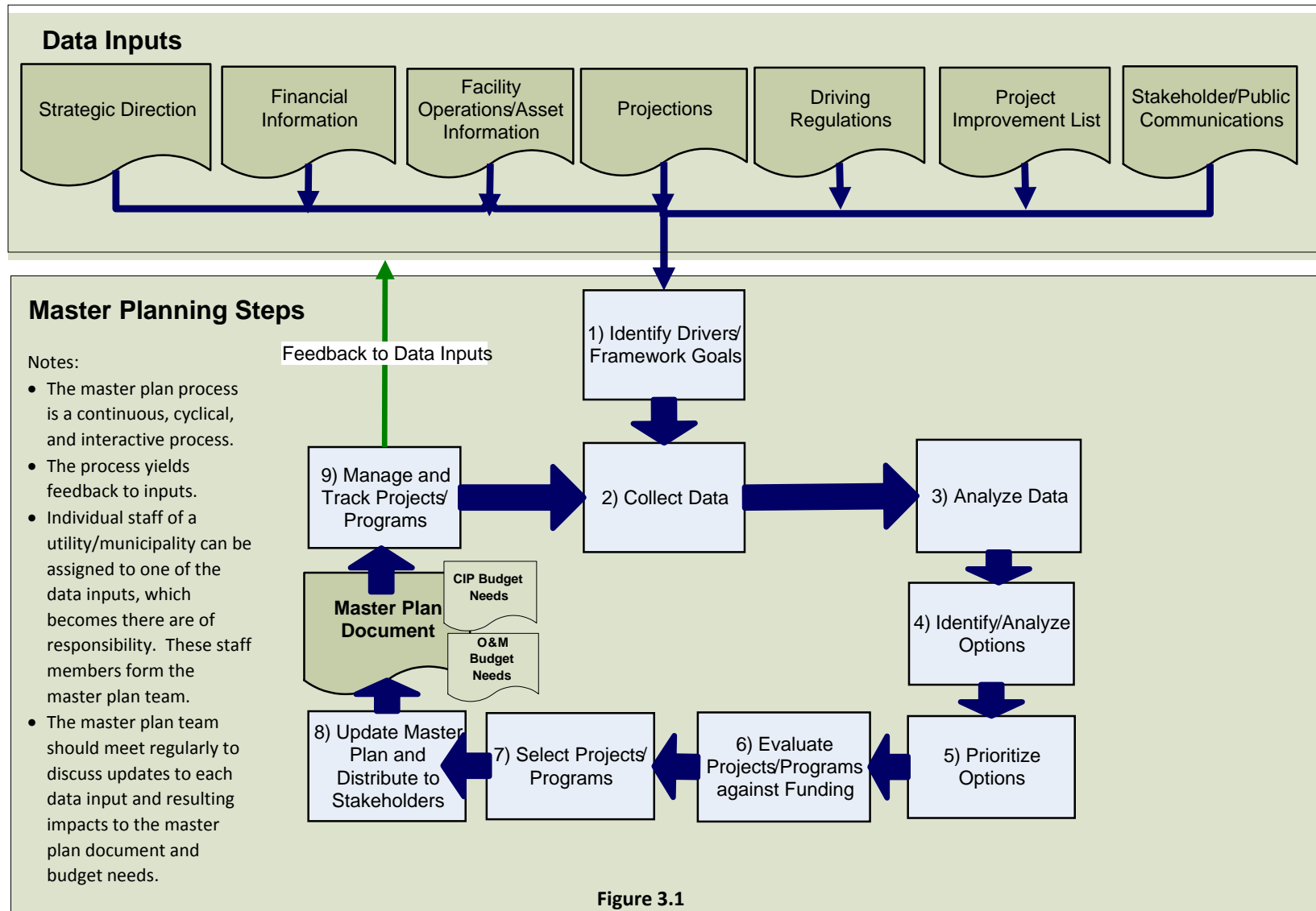
- Growth and development (changing growth patterns, changing projections, higher/lower population densities, employment changes, unknowns)

- Facility operations (includes asset management, staffing, training, safety, crew dispatching, environmental compliance [lab analyses, grease management, backflow prevention, and industrial pretreatment], linear asset system maintenance, asset renewal and associated budgeting, warehouses, SCADA, pump and lift stations, and water and wastewater treatment facilities).

- Economic conditions (external—i.e., recession, property vacancy rates, foreclosures) – matching customer needs with economic reality

- Financial changes within the utility (rate setting, bond ratings, inability to secure funding)

- Level of Service (customer desires and expectations, affordability).

- Regulatory changes (water supply, wasteload allocations, watering restrictions and other water conservation measures, permit limit changes, inter-basin transfers, development regulations, new or amended water quality criteria, stormwater requirements)

- Demographic changes

- Political changes

- Policy changes (pay as you go vs. debt financing, development policies)

- Alignment with other local plans (comprehensive plan, regional water plans, etc.)

- Desire to pull a wide variety of efforts into a comprehensive whole

Chapter 3: Best Practice Master Plan Development & Implementation Process

Implementing water, wastewater, and stormwater master plans has presented many challenges for utilities and municipalities throughout the State of Georgia and is becoming more and more complex with economic, social, and environmental pressures. As we increase our awareness of how we think about the value of master plans and the master planning process, we have an opportunity to address some of the issues we have had with implementation in the past. We can accomplish this through a change in the way we have traditionally developed our master plans and how we keep them updated.

While every utility/municipality is unique, a general best-practice master planning approach, outlined in Figure 3.1, can be applied to master planning efforts. The best practice approach shows that when developing or updating a master plan, a series of data inputs must be considered. Some of these inputs are documents/efforts already in existence at certain utilities/municipalities, and some can be developed specifically for the master plan. Each data input should be assigned to an individual who is accountable for overseeing that input and communicating with internal and external groups as necessary to obtain up-to-date information and data. The group of assigned individuals, the master plan team' should meet regularly at defined intervals (i.e., once every 3 months, once every 6 months, etc.) to discuss changes that may impact the master plan. A change (i.e., a new regulation) can trigger the need to revisit an existing master plan and determine if an update to the resulting list of projects and programs is needed.

There is great value in the process of developing a master plan and keeping it updated. It is these processes that promote the communication among stakeholders and the master plan team needed to keep a master plan up to date, dynamic, and useful as a decision-making tool. When a master plan is being developed, it is an opportunity to engage stakeholders and the public and elevate strategic planning. Engaging the right stakeholders can lead to more efficient and informed decision making and consequently, a more sustainable, comprehensive, and usable master plan.

Data Inputs

| Strategic Direction | Financial Information | Facility Operations/Asset Information | Projections | Driving Regulations | Project Improvement List | Stakeholder/Public Communications |

Master Planning Steps

Notes:

- The master plan process is a continuous, cyclical, and interactive process.
- The process yields feedback to inputs.
- Individual staff of a utility/municipality can be assigned to one of the data inputs, which becomes there are of responsibility. These staff members form the master plan team.
- The master plan team should meet regularly to discuss updates to each data input and resulting impacts to the master plan document and budget needs.

Feedback to Data Inputs

1) Identify Drivers/ Framework Goals

9) Manage and Track Projects/ Programs

2) Collect Data

3) Analyze Data

Master Plan Document

CIP Budget Needs

O&M Budget Needs

4) Identify/Analyze Options

8) Update Master Plan and Distribute to Stakeholders

7) Select Projects/ Programs

6) Evaluate Projects/Programs against Funding

5) Prioritize Options

Figure 3.1

Chapter 4: Data Inputs

The data inputs outlined and defined in Chapter 4 are presented to assist in the identification of the types of information and data that can influence the projects and programs contained in a master plan. These inputs should be considered when initially developing a master plan and can be assigned to individuals who will be accountable for understanding them and documenting changes over time. Data inputs build the assumptions on which we base our master plan and a change to a data input can result in a change to assumptions and—ultimately—a change to a project or program**. Monitoring the data inputs and assumptions on which we base our master plans on a routine basis is critical to keeping the master plan dynamic and responding to our changing environment**. It is also important to consider the quality of data being used to develop the master plan and if there is more than one place where the same data is being maintained. It is a best practice to identify a system record, where data will be maintained, and a process for keeping it updated to avoid inaccuracies and overlap. Data typically needed when developing a master plan and typical sources are listed in Figure 4.1 and on the remaining pages in this chapter.
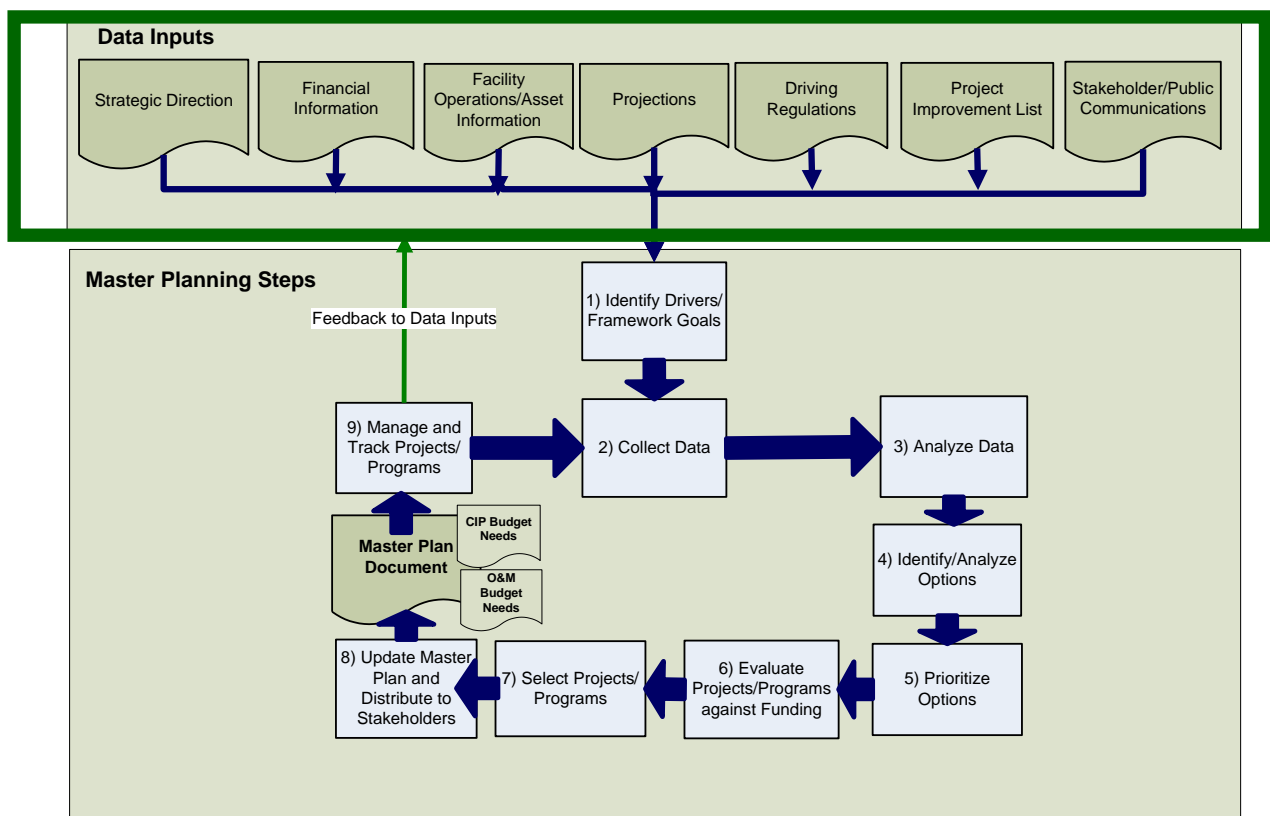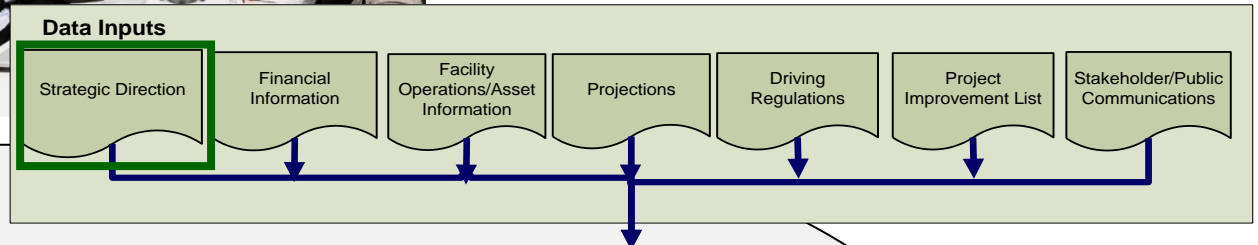
Figure 4.1

Data Inputs

Strategic Direction	Financial Information	Facility Operations/Asset Information	Projections	Driving Regulations	Project Improvement List	Stakeholder/Public Communications

Data Input Strategic Direction
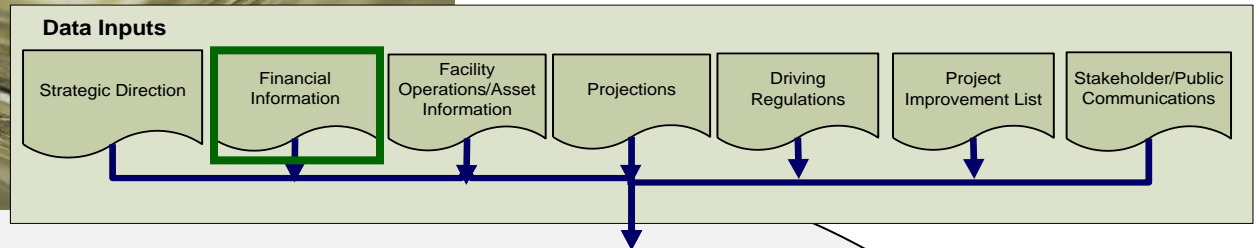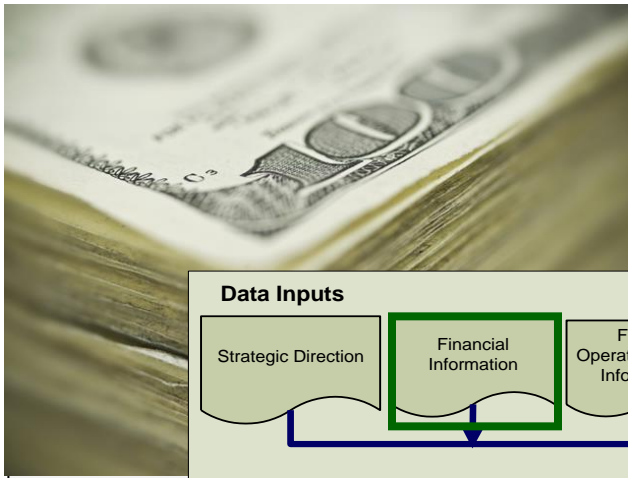# Data for Master Plan

- Vision
- Mission
- Goals
- Objectives
- Key Performance Indicators (measures progress toward goals)

Typical Data Sources

- Management
- Strategic initiatives or goals
- Key Performance Indicator Report – from work management system

Major Activities

- Ensure the master plan supports the organization's vision, mission, goals, and strategic objectives
- Seek to get new strategies, as identified through the master plan development process, integrated into the organization's vision, mission, goals and strategic objectives

Data Inputs

| Strategic Direction | Financial Information | Facility Operations/Asset Information | Projections | Driving Regulations | Project Improvement List | Stakeholder/Public Communications |

Data Input Financial Information
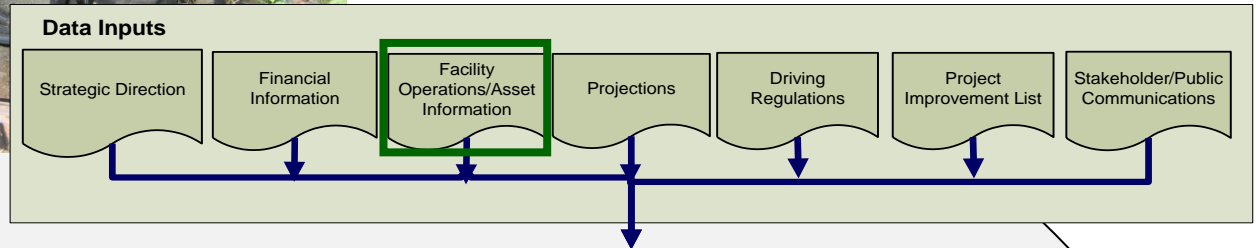# Data for Master Plan

- Capital needs
- Operations and maintenance needs
- Revenue/profits (past, existing, and anticipated future)
- Rates
- Bond cycles
- Grant opportunities

Typical Data Sources

- Customer Information Systems (CIS)
- Computerized Maintenance Management Systems (CMMS)
- Financial Department
- Georgia Environmental Finance Authority

Major Activities

- Maintain Financial Model
- If a Financial Model is not developed, identify cost to provide service and revenue stream
- Align rates with customers' and stakeholders' expected Level of Service (LOS)

Data Inputs

| Strategic Direction | Financial Information | Facility Operations/Asset Information | Projections | Driving Regulations | Project Improvement List | Stakeholder/Public Communications |

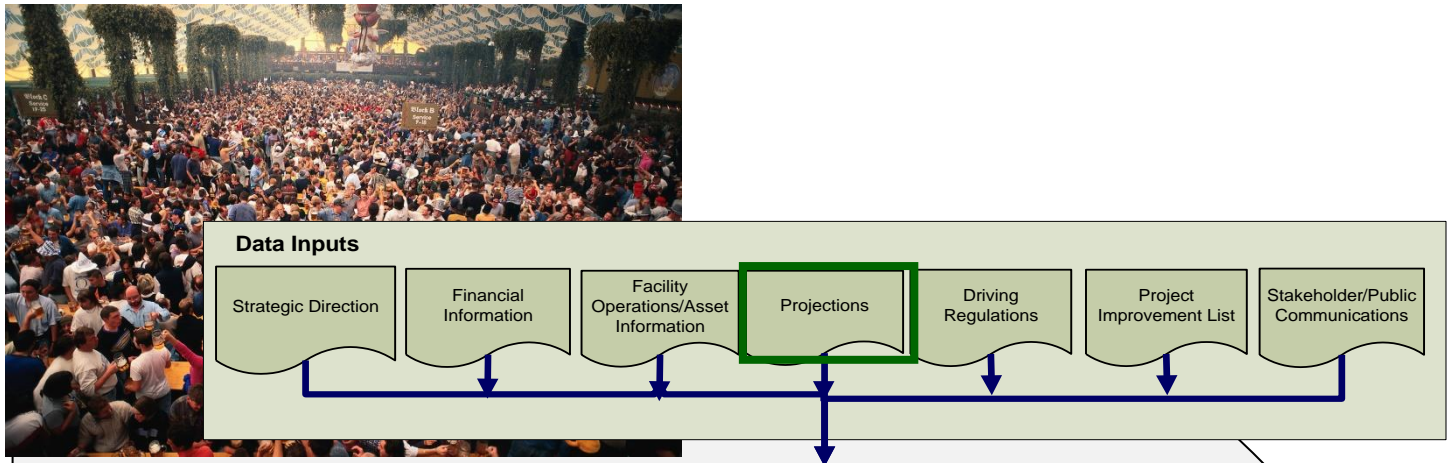# Data Input **Facility Operations/Asset Information**

Data for Master Plan

- Inventory assets
- Condition assessment of assets
- Residual life determination of assets
- Target Levels of Service (LOS)
- Business Risk Exposure (BRE) (cause/consequence of failures)
- Asset criticality
- Appropriate maintenance (asset renewal to include either repair, rehabilitation, or replacement)
- Appropriate capital investment plan/funding strategy
- Asset Management Plan
- Rehabilitation & Replacement (R&R) projects

Typical Data Sources

- Geographic Information Systems (GIS)
- Computerized Maintenance Management Systems (CMMS)
- Regulatory permit requirements

Major Activities

- Ensure that the master plan considers all of the organization's assets
- Ensure that the master plan identifies prioritized future system needs based on existing asset condition and anticipated future asset condition (considering deterioration rates, historical failures, replacement cycles, repair and replacement strategies, and desired LOS)
- Ensure that the master plan includes programs to address causes of failures
- Ensure the asset management plan informs the master plan of demand-based needs

Data Inputs

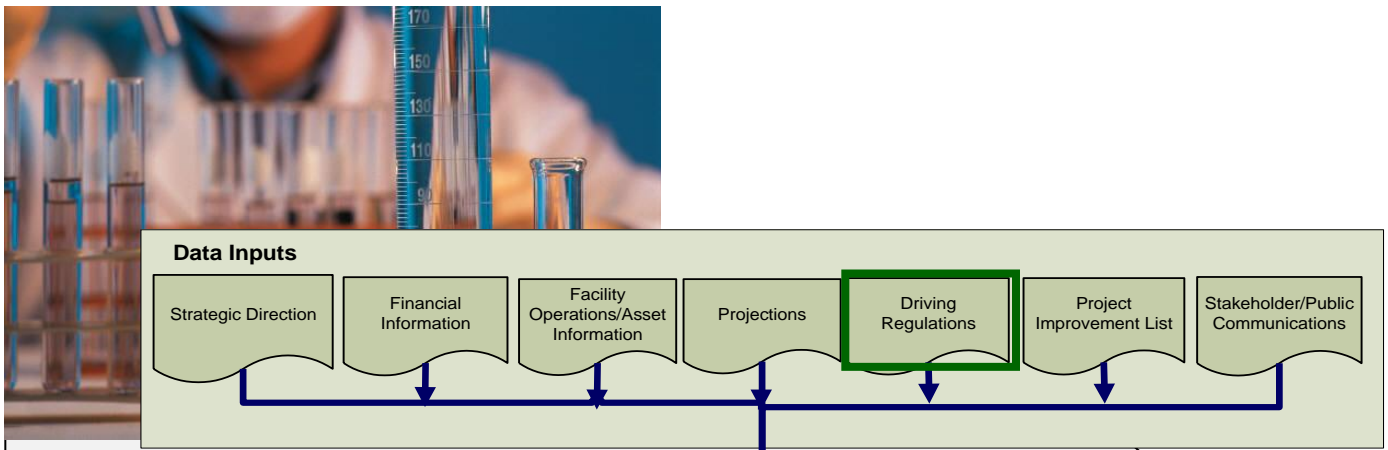| Strategic Direction | Financial Information | Facility Operations/Asset Information | Projections | Driving Regulations | Project Improvement List | Stakeholder/Public Communications |

Data Input Projections

Data for Master Plan

- Population projections
- Employment trends/projections
- Land use
- Zoning
- Service areas – short term (5 years), transitional (20 years), no service

Typical Data Sources

- Planning Departments
- Regional Centers
- Census Bureau

Major Activities

- Maintain communication with the local planning department to identify changes in population projections
- Maintain communication with the local planning department to identify changes associated with major industries that could affect water usage.
- Maintain communication with the local planning department to identify changes in land use (if build out conditions are prepared).

Data Inputs

Strategic Direction	Financial Information	Facility Operations/Asset Information	Projections	Driving Regulations	Project Improvement List	Stakeholder/Public Communications

Data Input   Driving Regulations
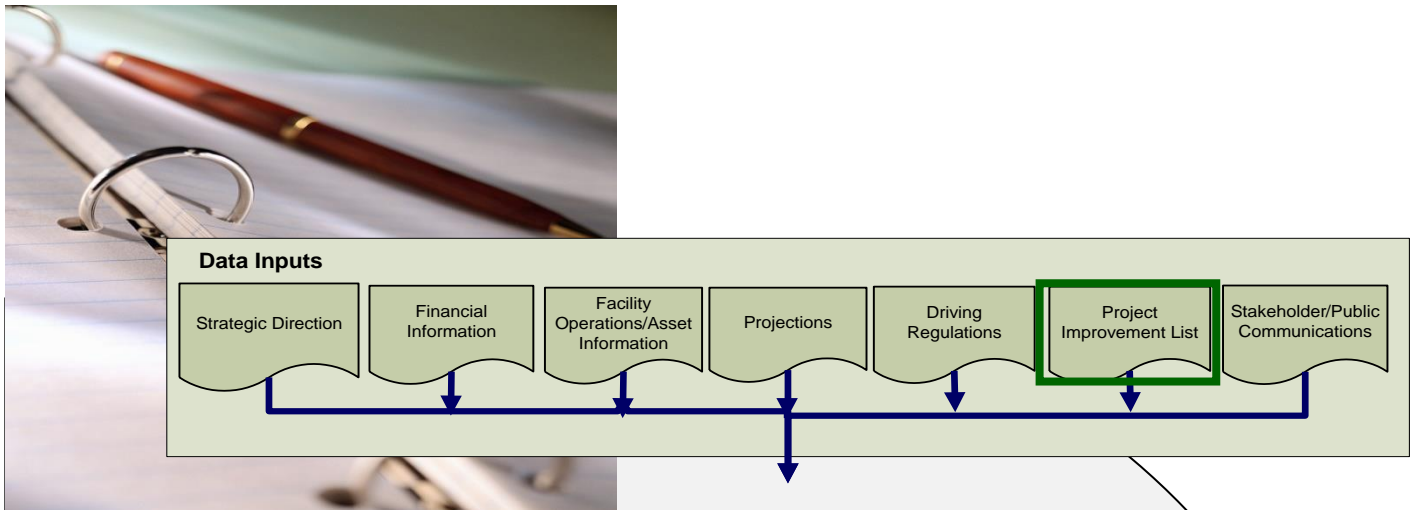
Data for Master Plan

- Current regulations and requirements
- Anticipated future regulations, dates, and requirements

Typical Data Sources

- Management
- Law Department
- Laboratory

Major Activities

- Maintain spreadsheet of existing regulations, requirements, and dates
- Identify staff responsible for implementing/delivering on existing requirements
- Maintain listing of anticipated future regulations, requirements, and dates
- Participate in relevant state and regional discussions about anticipated regulations and requirements
- Assess impacts of new regulations to system operations and development

Data Inputs						
Strategic Direction	Financial Information	Facility Operations/Asset Information	Projections	Driving Regulations	Project Improvement List	Stakeholder/Public Communications

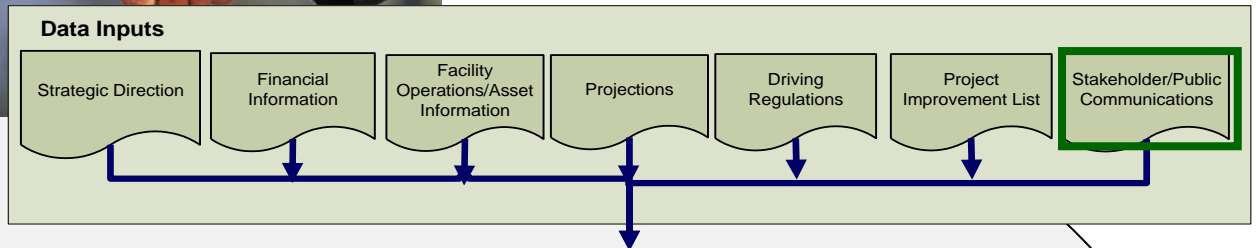# Data Input   Project Improvement List

Data for Master Plan

- Capital Improvement Program (CIP) projects
- CIP programs
- Renewal projects composed of repair, rehabilitation, and replacement projects

Typical Data Sources

- Master Plan
- Renewal Project List
- Computerized Maintenance Management System (CMMS)

Major Activities

- Maintain listing of capital projects from the master plan
- Maintain listing of programs needed for master plan
- Maintain listing of R&R projects
- Identify a process for staff to communicate needs
- Confirm costing for projects and programs
- Annually assess/confirm needs for project/programs
- Obtain review/input/buy-in from operations staff
  for all proposed projects and programs

Data Inputs

Strategic Direction	Financial Information	Facility Operations/Asset Information	Projections	Driving Regulations	Project Improvement List	Stakeholder/Public Communications

Data Input   Stakeholder/Public Communications
Data for Master Plan

- Internal stakeholders, goals, needs, and concerns (see sample list)
- External stakeholders, goals, needs, and concerns (see sample list)
- Other plans' goals and objectives, programs, and projects

Typical Data Sources

- Stakeholder Master Plans/Strategic Direction Plans

Major Activities

- Identify internal and external stakeholder, goals, needs, and concerns that could affect the need for management of water
- Identify other plans' goals and objectives that may affect the master plan goals and objectives
- Identify, manage, and influence stakeholder input requirements that affect the management of water
- Develop and implement a communications strategy with stakeholders/public to assist with implementing key programs and projects
- Identify frequency and timing for stakeholder/public interaction to streamline planning and implementation of programs and projects
- Summarize activities into a stakeholder/public communication plan

Data Input   Stakeholder/Public Communication Plan

Sample List of Stakeholders

Internal Stakeholders

- Finance Department
- Fire Department
- Human Resources Department
- Information Technology
- Legal Department
- Legislative Bodies
- Parks, Recreation and Cultural Affairs Departments
- Planning Department
- Police Department
- Procurement Department
- Public Works Department
- Stormwater Department
- Water Department
- Wastewater Department

External Stakeholders

- Academic Groups/Schools
- Retail & Wholesale Customers/ Large Users
- Environmental Organizations
- Georgia Association of Water Professionals (GAWP)
- Georgia Department of Health
- Georgia Department of Transportation (GDOT)
- Georgia Forestry Commission
- Non-Profit Organizations
- Planning Organizations
- Atlanta Regional Commission
- Metropolitan North Georgia Water Planning District or Basin Council
- State Water Planning Commission
- Private Contractors & Consultants
- Neighbors, Community Groups and Associations, Local Public Office Holders

Sample List of Plans

- Asset Management Plan
- Strategic Plan
- Regional Plans
- State Plans
- Comprehensive Plans
- Land Use and Zoning Plans
- Community Agendas
- Local Plans
- CIP Plans
- Management Plans
- Facility Plans
- Service Delivery Strategies
- Transportation Plans
- Water Conservation Plans
- Drought Plans
- Development Plans
- Energy Plans
- Wellhead Protection Plans
- Watershed Protection Plans
- Watershed Improvement Plans
- Watershed Management Plans
- Stormwater Management Plans
- Water Reuse Plans
- Emergency Management Plans
- Security Plans
- Economic Development Plans

Chapter 5: Master Planning Steps

The Master Planning Steps outlined in Figure 5.1 and described in this chapter are intended to assist utilities/municipalities with identification of the major activities that should be implemented over time to maintain a dynamic and up-to-date master plan. These steps are recommended when initially developing a master plan and as an ongoing and continuous process to ensure that the master plan reflects current conditions and can be used as a tool and resource when making decisions.

Data Inputs

| Strategic Direction | Financial Information | Facility Operations/Asset Information | Projections | Driving Regulations | Project Improvement List | Stakeholder/Public Communications |

Master Planning Steps

Feedback to Data Inputs

1) Identify Drivers/ Framework Goals

9) Manage and Track Projects/ Programs

2) Collect Data

3) Analyze Data

Master Plan Document

CIP Budget Needs

O&M Budget Needs

4) Identify/Analyze Options

8) Update Master Plan and Distribute to Stakeholders

7) Select Projects/ Programs

6) Evaluate Projects/Programs against Funding

5) Prioritize Options

Figure 5.1

Process Step 1: Identify Drivers/Framework Goals

Purpose: To identify the reason(s) for developing a master plan and to formulate them into a set of measurable goals and objectives.
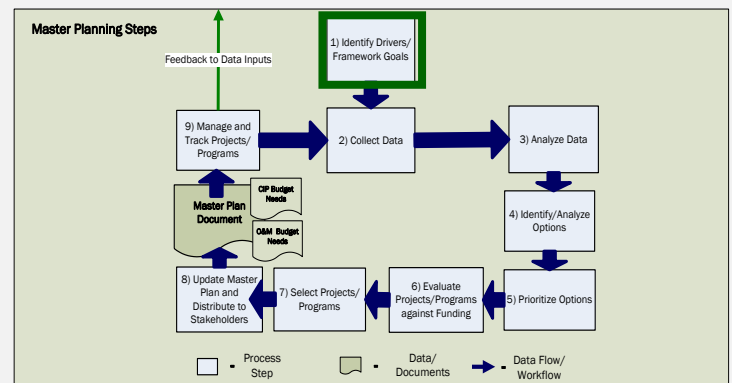
Major Activities

- Identify the initial reasons for promoting the development of a master plan.
- Identify the intended universe to be covered by the master plan (i.e., capital projects, asset management, data and tool development, etc.)
- Determine the planning time frame to be considered.
- Identify stakeholders associated with the envisioned plan.
- Communicate with stakeholders to determine stakeholder willingness to participate and stakeholder expectations/desires with respect to master plan goals and objectives.
- Define goals of master plan.

Supporting Tools

- Vision Statements
- Mission Statements
- Strategic Goals

Considerations

- Management support for developing the master plan
- Stakeholder support for developing the master plan
- Availability of resources for developing the master plan
- Availability and sustainability of resources for maintaining the master plan
- Typical drivers include the desire to have a comprehensive, cohesive plan for achieving organizational goals and objectives, including determining how to meet demand for growth and development, improve system performance, catch up on neglected maintenance, reduce capital and/or operating costs, balance funding with project needs, demonstrate the need for additional funding, etc.

Process Step 2: Collect Data

Purpose: To collect data and information needed to prioritize needed programs and projects.

Major Activities

- Manage data needed for master plan: *See Chapter 4: Data Inputs.*
- Facilitate monthly meetings between data input providers.
- Maintain listing of data needed from each data component.
- Coordinate communication among data input providers when changes occur.
- Coordinate data collection with upcoming analysis needs.

Supporting Tools

- Data tracking worksheets
- Data input lists

Considerations

- Data accuracy
- Frequency of updates
- Communication processes
- Tracking changes processes
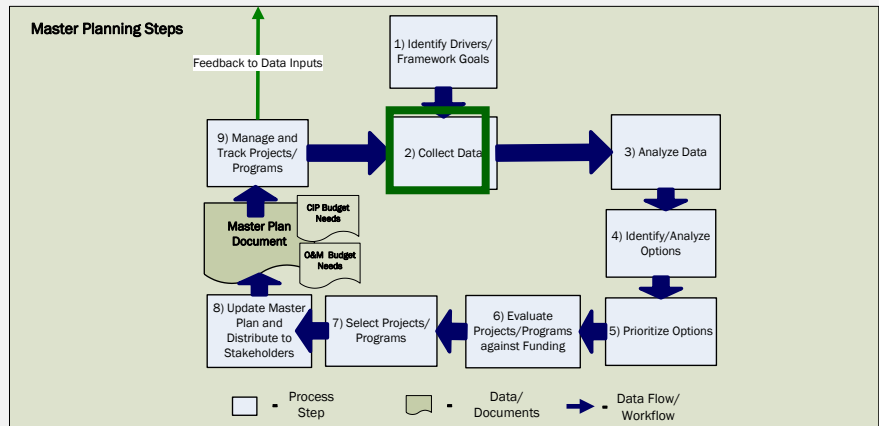
Process Step 3: Analyze Data

Purpose: To convert and process data collected in the data collection step to forms that directly indicate the current state of utility operations and the future conditions that will drive changes in utility infrastructure, operations, and policy.

Major Activities

- Compile data for future service population and water use trends, and develop a demand forecast.
  - Use historical data to develop/determine relationships between regional characteristics (e.g., population, per-capita use trends, price of water, income, weather) and demand.
  - Apply projected regional data to historical relationships to develop demand forecast.
  - Forecast demand by sub-region of the service area, if possible.
  - Include multiple demand forecast scenarios reflecting different potential regional growth scenarios, if possible.
- Assess the sufficiency of the utility's system and assets to meet current and future demands.
  - System inventory data
    - Evaluate system components and assets that are most critical to meeting current and projected demand (severe consequences of failure)
    - Identify where infrastructure is not yet in existence or insufficient to meet projected demand
  - System condition data
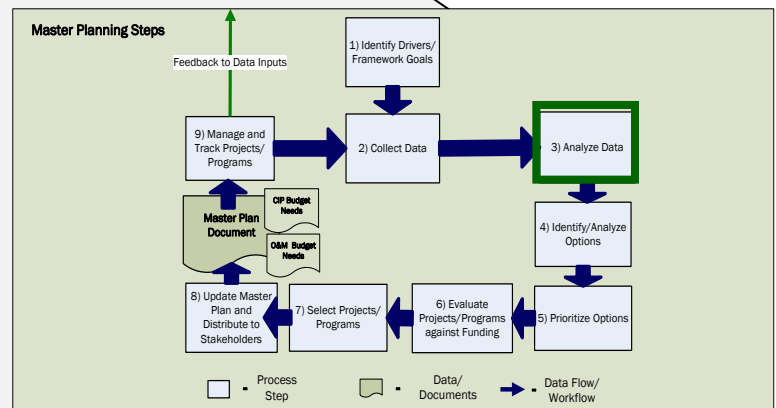
Process Step 3 (continued): Analyze Data

Supporting Tools

- System condition resources
  - System component inventory
  - System component histories (age, persistent maintenance, failure, cost issues)
  - Updated condition assessments and inspections
  - System inventory and tracking information (CMMS software, work-order tracking software, databases, as-built drawings, maintenance records)
  - System models/operator knowledge for evaluating criticality
  - Other process results from Asset Management
- Demand modeling resources
  - Regional projections from planning agencies
  - Historical data: customer databases, consumption records, regional characteristics (population, water rates, weather, etc.)
  - Modeling and analysis software:
    - GIS and databases (storing, organizing, and maintaining multiple historical and projected data sources)
    - Demand modeling
  - Demand forecast professionals: economists, engineers, database/GIS specialists

Considerations

- Demand forecasting
  - Frequency of regional projection updates
  - Variability of projection values between updates
  - Changing availability of particular projection variables over time
  - Availability of alternative projection scenarios
  - Availability and detail of historical water use, customer, and regional data
  - Ability to develop forecasts in-house (versus need for external modeling and data processing assistance)
- System condition assessment
  - Existence and maturity of asset management or asset management -like programs
  - Degree of detail in system inventory and condition information
  - Degree to which this information is kept current
  - System knowledge retention in the face of employment turnover and retirement
  - Ability to perform criticality and condition assessment analyses in-house (versus need   for asset management professionals)

Process Step 4: Identify/Analyze Options

Purpose: To identify options for providing service that support anticipated growth and development and that meet expected levels of service and strategic goals. Options could include:

- Will plants/water/sewer lines need to be constructed/expanded to meet demand?
- Can the increases be delayed by water conservation measures?
- Can leak detection and repair delay the need for construction?
- Can water be purchased from another municipality?
- Can sewage be pumped to another treatment plant?
- Can an industry with high water usage be converted to a process that uses less or no water?
- Can processes be changed or reorganized to make them more efficient and alleviate needs?
- Instead of replacing sewer lines, can more aggressive FOG enforcement and sewer line cleaning reduce the number of overflows instead of expanding the sewer capacity?
- If flows are projected to go in the opposite direction, can the system sell capacity to a neighbor in order to have the funds to maintain equipment?
- Can maintenance be improved such that facility/pipeline development and/or replacement can be postponed?
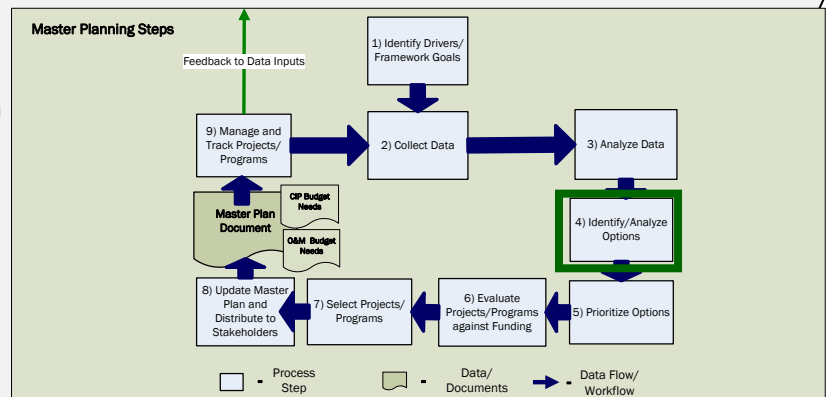
Major Activities

- Compare population projections to water/wastewater/stormwater needs
- Profile user groups
- Perform water loss evaluations
- Evaluate water loss audit data
- Perform system evaluations: plant age, water/sewer line age and capacities
- Conduct rate evaluations
- Ensure understanding of inter-jurisdictional needs
- Hydraulic modeling

Supporting Tools

- Business case evaluations
- Excel spreadsheets – linear regression models

Considerations

- Future costs and inflation
- Staffing
- Political desires
- Operations group review of options

## Process Step 5: Prioritize Options

Purpose: To prioritize the projects/programs recommended for action under

Step 4 -Identify/Analyze Options.

Major Activities

- Determine the process to be used for prioritizing projects/programs
- Identify the criteria to be used for comparing projects/programs
- Apply the process and criteria to the projects/programs
- Determine if the resulting prioritization makes sense based on professional judgment
- Modify the process and criteria until the resulting prioritization aligns with professional judgment
- Refine the process and criteria over time to improve the results
- Obtain Operations group input to the prioritization process

Supporting Tools

- Mission Statement
- Organizational Goals & Objectives
- Defined Service Levels
- Compliance Criteria
- Stakeholder Analysis
- Required Project Sequencing
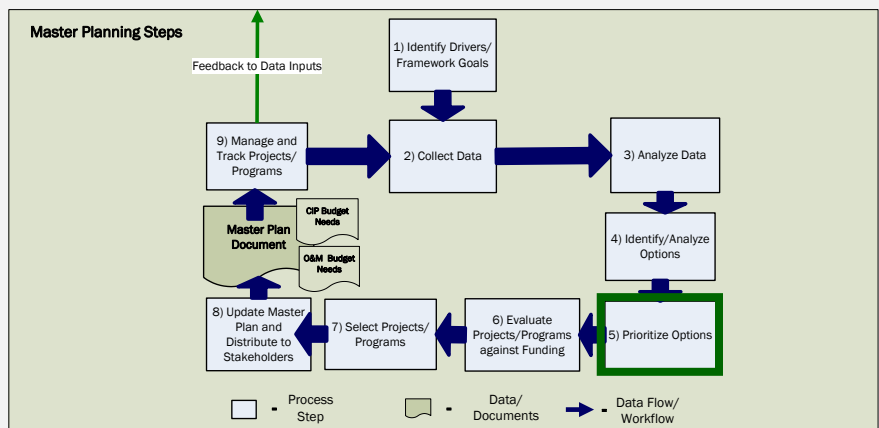
Considerations

- You may not be able to define a process that provides uniformly consistent results
- The process and criteria may only take you so far and then professional judgment or executive decision making may have to take precedence
- It is easier to prioritize within a service sector (e.g., water, wastewater, stormwater) than across service sectors
- Simple is good
- When creating a scoring process, look at the relative equality of the requirements for achieving a given score across the categories

Process Step 6: Evaluate Projects/Programs Against Funding

Purpose: To assess funding strategies and prepare a plan/strategy to finance needed projects and programs.

Major Activities

- Identify operating budgets
- Identify needed capital
- Assess bond needs
- Assess rates to cover the expenses or repay the bonds
- Assess whether state revolving funds are available
- Assess whether grants are available
- Evaluate a stormwater utility as a funding source
- Can a project or projects be modified to gain funding from a grant?
- Identify scheduling opportunities to delay or eliminate extra expenses (i.e., can projects can be implemented in phases to spread the costs over a longer period of time? This tactic could lower the interest paid until funds are actually used)
- Assess whether funding could be covered by connection fees or a special options sales tax
- Assess combinations of funding strategies

Supporting Tools

- Spreadsheets
- Required reserves
- Credit agencies ratings
- Current interest rates

Considerations

- Financial planning can be a very political process. Rate payers normally are uneasy about a reason to pay more either though rate increases or extra fees or taxes. Are current interest rates acceptable for loans or bonds?
- What covenants go along with the funding that may hinder the process?
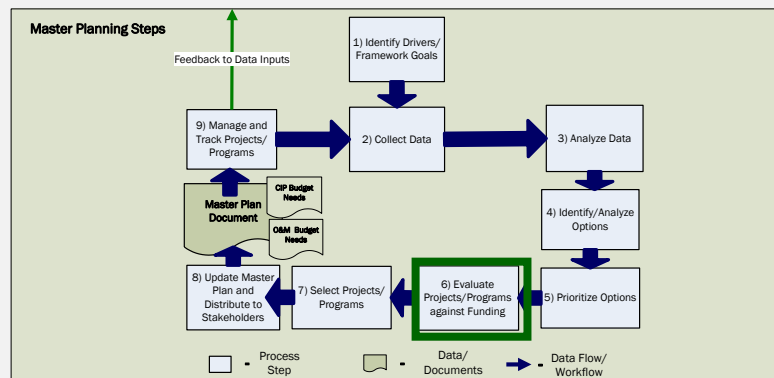
Process Step 7: Select Projects/Programs

Purpose: To recommend an alternative for implementation from the list of alternatives defined in Process Step 6 (Evaluate Projects/Programs against Funding) and present an implementation plan for the selected projects and programs.
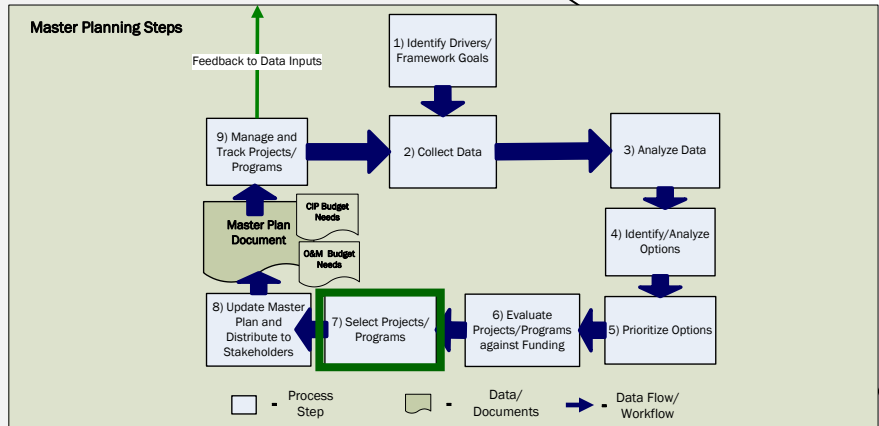
Major Activities

- Select projects/programs for implementation based on the results of the financial evaluation presented in Step 6
- Explain the rationale behind the alternative selected. Selection could be based on least cost. However, the selection of an alternative could also be driven by public acceptance or environmental benefits
- Develop or update Capital Improvement Plan (CIP) budgets to include selected projects/programs, their anticipated costs, and their target installation dates
- Develop a schedule to match funding

Supporting Tools

- Existing Financial Plan, including anticipated revenue and impact fees, existing debt service, etc.
- Cost-estimating tools (could be as simple as bid tabulations from recent projects)
- Life-cycle costing

Considerations

- Uncertainty in projected revenue (slower growth or watering restrictions)

Process Step 8: Update Master Plan and Distribute to Stakeholders

Purpose: To incorporate edits that need to be made to the master plan document as a result of changing conditions and communicate those changes to Stakeholders.
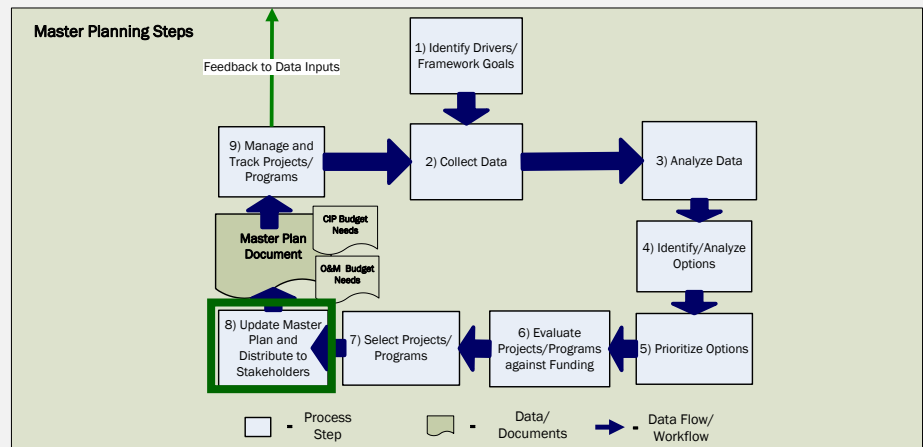
Major Activities

- Make text edits to the master plan document
- Maintain a version history and why changes were made
- Establish a document management and distribution plan

Supporting Tools

- Document management software
- Email

Considerations

- Stakeholder access
- Document management rules

Process Step 9: Manage and Track Projects/Programs

Purpose: To identify and track metrics [Key Performance Indicators (KPIs)] that provide information about progress toward established master plan projects/program goals.

Major Activities

- Identify master plan goals
- Identify metrics (KPIs) that can track progress on reaching master plan goals
- Identify how KPI data is collected/can be gathered
- Establish a reporting mechanism and frequency to report on progress towards master plan goals/drivers
- Identify how project/program progress impacts data inputs

Supporting Tools

- Project Management software
- Enterprise Application Integration tools
- Work Order Management Systems
- Excel spreadsheets

Considerations

- Limit KPIs to those that provide information for decision making
- KPIs can change when goals change
- Develop a communication plan to report progress on program/project goals so changes can be made as needed