

Forest Lakes

Domestic Water Improvement District

Master Plan - 2022

Forest Lakes Domestic Water Improvement District

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Forest Lakes Domestic Water Improvement District

I - Introduction:

Welcome to the Forest Lakes Domestic Water Improvement District (DWID). The Forest Lakes Domestic Water Improvement District was created in 1992 in accordance with Arizona Revised Statutes Title 48 to manage the water supply for all District residents. A five-member Board of Directors is elected by property owners of the District. Board Members serve a four-year term with positions expiring on alternating two-year election periods. The daily operation of the District is managed by a State-Certified Water Operations Manager, who is supported by an Administrative Assistant and various part-time or full-time employees and contractors based on seasonal requirements. The District is responsible for operations, fiscal management and planning that provides for the delivery of clean and reliable water to District residents.

This Master Plan is a blueprint for how the District will respond to current challenges and make the best of future opportunities for the benefit of our customers. It also reaffirms our vision, mission, and values to our customers (mainly residents and local businesses) for the next five years (*). Furthermore, it establishes approaches for the preservation of our precious resources for future generations, utilizing the principles of sustainability and prudent fiscal practices. This plan is also published as to inform the public about the projects and efforts being made to keep clean water flowing to our customers and community.

- * Note - While this Master Plan stands for a period of five-years, Long Range Planning is not a one-time event. Therefore, this Plan will be reviewed annually and updated as more details become available and/or conditions change. A few of the conditions that will change the plan are significant increases in the demand for water, the amount of available funds, and policy changes placed on the system by the State and Federal government.

II - DWID Description:

Forest Lakes is home to full time, seasonal, and weekend residents. Even though we use our property in diverse ways, there is a common need that we all have and that is water. Also, as water is a vital resource it is mandatory for all customers to use the system in a responsible manner. The source of water for the District includes four wells that can produce one thousand gallons of water per minute when running at full capacity. Water is stored in three tanks that have a capacity of 685,000 gallons and then is distributed to over 894 residents and nine two-inch meter customers via twenty-six miles of pipe. The distribution system has a redundant supply system so that if one tank or well is not operative, water can still be provided to all connections. It should be noted that emergency breaks in a main or service line to a customer will still disrupt the flow of water. The system also provides water to 149 fire hydrants used by the Forest Lakes Fire District used in the event of local fires as well as assisting the Forest Service to fight forest fires in the immediate area.

The Forest Lakes DWID is a Not-For-Profit Organization; therefore, all financial resources that are used to operate, maintain and improve the water systems come from customer fees that are collected monthly and from property tax collected by Coconino County. The District follows County rules that govern the District. An example of this is the requirement that an Annual Budget and this Master Plan be submitted for review to the County Board of Supervisors.

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The District is also required to comply with all applicable rules and regulations published by the State of Arizona. This includes completing all required water sampling and water testing. The Federal Department of Environmental Protection has responsibility for the enforcement of the Safe Drinking Water Act established by the Congress. The enforcement for Arizona is delegated to the Arizona Department of Environmental Quality (ADEQ), which implements Federal rules such as the recent stricter rule governing the amount of arsenic allowed in drinking water. The District must also comply with rules and regulations promulgated by the State Department of Water Resources. An example of this agency's responsibility is the authorization of all well drilling. To ensure compliance with the State of Arizona rules and regulations the District's daily operations is overseen by a State-Certified Water Operations Manager, who is supported by an Administrative Assistant. Furthermore, the State of Arizona requires a trained and certified operator to be on-site or available at all times. To ensure compliance to this requirement, we have a second Certified Operator that provides necessary support to the system. Based on seasonal requirements and other operational needs the Board may authorize additional part-time or full-time employees or contractors to support the system requirements.

The Water District also maintains appropriate Rules and Regulations, such as criteria for connection, use of water, billing procedures, etc. These Rules and Regulations provide consistency in the delivery of water, as well as fairness to the users. In addition to the Rules and Regulations governing the District, the District also maintains other Policies, Procedures and an Emergency Plan. All of these documents are published on our Forest Lakes Domestic Water Improvement District website.

III - Vision:

To provide adequate clean water for domestic use and related services to all customers while supporting other community water requirements at a reasonable cost.

IV - Mission:

The following statements support the Water District Vision.

The Water District will:

1. comply with all rules and regulations established by Federal, State and Local Governments.
2. provide clean water to all customers in adequate volumes without interruption.
3. maintain a qualified staff that will be available to operate and maintain the water system.
4. maintain all District equipment, production and distribution systems in accordance with established standards.
5. implement and maintain Security Systems as well as procedures to protect the water systems from unauthorized access and damage.

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6. maintain all administrative policies and procedures; reviewing annually to ensure fairness and compliance.
7. publish an Annual Budget and review Fiscal performance on a monthly basis to ensure compliance.
8. will provide water in a cost-effective manner and strive to be debt free.

V - Values:

The following statements represent the foundation upon which the District is managed.

1. Customers must be treated fairly and with respect.
2. A well-trained and knowledgeable staff is key to a successful water service.
3. A standard of excellence for quality and quantity of water must be maintained.
4. Good business practices and procedures are essential to the system.
5. A Board of Directors that is dedicated and knowledgeable about water systems and works as a team with a highly qualified staff is essential to an effective and efficient water system operation.
6. Water is a critical element to life and a resource issue in the State of Arizona; therefore, it must be used wisely and conserved in accordance with established programs.

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VI - Operating Plan:

This Master Plan contains goals and objectives that will be accomplished over the next five years. To be more specific, the following operational plan contains the specific objectives that will be accomplished each year. Note that the years identified are consistent with the fiscal year of the District which is **July 1st through June 30th**. In some cases, large projects will overlap. In other cases, the objective may need to be repeated. In these cases, the objective will be shown in all years to which it applies or continues.

The following is a summary of the Objectives that will be reported as identified during monthly meetings.

VI-I Water Production and Distribution

Goal 1: Replace and update components of the of the production and distribution system to enable uninterrupted water supplies.

Description:

As stated in the DWID Description, the production and distribution system include four wells, three tanks, approximately 26 miles of various size pipe and assorted pumps and valves to get the water from the ground to each connection. Maintaining this facility is vital to keep the water flowing.

The system is currently in compliance with all Federal and State rules and regulations.

There remains approximately 52% of 26 miles of distribution pipe to be replaced or upgraded once Main Trunk Line is approved by ADEQ.

Strategy:

The strategy is to replace a segment of the distribution system each year if funds are available in the Water District Capital Improvement Budget. Fire hydrants and service lines will be upgraded as appropriate with all distribution line improvements. When additional looping can be done in the course of other construction, it will also be accomplished.

Pending financial capability of the District, the following objectives include the pipe upgrades and replacements that are expected within the next five years.

Objective 1: Engineering and Upgrade water line on Sheep Springs Road, 2022-2023. Complete installation of undersized water lines.

Objective 2: Engineering and Upgrade in 2023-2024 for Turkey Trail and Flicker Drive. Replace undersized water lines.

Objective 3: Engineering and Upgrade Little Pine Trail Project 2024-2025. Continuing the replacement undersized water lines.

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Objective 4: Engineering and Upgrade in 2025-2026 for Daisy Trail. Complete the installation of undersized water lines.

Objective 5: Engineering and Upgrade Liberty Lane and Pepper Trail 2026-2027. Replace undersized water lines.

Goal 2: Maintain a system that provides required levels of water pressure through the District.

Description:

The change in elevation between various areas within Forest Lakes causes the water pressure to vary as much as 40-50 pounds. Connections at the highest levels are experiencing low water pressure while the connections at the lowest elevations have very high pressure.

Strategy:

There is more than one alternative to resolve this problem; our contracted engineer identified an alternate water routing process.

Objective 1: The upgraded pipe size will aid in providing required volume throughout the district and improve fire support capabilities.

Goal 3: Perform maintenance on the production and distribution system.

Description:

The production and distribution systems require routine maintenance that is currently being performed according to manufacturer. This requirement increases with each system upgrade with additional valves and hydrants added to our system.

Strategy:

The existing staff will implement necessary changes and improvements as time permits.

Objective 1: Upgrade the mapping of all valves and other key distribution components. Mapping complete including 198 main line valves and 149 hydrant valves and 97 blow off valves. On Going.

Objective 2: Implement and follow a program of exercising all valves on an established schedule. Target is a 2-year exercising valve program.

Objective 3: Continue to maintain an inventory of all spare parts adjusting requirements based on usage data. (On going - part of daily operations)

Objective 4: Hydrant Testing every 5 years, last testing was 2020.

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Goal 4: Ensure that there is adequate utility and emergency power.

Description:

APS provides power to Forest Lakes and we have backup generators at well sites.

Strategy:

Pumps and generators are monitored by our SCADA system to assure continuous operation.

Goal 5: Maintain and follow a plan to encourage all customers to conserve water.

Description:

Many areas of Arizona are under severe water restrictions and laws have been passed that control water usage in these areas. As responsible managers of a critical resource the Forest Lakes DWID Board should implement a conservation program that is consistent with other parts of the State. Currently there is a flat rate for the basic service plus a usage charge per one thousand gallons used. Although there is ample water available at this time, we should still be using this resource responsibly.

Strategy:

Develop additional methods to encourage the conservation of water.

Objective 1: Develop a water conservation program. (Ongoing review annually– ADWR System Water Plan)

Objective 2: Monitoring our new meter system and communicating on possible leaks in a timely manner. (On going – at least monthly with our billing system)

Goal 6: Develop and follow security procedures that protect District facilities from unauthorized access and damage.

Description:

Protection of DWID property from unauthorized access and damage is required to protect property as well as ensuring that all water supplies are protected from contamination by vandals or terrorists.

Strategy:

Installed and use electronic monitoring devices and ensure that all authorized persons are properly trained in the emergency procedures for security.

Objective 1: Update the DWID Emergency Plan to include procedures for unauthorized intrusion at any DWID facility. (Updated – Review annually)

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Goal 7: Maintain a plan that will provide water to all customers in any emergency.

Description:

The District is obligated to provide drinking water to all customers in the event of an emergency. There must be a plan and procedures to address various kinds of emergencies and the course of action to deal with the situation.

Strategy:

Review the Emergency Plan annually to ensure that all known situations are addressed and that all appropriate staff is familiar with procedures.

Objective 1: Develop and maintain procedures in the Emergency Plan to fix major water line ruptures or address a natural disaster. (In place review annually)

Objective 2: Maintain contingency agreements with one or more water companies to receive water in the event of a major water outage in the Forest Lakes District, add this information to the Emergency Plan. (In place)

Objective 3: Maintain procedures in the Emergency Plan to address a major contamination event. (In Place)

VI-II Compliance:

Goal 1: Comply with all Federal, State and Local Water Quality Rules and Regulations.

Description:

The Arizona Department Environmental Quality (ADEQ) requires water samples to be taken during specific periods of time and tested at a certified laboratory to meet EPA standards. The Federal Environmental Protection Agency (EPA) continues to review the Maximum Contaminant Levels (MCL) of various elements and minerals. The District must also comply with rules governing operator certification and general operation, administration, and facility standards.

Strategy:

Monitor system on monthly basis in compliance with ADEQ.

Objective 1: Continue to compile and publish a Consumer Confidence Report annually according to ADEQ standards. (On going)

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VI-III Financial Management:

Goal 1: Maintain and improve sources of revenue.

Description:

There are two primary sources of funding that support the District: 1) Property Tax and fees from District customers. These funds are used for system operations and maintenance and capital improvement. There is also a limited amount of revenue to accomplish the identified capital improvements.

Objective 1: Conduct a periodic rate review to ensure that the District's operational expenses can be met. (On going annually)

Goal 2: Maintain appropriate financial management and reporting procedures.

Description:

An annual budget is developed and approved by the District Board. The budget is then forwarded to the Coconino County Board of Supervisors for review. Monthly financial reports are produced for review and approval by the District Board. The financial records are audited annually.

For Historical Content and Purposes:

- There was a Public Hearing in 2002 that provided for a three-year water fee increase of 15% in 2003, 10% in 2004, and 5% in 2005.
- There was a public hearing in June 2013 for a 12% increase to water base rate.
- We switched from a flat rate with installation of meters to monthly usage billing in 2008.
- Due to a reduction of our annual property tax income by 158K between 2009/2010 and 2013-2014 we were required increase our base rate by \$3.00 per month and adjust tax rate to \$1.60 per thousand in 2013.
- There was a Public Hearing in 2019 for a line item to add to customer's billing to help with the cost of the Little Colorado River Coalition of \$3.74. Tax rate is determined by the FLDWID and Coconino County once the District submits the budget in July.
- In 2020-2021 Budget, we lowered property tax income by 8K resulting in lower mill rate.

Strategy:

Conduct rate reviews annually to ensure that there are adequate funds for operation and maintenance as well as capital improvements. Update the audit procedures to improve the chances of receiving grants.

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Objective 1: Continue to develop annual budget by April of each year. (On going – April)

Objective 2: Continue to report financial status monthly. (On going)

Objective 3: Internal Audit conducted by Operations Manager and Administrative Assistant and report anomalies to FLDWID Board. Continue to require CPA of the closing financial.

VI-IV Administration:

Goal 1: Maintain District Rules and Regulations

Description:

Rules and regulations are essential to consistent management of the District business and to maintaining fairness to all customers. The District has published rules and regulations governing the connection and use of water, safety practices, personnel procedures, and emergency procedures.

Strategy:

Review all rules, regulations, procedures, and planning documents and update as required to ensure they apply appropriately to the current environment.

Objective 1: Continue to review and publish appropriate changes as required to the rules and regulations. (Annually)

Objective 2: Continue to review and publish all internal administrative policies and procedures as required. (Annually)

Objective 3: Address anomalies identified by Internal Audit with CPA closing Financials at end of Fiscal Year. (Annually)

Goal 2: Maintain all planning documents.

Description:

The Master Plan is the first step in documenting a long-range plan. The District Board considers this an important step toward improving the management of larger projects as well as the routine work.

Strategy:

Annually update and review the Master Plan, as necessary. Develop a short-range plan that will be considered during the development of the annual budget. Larger projects will also have more detailed project plans developed by the District staff.

Objective 1: Review and update the District Master Plan annually and monitor progress twice annually.

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Objective 2: Develop and follow project plans for all large projects over \$50,000. (On going)

VI-V Other Management Issues:

Goal 1: Establish and monitor contracts for outside services.

Description:

The District periodically requires technical or professional expertise not available within the District Staff. To ensure that these services are available at a reasonable cost, contracts are awarded for these services for a period of time. Support is also available through membership in associations and working with other water companies.

Strategy:

Review existing contracts periodically and issue bid requests, as necessary. Continue relationships with associations and groups that can provide technical assistance to the District at low or no cost.

Objective 1: Continue to annually review all service contracts, including Engineering and Electrical services, as well as attorney and audit consultants. (On going)

Objective 2: Continue to coordinate activities with ADEQ, RWAA, ADWR, and special Districts and report to the Board as appropriate. (On going- reviewed annual.)

Goal 2: Provide District activity information to the customers.

Description:

The customers are important to the success of the Water District; therefore, it is important that information regarding the activities of the District be easily accessible by the customer. This is particularly important to the water conservation program.

Strategy:

Utilize newsletters, the Internet, monthly board meetings, and board meetings of other groups to communicate with our customers.

Objective 1: Continue to maintain a customer complaint process that will address all complaints within 1 week after receipt. In accordance with rules and regulations.

Objective 2: Continue to provide articles for the FLOA newsletter and produce a District newsletter when appropriate.

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Objective 3: Continue to use the FLOA meetings and FLDWID web site to communicate significant activities and future to the residents as required.

Appendix A – Requirements and Objective Summary

Throughout this Master Plan there are a number of requirements and objectives that do or will require period reporting or status. The following is a summary of the objectives that will be reported as identified during monthly Water District Board meetings.

Note that the years identified are consistent with the fiscal year of the District which is **July 1st through June 30th**. In some cases, large projects may overlap. In other cases, the objective may need to be repeated. In these cases, the objective will be shown in all years to which it applies or continues.

Objective	Date	Comments
Provide Project Plans to the board for all projects over \$50,000.	Monthly	Status approved plans monthly
Arizona Department of Water Resources Report	May	ADWR
Compile and publish a Consumer Confidence Report	June	Publish Results in Paper by July, Company website, and available in 3 public locations in community
Inspect inventory of all spare parts	March	Part of annual operation
Review all service contracts	Annually	Recommend in April with budget
Conduct Internal Audit	August	Operation Manager and Administrative Assistant
Conduct Annual Financial Review	October	FLDWID CPA
Provide monthly customer billing	Monthly	On monthly spreadsheet presented at Board Meetings
Review all Internal Policies and Procedures	January	Identify target month target 3 rd Qrt.
Review all Rules and Regulations	January	Identify target month target 3 rd Qrt.
Review/Update Master Plan	Nov/June	Review in November Approve in June
Develop Annual Budget	May	Approve in June
Review Grant Status	Annually	After requirement id defined

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Objective	Date	Comments
Review Grant Status	Annually	After requirement id defined
Budget submitted to County Board of Supervisors	June	Post Approved Budget
Monitor and report on meters operation - including potential leaks	Monthly	
Review and update as required DWID Emergency Plan	January	
Review and Update Special Use Permit with National Forest Service	Annually	Renewal permit on going
Review and update as required contingency agreement with one or more water companies	February	
Maintain procedure in the Emergency Plan to address a major contamination event	Annually	Identify target month 2 nd or 3 rd quarter Standing IGA with Heber Water District
Coordinate activities with ADEQ, RWAA, ADWR and Special Districts	On Going	
Maintain and report customer complaint process	Monthly	Included in monthly manager report
Yearly review of capital equipment	April	To support budget planning
Continue to provide articles for the FLOA newsletter	On Going	Communicate _ FLOA newsletter or Dist. Letter
Review and update water conservation program.		Water conservation on going priority / service
Update District Web page annually	On Going	Includes all Documentation
LCR Coalition	Annually	Review with Lawyer

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Appendix B – Future Project Summary and Priority Assignment


Throughout this Master Plan there are a number of requirements and objectives to be accomplished in order that we maintain all District equipment, production and distribution systems in accordance with established standards. In doing so, the District must also provide water in a cost-effective manner and strive to be debt free as well as be Fiscally responsible.


The matrix below outlines our Water Distribution System and will allow the District the ability to “right-size” and prioritize projects in a responsible manner. This matrix will be reviewed annually along with our budget commitments and changing circumstances with our systems efficiency.


Forest Lakes Domestic water Improvement District					
ACP Line Summary Feb 2022					
	<u>Road Name</u>		<u>Line Type</u>	<u>Line Length Fee</u>	<u>PRIORITY</u>
1	Sheep Springs Rd	Hydrant on road	3in ACP	1724.44	1
2	Turkey Trail	Hydrant on road	3in ACP	1284.1	2
2	Flicker Drive	Hydrant on road	3in ACP	1042.38	2
3	Little Pine Trail	Hydrant on road	3in ACP	2713.66	3
4	Daisy Trail	Hydrant on road	3in ACP	2456.86	4
5	Liberty Lane	Hydrant on road	3in ACP	321.57	5
5	Pepper Trail	Hydrant on road	3in ACP	1036.32	5
6	Tranquility Trail	Hydrant on road	3in ACP	874.77	6
6	Vacation Drive	Hydrant on Road	3in&4 in ACP	1878.09	6
7	Quail Trail		3in ACP	1645.97	
8	Skunk Way		4in ACP	248	
9	Wildcat Road		4in ACP	3146.65	
10	Baily Drive		4in ACP	3186.92	
11	Sheep Springs Rd		4in ACP	108.75	
12	Hillcrest Trail		4in ACP	798.97	
13	Forest Trail		4in ACP	1108.64	
14	Tall Trees Loop		4in ACP	1575.29	
15	Ryan Ranch Loop		4in ACP	1139.28	
16	Merzville Road		4in ACP	1482.39	
17	Mule Springs Tr.		6in ACP	1336.00 Ft	
18	Mule Springs Tr.		6in ACP	1241.65 Ft	

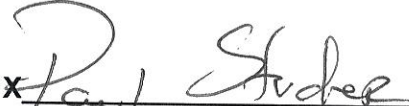
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Master Plan Approval - Water District Board Members

X 
Joe Taylor, Chairman
Signature and Date

X 
Mary Hume, Vice Chairman
Signature and Date

X  6-16-22
Lou St. Germain, Member at Large
Signature and Date

X  6.16.2022
Paul Studer, Treasurer
Signature and Date

X  16 June 2022
Bryan Hawk, Secretary