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Water Forward

Implementation Outlook and Adaptive Management Plan

AW will continue implementation of Advanced Metering Infrastructure and Water Loss Control utility initiatives.
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	Row No.	Option No.	Task Name	Description	2040 Yield AF/Yr
Planning Cycles	1		**Integrated Water Resource Plan Development and Update Process**		NA
	2		Scope of Work and Project Schedule Development		
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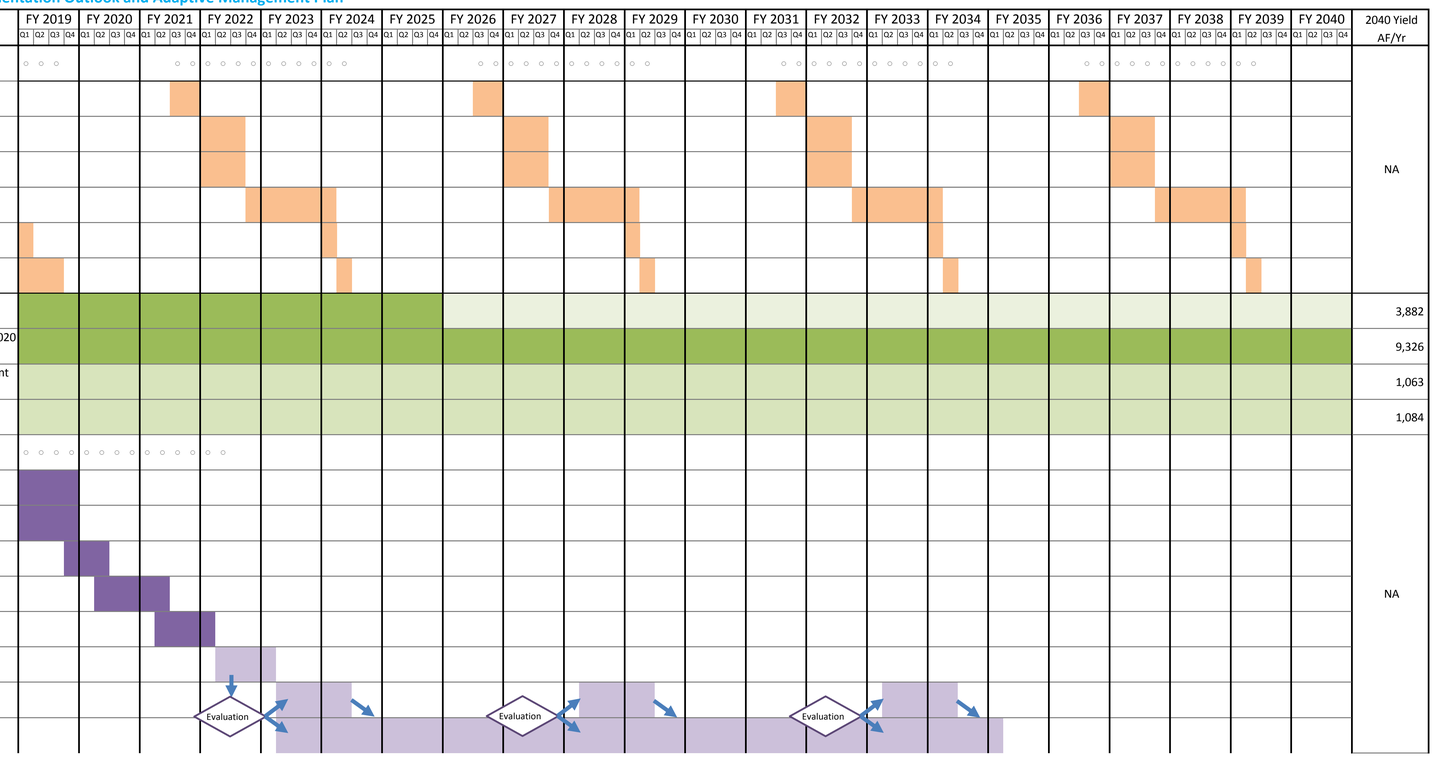
Ongoing Utility Initiatives	8	D1	**Advanced Metering Infrastructure**	Implement customer facing programs that provide real-time water use information. Savings achieved through identification of customer-side leaks, behavior modification, etc.	3,882
	9	D2	**Water Loss Control - Utility Side**	Leak detection, correction, and prevention program to reduce the Infrastructure Leakage Index (ILI) to 2.7 by 2020 and further reduce and sustain a 2.0 ILI from 2040 to 2115.	9,326
	10	D3	**Commercial, Institutional, and Industrial (CII) Ordinances**	Already in Code - Require older cooling towers to meet water efficiency benchmarks and use efficient equipment and require efficiency standards for steam boilers in new development.	1,063
	11	D12	**AC Condensate Reuse**	Already in Code - Require collection and reuse of condensate water from Air Handling Units (AHUs) for cooling systems from new development with cooling capacity over 200 tons.	1,084
	12		**Expansion of Current Centralized Reclaimed Water Connection Requirements**	Stakeholder process will explore expanding existing centralized reclaimed water connection requirements.	NA
	13		Evaluation of potential implementation approaches	Evaluation to include refinement of ordinance applicability, location in code, enforcement considerations.	
	14		Preliminary stakeholder outreach		
	15		Develop draft ordinance language		
	16		Stakeholder outreach and draft code language changes as needed		
	17		Boards and Commissions and Council action		
	18		Implementation and monitoring		
	19		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	20		Maintain approach and continue monitoring		



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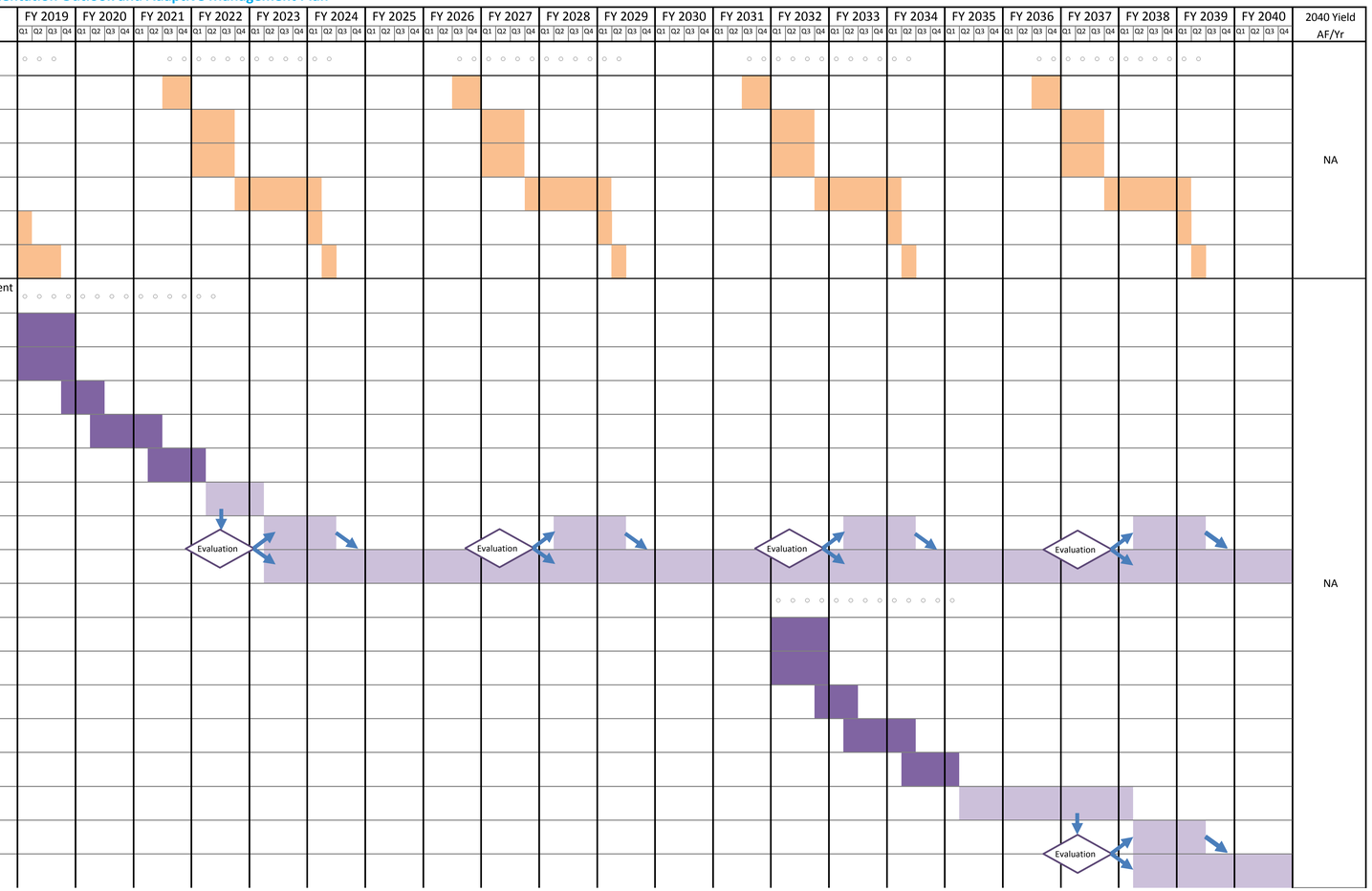
	12	D8, D9, D10, D11, S11	**Phase 1 Dual Plumbing Ordinance Development**	Stakeholder process will explore requiring dual plumbing for new large Commercial and Multifamily development (with a potable backup).	NA
	13		Evaluation of potential implementation approaches	Evaluation to include refinement of ordinance applicability, location in code, enforcement considerations.	
	14		Preliminary stakeholder outreach		
	15		Develop draft ordinance language		
	16		Stakeholder outreach and draft code language changes as needed		
	17		Boards and Commissions and Council action		
	18		Implementation and monitoring		
	19		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	20		Maintain approach and continue monitoring		
	21		**Phase 2 Dual Plumbing Ordinance Development**	Stakeholder process will explore expanding ordinance's applicability to potentially include mid-size new commercial and multifamily (with a potable back-up required).	
	22		Evaluation of potential implementation approaches	Evaluation to include refinement of ordinance applicability, location in code, enforcement considerations.	
	23		Preliminary stakeholder outreach		
	24		Develop draft ordinance language		
	25		Stakeholder outreach and draft code language changes as needed		
	26		Boards and Commissions and Council action		
	27		Implementation and monitoring		
	28		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	29		Maintain approach and continue monitoring		



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	12	D8, D9, D10, D11, S11	**Phase 1 Alternative Water Ordinance Development**	Stakeholder process will explore requiring use of alternative waters for new large Commercial and Multifamily development (with a potable backup).	NA
	13		Evaluation of potential implementation approaches	Evaluation to include refinement of ordinance applicability, location in code, enforcement considerations.	
	14		Preliminary stakeholder outreach		
	15		Develop draft ordinance language		
	16		Stakeholder outreach and draft code language changes as needed		
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	18		Implementation and monitoring		
	19		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	20		Maintain approach and continue monitoring		
	21		**Phase 2 Alternative Water Ordinance Development**	Stakeholder process will explore expanding ordinance's applicability to potentially include mid-size new commercial and multifamily (with a potable back-up required).	
	22		Evaluation of potential implementation approaches	Evaluation to include refinement of ordinance applicability, location in code, enforcement considerations.	
	23		Preliminary stakeholder outreach		
	24		Develop draft ordinance language		
	25		Stakeholder outreach and draft code language changes as needed		
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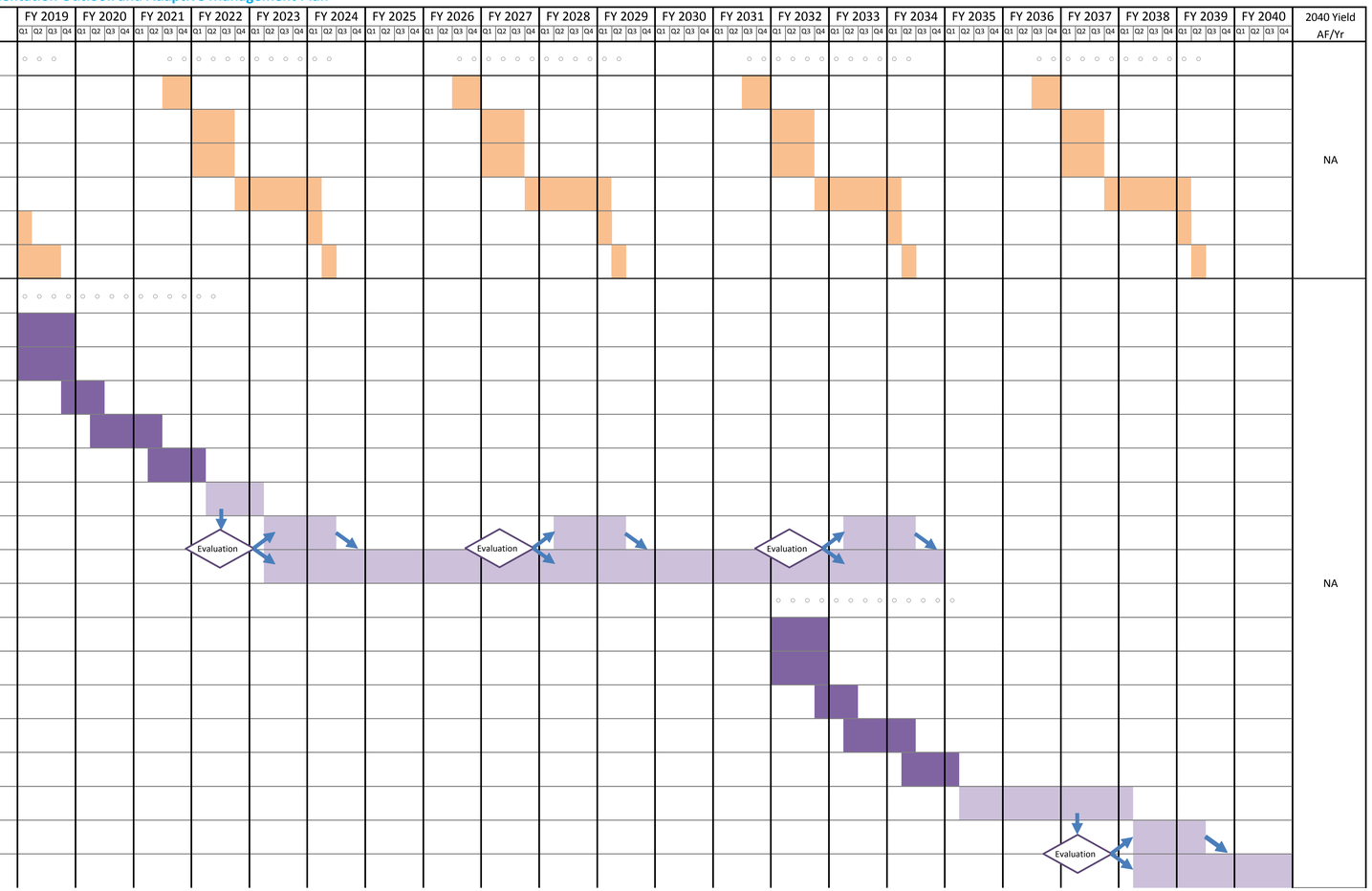

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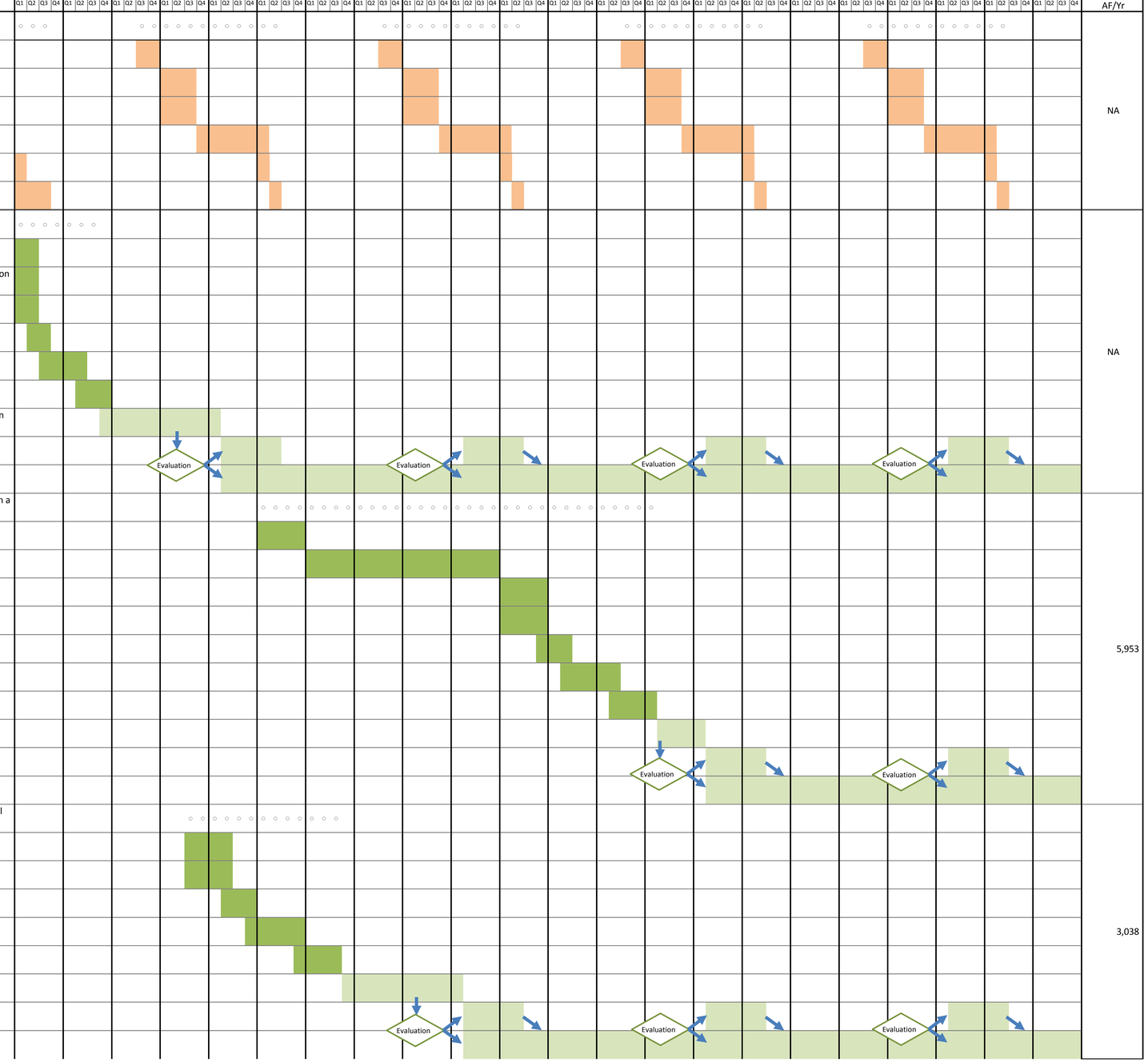
Developer or customer installed, owned, and operated	30		**Phase 1 Development-focused Water Use Benchmarking and Budgeting - Submittal Process Development**	Stakeholder process to explore requiring submittal of water use estimates for new development.	NA
	31		Development of water usage calculator		
	32		Evaluation of potential implementation approaches	Determination if an ordinance is needed - If so, process will include refinement of ordinance applicability, location in code, enforcement considerations	
	33		Preliminary stakeholder outreach		
	34		Develop draft ordinance language if needed		
	35		Stakeholder outreach and draft code language changes as needed		
	36		Boards and Commissions and Council action		
	37		Implementation	City staff will provide potential water use efficiency and alternative water recommendations and information on available incentive and rebate programs.	
	38		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	39		Maintain approach and continue monitoring		
	40	D4	**Phase 2 Development-focused Water Use Benchmarking and Budgeting Ordinance Development**	Stakeholder process will explore requiring new development to submit a water usage estimate and comply with a water budget - compliance mechanism to be determined.	5,953
	41		Public stakeholder process in advance of benchmark development	Stakeholder process will explore development of benchmarks to be applied to buildings developed post-2025.	
	42		Data gathering and development of water usage database		
	43		Evaluation of potential implementation approaches (refinement of ordinance applicability, location in code,		
	44		Preliminary stakeholder outreach		
	45		Develop draft ordinance language		
	46		Stakeholder outreach and draft code language changes as needed		
	47		Boards and Commissions and Council action		
	48		Implementation and monitoring	Starting in FY 2032, water budgets will be applied to development built post-2025.	
	49		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	50		Maintain approach and continue monitoring		
	51	D5	**Landscape Transformation Ordinance**	Stakeholder process will explore requiring single-family residential to limit turf-grass area and include additional requirements for existing COM and MFR ordinance	3,038
	52		Evaluation of potential implementation approaches (refinement of ordinance applicability, location in code,		
	53		Preliminary stakeholder outreach		
	54		Develop draft ordinance language		
	55		Stakeholder outreach and draft code language changes as needed		
	56		Boards and Commissions and Council action		
	57		Implementation and monitoring		
	58		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	59		Maintain approach and continue monitoring		



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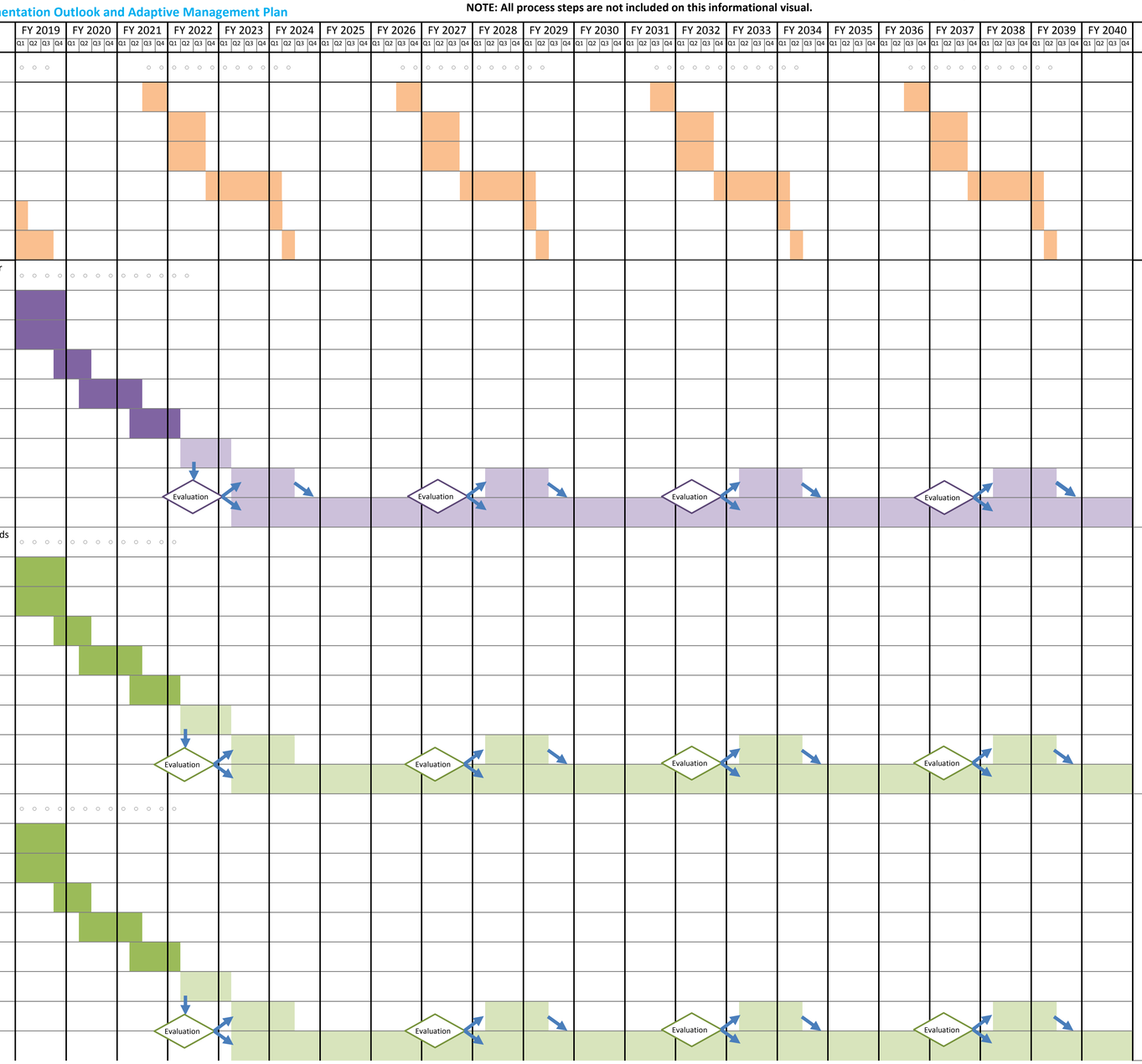
	60	D8, D9, D10, D11, S11	**Alternative Water Incentive**	Expansion of existing rebate program - incentive would encourage the use of rainwater harvesting, stormwater harvesting, graywater reuse, and blackwater reuse.	1,984
	61		Evaluation of potential implementation approaches	Evaluation to potentially include amount and/or type of incentive to offer.	
	62		Preliminary stakeholder outreach		
	63		Program development and cost-benefit analysis		
	64		Stakeholder outreach and incentive program refinement as needed		
	65		Boards and Commissions Input		
	66		Program implementation and monitoring		
	67		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	68		Maintain approach and continue monitoring		
	69	D6	**Landscape Transformation Incentive**	Expansion of existing rebate program - incentive would encourage water use efficiencies and reduce water needs for outdoor irrigation through regionally appropriate landscapes	321
	70		Evaluation of potential implementation approaches	Evaluation to potentially include amount and/or type of incentive to offer.	
	71		Preliminary stakeholder outreach		
	72		Program development and cost-benefit analysis		
	73		Stakeholder outreach and incentive program refinement as needed		
	74		Boards and Commissions Input		
	75		Program implementation and monitoring		
	76		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	77		Maintain approach and continue monitoring		
	78	D7	**Irrigation Efficiency Incentive (Expand existing rebate program)**	Expansion of existing rebate program - incentive would encourage use of include irrigation system controllers.	205
	79		Evaluation of potential implementation approaches	Evaluation to potentially include amount and/or type of incentive to offer.	
	80		Preliminary stakeholder outreach		
	81		Program development and cost-benefit analysis		
	82		Stakeholder outreach and incentive program refinement as needed		
	83		Boards and Commissions Input		
	84		Program implementation and monitoring		
	85		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	86		Maintain approach and continue monitoring		



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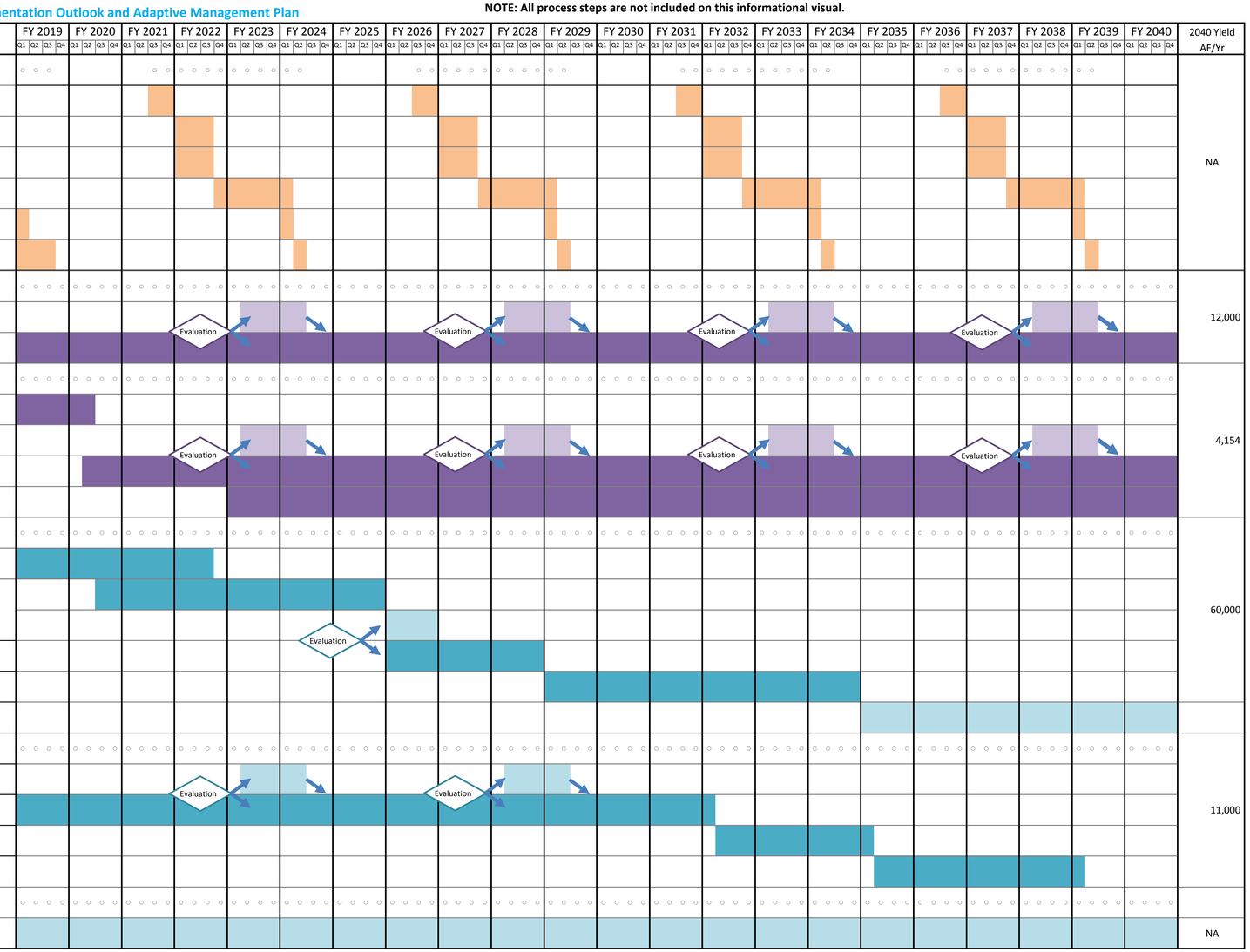
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Potentially a combination	87		**Centralized Reclaimed System (Direct Non-Potable Reuse)**	Implementation to focus on Reclaimed Master Plan through 2040.	12,000
	88	S3	Approach refinement and/or implementation of other option(s) identified in plan update cycle		
	89		Maintain approach and continue implementation		
	90		**Decentralized Reclaimed (Community Scale Distributed Wastewater Reuse and Sewer Mining)**		4,154
	91		Refinement of decentralized option analysis		
	92	S9, S10	Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	93		Future additional decentralized reclaimed project identification		
	94		Decentralized reclaimed project design and construction	Implementation will consider timing and location of new development opportunities.	
Utility constructed, owned and operated	95		**Aquifer Storage and Recovery**		60,000
	96		Further Study and Modeling, Permitting, Land Acquisition	Initial steps will include further study for pilot and full project, further modelling for operational considerations, land acquisition, legal and permitting considerations, and piloting	
	97		Pilot Design, Construction, and Testing		
	98	S1	Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	99		Design of full-scale ASR facility		
	100		Construction of full-scale ASR facility		
	101		ASR fill/refill cycles		
	102		**Indirect Potable Reuse**	Note: Option could be accelerated if required in a drought situation.	11,000
	103		Approach refinement and/or implementation of other option(s) in subsequent plan update cycle		
	104	S5	Alternatives Analysis, Permitting, and Public Outreach		
	105		Design		
	106		Construction		
	107		**New Off Channel Reservoir and Brackish Groundwater Desalination**		
	108	S7, S2	Continued study and refinement of option	This phase to include public outreach and possible exploratory land acquisition efforts.	NA