

Virginia Flood Protection Master Plan – Priority Gaps to Address

Table 1: Primary Gaps to Address

Key Mechanism	Primary Gap	Relevant Objectives (Bold = Most Impactful)	Prioritization Justifications	Notes (if applicable)
Coordination - Internal and External	A: Coordination among state agencies to streamline flood resilience strategies and reduce redundancies	A2: Reduce negative impacts to vulnerable populations from flooding. B2: Strengthen our ability to prepare for and manage flood risks. B3: Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests. B4: Increase the return on public investments in flood resilience. C1: Improve health and quality of life through flood resilience efforts. C2: Boost the economy through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Ranked highly within Key Mechanism by Stakeholders during VFS (step 4); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	
Financial Support - Grants, Loans, Other	D&F&G: Funding resources for long term resilience planning that support a wide breadth of needs at both the state and local government levels	A1: Reduce negative effects on human health from flooding. A3: Reduce flood damage to buildings and infrastructure. A4: Reduce economic disruptions and losses from flooding. A5: Reduce negative effects to natural and culture resources from flooding. B2: Strengthen our ability to prepare for and manage flood risks. B3: Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests. B4: Increase the return on public investments in flood resilience. B5: Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need. C1: Improve health and quality of life through flood resilience efforts. C2: Boost the economy through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Ranked highly within Key Mechanism by Stakeholders during VFS (step 4); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	Combined the following gaps into one: <ul style="list-style-type: none"> • D. Funding resources for long term resilience planning and disaster response to address state and local needs. • F. Flexibility in allocating state funding to support the breadth of needs, local needs in particular, required to build local flood resilience including use for personnel or overhead costs. • G. Dedicated, recurring hazard mitigation/recovery funding resources for flood resilience work affecting long-term strategy implementation.
Management – Resource Planning – Long-term	O&T: Access to up-to-date and comprehensive data resources that support long-term flood resilience planning and resource allocation decisions	A5: Reduce negative effects to natural and culture resources from flooding. B1: Increase understanding of current and future flood risks. B3: Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests. B4: Increase the return on public investments in flood resilience. C2: Boost the economy through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Important across multiple objectives for Core Stakeholders (step 6):	Combined the following gaps into one: <ul style="list-style-type: none"> • O. Data resources (data collection and data management) to support flood resilience planning. • T. Access to up-to-date data resources, particularly riverine data, for making resource allocation decisions
Management - Resource	P&H: Staff capacity and resources for interdepartmental data aggregation and coordination for comprehensive flood risk assessments, including those for state-owned assets	A2: Reduce flood damage to buildings and infrastructure. A3: Reduce negative impacts to vulnerable populations from flooding. B1: Increase understanding of current and future flood risks. B2: Strengthen our ability to prepare for and manage flood risks. B5: Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need. C1: Improve health and quality of life through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Ranked highly within Key Mechanism by Stakeholders during VFS (step 4); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	Combined the following gaps into one: <ul style="list-style-type: none"> • P. Staff capacity and resources for interdepartmental data aggregation and coordination for comprehensive flood risk assessments • H. Up-to-date data resources on state-owned assets and their associated flood risk.
Outreach - Program	Q: Community knowledge and capacity to take proactive steps to reduce vulnerability to flooding	A1: Reduce negative effects on human health from flooding. A2: Reduce negative impacts to vulnerable populations from flooding. B1: Increase understanding of current and future flood risks. B5: Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need. C1: Improve health and quality of life through flood resilience efforts. C2: Boost the economy through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	Rephrased from this original gap based on Stakeholder feedback: <ul style="list-style-type: none"> • Q: Public awareness to empower communities in taking proactive steps to reduce vulnerability to flooding

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Outreach - Resource	S: Staff capacity hindering collaboration, technical assistance provision, and funding outreach efforts	A2: Reduce negative impacts to vulnerable populations from flooding. A4: Reduce economic disruptions and losses from flooding. B1: Increase understanding of current and future flood risks. B4: Increase the return on public investments in flood resilience. B5: Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need.	Ranked in Arcadis top 11 gaps (step 3); Ranked highly within Key Mechanism by Stakeholders during VFS (step 4); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	
Planning - Long Term	V: Robust decision-making frameworks and capacities to facilitate long-term planning efforts and resource allocation decisions	A5: Reduce negative effects to natural and culture resources from flooding. B2: Strengthen our ability to prepare for and manage flood risks. B3: Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests. B4: Increase the return on public investments in flood resilience. C1: Improve health and quality of life through flood resilience efforts. C2: Boost the economy through flood resilience efforts. C3: Enhance the natural environment through flood resilience efforts.	Ranked in Arcadis top 11 gaps (step 3); Ranked highly within Key Mechanism by Stakeholders during VFS (step 4); Important across multiple objectives in Arcadis analysis and Core Stakeholders (Steps 5 & 6).	Rephrased from this original gap based on Stakeholder feedback: V. Robust decision-making framework resources necessary for resource allocation and prioritization to facilitate long-term planning efforts

Table 2: Secondary Gaps to Address

Key Mechanism	Secondary Gap	Relevant Objective	Prioritization Justifications
Event Response	C. Staff capacity and data management resources for coordination between federal, state, and local agencies during events to ensure targeted event response	A1: Reduce negative effects on human health from flooding. A2: Reduce negative impacts to vulnerable populations from flooding.	Important across multiple objectives in Arcadis analysis (step 5)
Financial Support – Grants, Loans, and Others	E - Staff capacity and funding resources for additional grant application and management support to local governments.	B5: Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need.	Ranked as a priority gap by Arcadis and 3 of 4 Core Stakeholder Groups (Step 6)
Management - Assets	I. Funding resources for asset maintenance	A3: Reduce flood damage to buildings and infrastructure. A4: Reduce economic disruptions and losses from flooding	Ranked as a priority gap by Arcadis and 3 of 4 Core Stakeholder Groups (Step 6)
Management - Programs	N: Reliance on non-permanent federal funding posing challenges in sustaining flood resilience programs	B3: Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests. A4: Reduce economic disruptions and losses from flooding. B4: Increase the return on public investments in flood resilience.	Ranked as a priority gap by Arcadis and 3 of 4 Core Stakeholder Groups (Step 6)
Planning – Long Term	U: Staff capacity for integration of flood resilience tools	B:3 Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests	Important across multiple objectives in Arcadis and Core analysis (Step 5 & 6)
Legal Instruments	W. Staff capacity to address and assist with federal and state regulations	B3: Reduce flood damage to buildings and infrastructure	Ranked as a priority gap in all Core stakeholder groups (Step 6)
Technical Assistance	X. Staff capacity and resources to coordinate technical assistance for funding and program initiatives to address long-term flood resilience goals	B2: Strengthen our ability to prepare for and manage flood risks	

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Table 3: Top Gaps per Objective

Goal	Objective	Top Gaps per Objective (Bold = Primary Gap)		
A. Mitigate current and future flood risks statewide.	1. Reduce negative effects on human health from flooding.	D - Funding resources for long term resilience planning and disaster response to address state and local needs. (Financial Support - Grants, Loans, Other)	G - Dedicated, recurring hazard mitigation/recovery funding resources for flood resilience work affecting long-term strategy implementation. (Financial Support - Grants, Loans, Other)	C - Staff capacity and data management resources for coordination between federal, state, and local agencies during events to ensure targeted event response. (Event Response)
	2. Reduce negative impacts to vulnerable populations from flooding.	Q - Public awareness to empower communities in taking proactive steps to reduce vulnerability to flooding (Outreach - Program)	C - Staff capacity and data management resources for coordination between federal, state, and local agencies during events to ensure targeted event response. (Event Response)	
	3. Reduce flood damage to buildings and infrastructure.	H - Up-to-date data resources on state-owned assets and their associated flood risk. (Management - Assets)	I - Funding resources for asset maintenance (Management - Assets)	W - Staff capacity to address and assist with federal and state regulations
	4. Reduce economic disruptions and losses from flooding.	D - Funding resources for long term resilience planning and disaster response to address state and local needs. (Financial Support - Grants, Loans, Other)	I - Funding resources for asset maintenance (Management - Assets)	S - Staff capacity hindering collaboration, technical assistance provision, and funding outreach efforts (Outreach - Resources)
	5. Reduce negative effects to natural and culture resources from flooding.	D - Funding resources for long term resilience planning and disaster response to address state and local needs. (Financial Support - Grants, Loans, Other)	F - Flexibility in allocating state funding to support the breadth of needs, local needs in particular, required to build local flood resilience including use for personnel or overhead costs. (Financial Support - Grants, Loans, Other)	
B. Advance lasting and unified strategies to address flood risk.	1. Increase understanding of current and future flood risks.	Q - Public awareness to empower communities in taking proactive steps to reduce vulnerability to flooding (Outreach - Program)	P - Staff capacity and resources for interdepartmental data aggregation and coordination for comprehensive flood risk assessments (Management - Resource)	R - Publicly available information resources about flood resilience. (Outreach - Resource)
	2. Strengthen our ability to prepare for and manage flood risks.	F - Flexibility in allocating state funding to support the breadth of needs, local needs in particular, required to build local flood resilience including use for personnel or overhead costs. (Financial Support - Grants, Loans, Other)	P - Staff capacity and resources for interdepartmental data aggregation and coordination for comprehensive flood risk assessments (Management - Resource)	X - Staff capacity and resources to coordinate technical assistance for funding and program initiatives to address long-term flood resilience goals (Technical Assistance - Long Term)
	3. Increase the adaptability and strength of flood resilience strategies to different potential future conditions and regional interests.	N - Reliance on non-permanent federal funding posing challenges in sustaining flood resilience programs.	O - Data resources (data collection and data management) to support flood resilience planning (Management - Resource)	V - Robust decision-making framework resources necessary for resource allocation and prioritization to facilitate long-term planning efforts (Planning - Long Term)
	4. Increase the return on public investments in flood resilience.	D - Funding resources for long term resilience planning and disaster response to address state and local needs. (Financial Support - Grants, Loans, Other)	G - Dedicated, recurring hazard mitigation/recovery funding resources for flood resilience work affecting long-term strategy implementation. (Financial Support - Grants, Loans, Other)	
	5. Increase the accessibility of flood resilience resources, opportunities, and information for Virginians most at need.	F - Flexibility in allocating state funding to support the breadth of needs, local needs in particular, required to build local flood resilience including use for personnel or overhead costs. (Financial Support - Grants, Loans, Other)	E - Staff capacity and funding resources for additional grant application and management support to local governments. (Financial Support - Grants, Loans, Other)	Q - Public awareness to empower communities in taking proactive steps to reduce vulnerability to flooding (Outreach - Program)

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Goal	Objective	Top Gaps per Objective (Bold = Primary Gap)		
C. Capture additional benefits through flood resilience efforts.	1. Improve health and quality of life through flood resilience efforts.	G - Dedicated, recurring hazard mitigation/recovery funding resources for flood resilience work affecting long-term strategy implementation. (Financial Support - Grants, Loans, Other)	Q - Public awareness to empower communities in taking proactive steps to reduce vulnerability to flooding (Outreach - Program)	
	2. Boost the economy through flood resilience efforts.	G - Dedicated, recurring hazard mitigation/recovery funding resources for flood resilience work affecting long-term strategy implementation. (Financial Support - Grants, Loans, Other)	A - Coordination among state agencies to streamline flood resilience strategies and reduce redundancies. (Coordination - Internal and External)	D - Funding resources for long term resilience planning and disaster response to address state and local needs. (Financial Support - Grants, Loans, Other)
	3. Enhance the natural environment through flood resilience efforts.	A - Coordination among state agencies to streamline flood resilience strategies and reduce redundancies. (Coordination - Internal and External)	O - Data resources (data collection and data management) to support flood resilience planning	T - Access to up-to-date data resources, particularly riverine data, for making resource allocation decisions

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