Implementing the Decision Framework in the Bay Program

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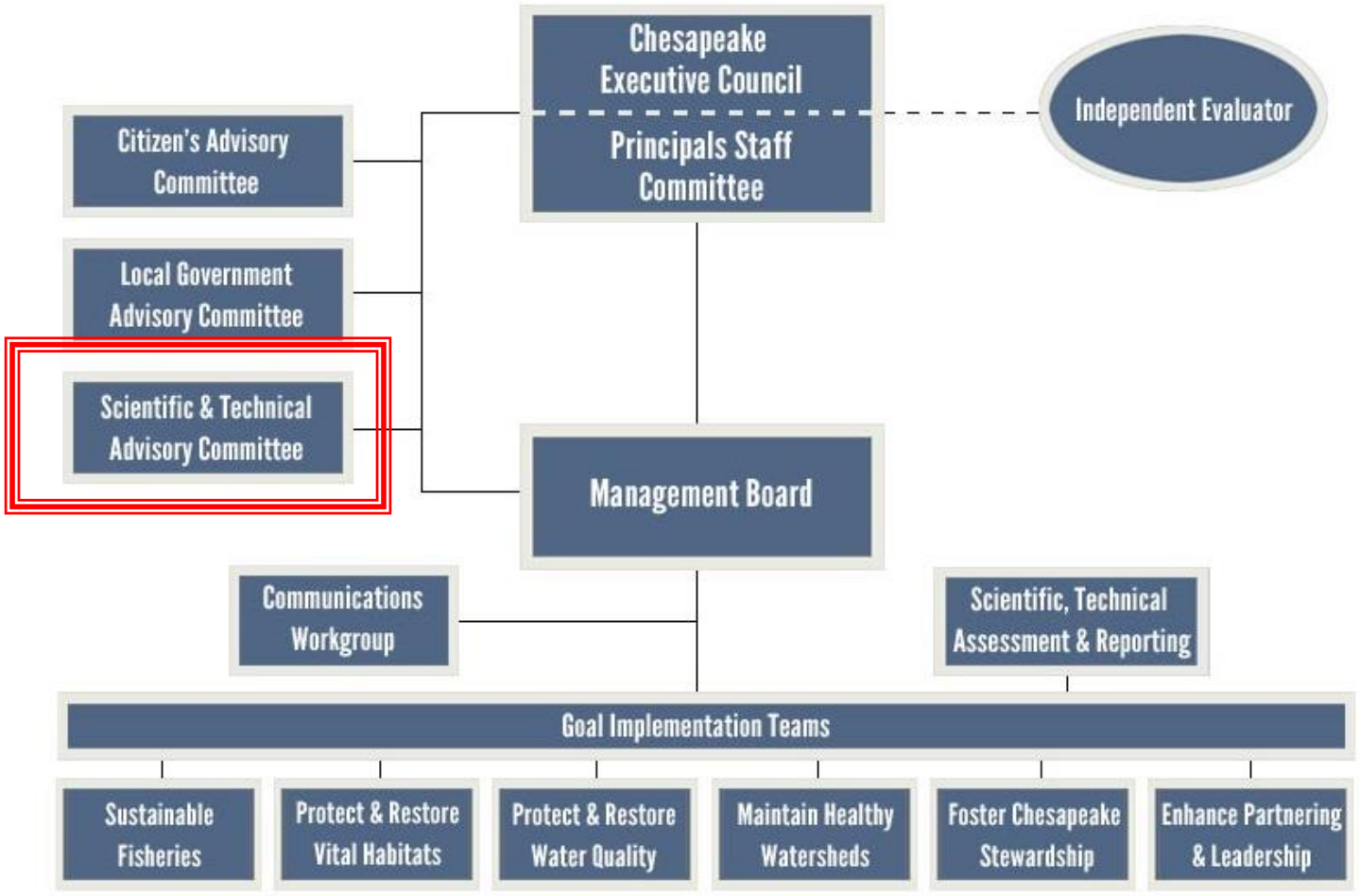


Implementing the Decision Framework in the Bay Program

CBP reasons for implementing the decision framework

- **Adaptive management**
  - Application of the logic necessary to enable adaptive management
- **Accountability**
  - full documentation of CBP activities:
    - what
    - why
    - how
    - time-bound expectations

CBP Management Board 5/2/12

CBP Decision Framework

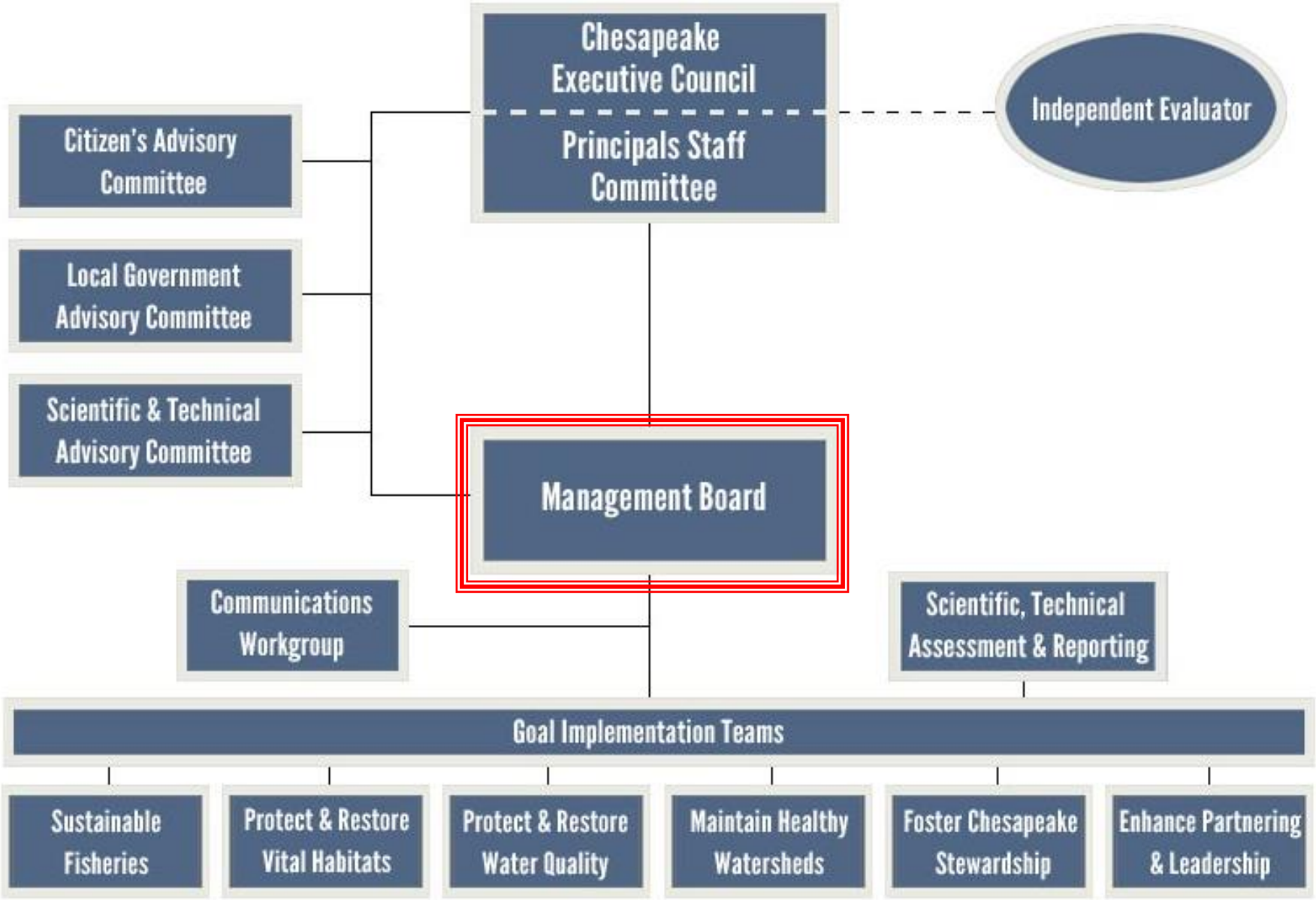
1. **goals** – clear articulation
2. **factors** affecting attainment
3. current efforts and **gaps**
4. **strategies** – detailed and justified
5. **monitoring** – outputs and outcomes
6. **assessment** – evaluate progress toward time-bound goals
7. **manage adaptively** – short-term or long-term adjustments

CBP Management Board 5/2/12

CBP Management Benefits

- **consistent and comprehensive documentation** of program activities
- identification of **coordination** needs & opportunities across GITs
    - strategy links
    - monitoring coordination
- clarification of CBP **decision points**

CBP Management Board 5/2/12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Maintain Healthy Watersheds
Foster Chesapeake Stewardship
Enhance Partnering & Leadership

GIT/Workgroup Benefits

1. goal articulation
   - **clearer understanding of intent**
   - **transparency/accountability**
2. factor analysis
   - **practicality of goals**
   - **identification of "missed" factors**
3. effort/gap analysis
   - **coordination opportunities within CBP**
4. strategy development
   - **enhanced internal and external coordination**
   - **focused scope of activities**
5. monitoring
   - **improved design for performance assessment**
   - **coordination opportunities within CBP**
6. performance assessment
   - **changed posture for future evaluations**
   - **enhanced alternatives analysis**
7. **manage adaptively**

CBP Management Board 5/2/12

DF Implementation Outcomes

GIT/workgroup

- **significant effort** to implement
- operational clarity
- transparency and accountability

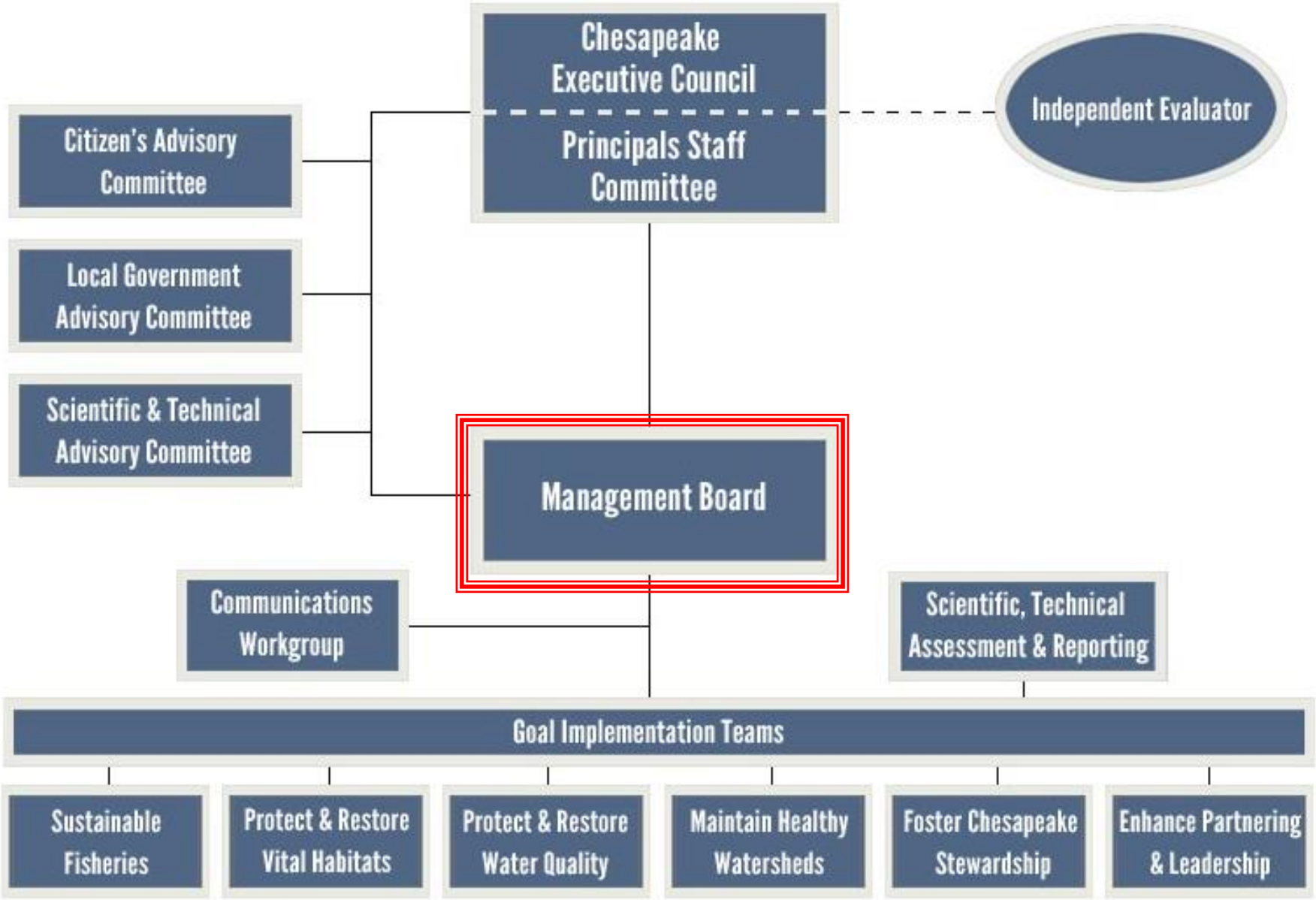
CBP management

- identifying coordination opportunities
- clarifying decision points

Future program design

- framing management issues and partner roles

CBP Management Board 5/2/12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CBP Management Board 5/2/12

Requirements for Success

The Management Board needs to be managers not just interested stakeholders

The logic of the Decision Framework needs to become systemic, not merely another quarterly reporting format

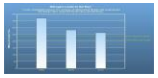
Agreement Goals and Outcomes

Sustainable Fisheries

- Blue Crab Abundance
- Blue Crab Management
- Oyster
- Forage Fish
- Fish Habitat

Vital Habitats Goal

- Wetlands
- Black Duck
- Stream Health
- Brook Trout
- Fish Passage
- Submerged Aquatic Vegetation (SAV)
- Forest Buffer
- Tree Canopy



Water Quality Goal

- 2017 Watershed Implementation Plans (WIP)
- 2025 WIP
- Water Quality Standards Attainment and Monitoring

Toxic Contaminants Goal

- Toxic Contaminants Research Toxic Contaminants Policy and Prevention

Healthy Watersheds Goal

- Healthy Waters

Stewardship Goal

- Citizen Stewardship
- Local Leadership
- Diversity

Land Conservation Goal

- Protected Lands
- Land Use Methods and Metrics Development Land Use Options Evaluation

Public Access Goal

- Public Access Site Development

Environmental Literacy Goal

- Student
- Sustainable Schools
- Environmental Literacy Planning

Climate Resiliency Goal

- Monitoring and Assessment
- Adaptation Outcome

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outcome logic tables

	A	B	C	D	E	F
1	**Fish Habitat Outcome**	Continually improve the effectiveness of fish habitat conservation and restoration efforts by identifying and characterizing critical fish and shellfish spawning, nursery and forage areas within the Chesapeake Bay and its tributaries. Use existing and new tools to integrate information and conduct assessments to inform restoration and conservation efforts.				
2	**Factor**	**Gap**	**Management Approach**	**Work Plan Action**	**Responsible**	**Critical**
4	Scientific and Technical Understanding: Management prioritization, funding and commitment	Jurisdictions have limited regulatory authority to strengthen habitat protections. Funding for new research is limited and requires additional coordination and management to improve efficiency.	Management Approach (1): Identify and prioritize existing and emerging threats to fish habitat and prepare actions to manage them	WP Action (1.1): Continue to improve our understanding of specific habitat stressors including temporal considerations to promote sound management strategies to conserve and restore habitat for productive	Fish Habitat Action Team	X
5				WP Action (1.2): Work with Chesapeake Bay Program partners and local Implementation Teams to identify threats and understand how there threats are being addressed.	Fish Habitat Action Team	X
6				WP Action (1.3): Develop threshold and/or metrics for primary stressors and threats in order to characterize the aspects of habitat that need to be maintained to support fish habitat functions	Fish Habitat Action Team	
7	Scientific and Technical Understanding: impacts of fish habitat on fisheries production	Scientific gaps include a limited understanding of the contributions fish habitats make to fisheries production and the impact environmental factors can have on spawning, larval development, and recruitment of adults.	Management Approach (1): Identify and prioritize existing and emerging threats to fish habitat and prepare actions to manage them	WP Action (1.1): Continue to improve our understanding of specific habitat stressors including temporal considerations to promote sound management strategies to conserve and restore habitat for productive	Fish Habitat Action Team	X
8				WP Action (1.2): Work with Chesapeake Bay Program partners and local Implementation Teams to identify threats and understand how there threats are being addressed.	Fish Habitat Action Team	X
9				WP Action (1.3): Develop threshold and/or metrics for primary stressors and threats in order to characterize the aspects of habitat that need to be maintained to support fish habitat functions	Fish Habitat Action Team	
10	Scientific and Technical Understanding: Lack of information and understanding on species in their habitats and identifying habitat areas.	Improved information on fish distributions and habitats could support the understanding and evaluation of habitat connections and fish distribution drivers.	Management Approach (2): Compile and identify data on habitats, habitat vulnerabilities, and fish utilization at different life stages to develop a set of criteria for identifying areas of high-value fish habitat	WP Action (2.1): Incorporate fish habitat utilization information into a threat matrix	Fish Habitat Action Team, Delaware Department of Natural Resources and	
11				WP Action (2.2): Complete fish population and abundance surveys at select U.S. Department of Defense installations and provide relevant data for species of interest	Department of Defense	
12	Scientific and Technical Understanding: need to integrate and synthesize existing data into decision support tools	Existing data needs to be compiled and made accessible to managers to improve decision-making process.	Management Approach (2): Compile and identify data on habitats, habitat vulnerabilities, and fish utilization at different life stages to develop a set of criteria for identifying areas of high-value fish habitat	WP Action (2.1): Incorporate fish habitat utilization information into a threat matrix	Fish Habitat Action Team, Delaware Department of Natural Resources and	
13				WP Action (2.2): Complete fish population and abundance surveys at select U.S. Department of Defense installations and provide relevant data for species of interest	Department of Defense	
14	Scientific and Technical Understanding: GIS Capacity	Geographic information related to fish habitat and utilization at different life stages could allow us to quantify and target high-quality habitat for management action. Scientific gaps include a limited understanding of where and how many areas of "high quality" fish habitat are located within the watershed, which could suggest which waters are most important to critical life stages for fish. Further, many wildlife action plans and spatial tools do not	Management Approach (3): Map and target high-value fish habitat for informed management decisions and improved conservation and restoration	WP Action (3.1): Overlay spatial data on the seasonal ranges of priority fish species with high-value habitats	Fish Habitat Action Team, Maryland Department of Natural Resources, NOAA	X
15				WP Action (3.2): Identify and, where possible, fill spatial data gaps for specific fish species and/or tributaries that lack sufficient data coverage	Fish Habitat Action Team	X
16	Scientific and Technical Understanding: Availability and applicability of integrative tools	Geographic information related to fish habitat and utilization at different life stages could allow us to quantify and target high-quality habitat for management action. Scientific gaps include a limited understanding of where and how many areas of "high quality" fish habitat are located within the watershed, which could suggest which waters are most important to critical life stages for fish. Further, many wildlife action plans and spatial tools do not	Management Approach (3): Map and target high-value fish habitat for informed management decisions and improved conservation and restoration	WP Action (3.1): Overlay spatial data on the seasonal ranges of priority fish species with high-value habitats	Fish Habitat Action Team, Maryland Department of Natural Resources, NOAA	X
17				WP Action (3.2): Identify and, where possible, fill spatial data gaps for specific fish species and/or tributaries that lack sufficient data coverage	Fish Habitat Action Team	X
18	Scientific and Technical Understanding: funding	Funding for new research is limited and is necessary to advance targeting of high-value fish habitat	Management Approach (3): Map and target high-value fish habitat for informed management decisions and improved conservation and restoration	WP Action (3.1): Overlay spatial data on the seasonal ranges of priority fish species with high-value habitats	Fish Habitat Action Team, Maryland Department of Natural Resources, NOAA	X
19				WP Action (3.2): Identify and, where possible, fill spatial data gaps for specific fish species and/or tributaries that lack sufficient data coverage	Fish Habitat Action Team	X
20	Scientific and Technical Understanding: Funding and	*Information on the economic contributions of fish habitat*	Management Approach (5): Evaluate ways to enhance fish habitat protection by reviewing examples from other regions and actively engaging with the Atlantic Coast Fish	WP Action (5.1): Engage and communicate fish habitat value (including ecosystem services) to local planners and restoration practitioners	LGAC	X
21				WP Action (5.2): Work with partners who are implementing fish habitat conservation projects	Fish Habitat Action Team	X

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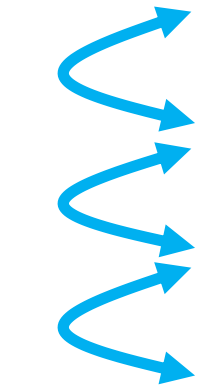


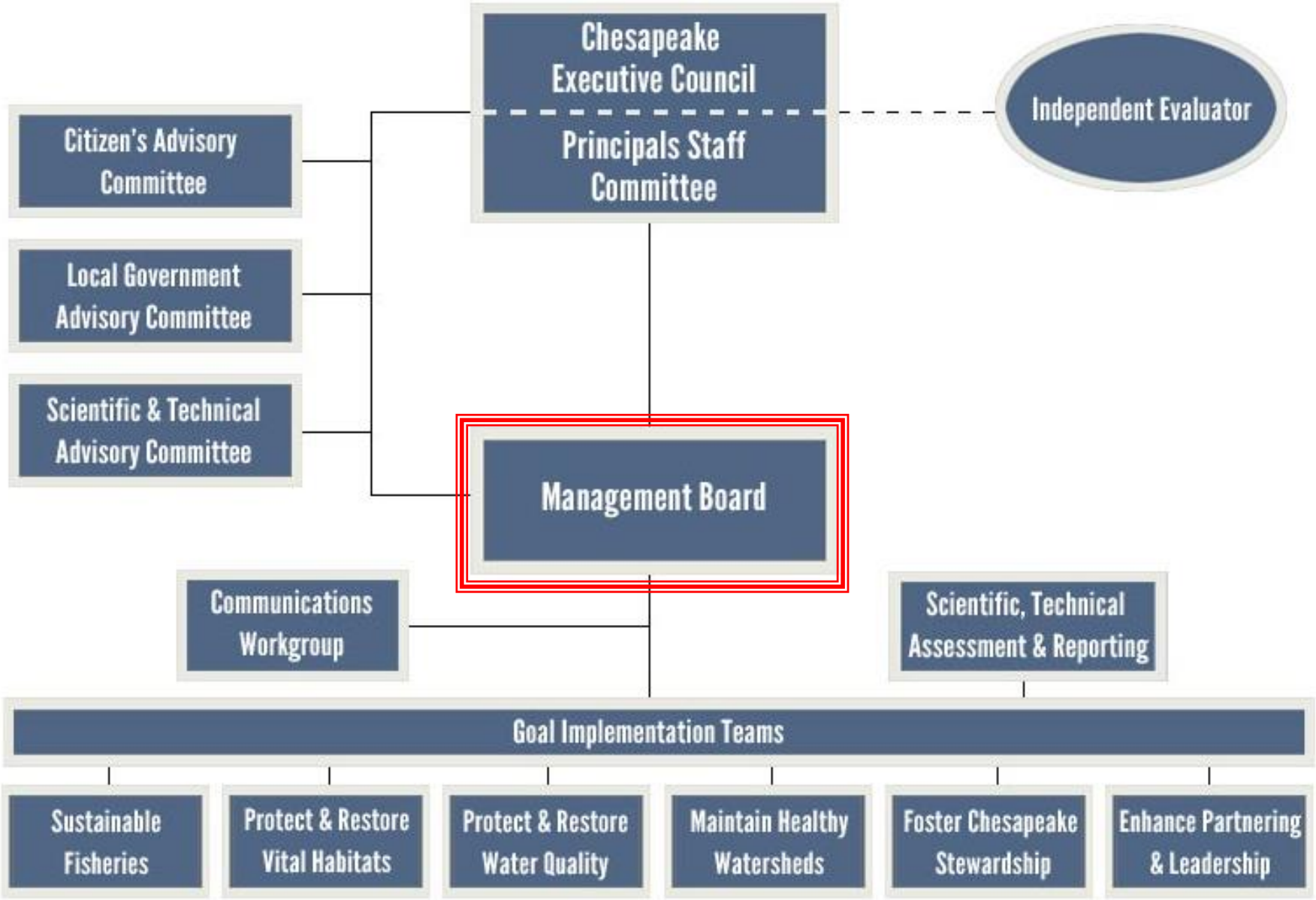
expectations

6. **assessment** – evaluate progress toward time-bound goals
7. **manage adaptively** – short-term or long-term adjustments

Assessment of Strategies

1. Are the factors identified reasonably comprehensive?
2. Is there a planned management action for each critical factor identified?
3. Are all of the planned actions linked to an identified critical factor?
4. Is responsibility for all of the planned actions clearly identified?
5. Are there output indicators identified for each planned action?
6. Is monitoring planned for key factors which will not be addressed by management actions?
7. What are the expected effects of the management actions?

Factor[1]	Action	Who's Responsible?	Indicator	Expected Response	Learning	Adaptation
A	1	CBP	**P&O**	ΔA	ΔA=oA?	Action 1+
B				ΔB	ΔB=oB?	
C	2	Other	P&O	ΔC	ΔC=oC?	
D	3	CBP	**P&O**	ΔD	ΔD=oD?	New factor J
E				ΔE	ΔE=oE?	New Factor K
F				ΔF	ΔF=oF?	
G	4	CBP	**P&O**	ΔG	ΔG=oG?	New action
H	5	Other	P&O	ΔH	ΔH=oH?	CBP action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Healthy Watersheds

Challenges:

- Lack of monitoring and tracking programs,
- Lack of threats and vulnerability data,
- Limited allocation of resources,
- Challenges in articulating the economic value of healthy watersheds,
- Lack of participation and engagement,
- Lack of prioritization,
- Challenges in rolling out tools
- Variability in defining and tracking healthy watersheds

Management Board Ask:

- Consistent partner participation
- Pathway to communicate tools and information to planners and watershed organizations (2-way)
- Monitoring and assessment of healthy watersheds
- Inclusion in the Watershed Implementation Plans (WIPs)

CBP reasons for implementing the decision framework

- **Adaptive management**
  - learn while doing
  - structured assessment

- **Accountability**
  - consistent documentation of what, why, and how