Performance Measures Manual

Version 1.3

Guidance for Using the CRCP Performance Measures

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Preface: How to Use This Manual

This document was created to help the recipients of funding from the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program (CRCP) understand why the new CRCP Performance Measures matter and how their work may contribute to them. The CRCP *Roadmap for the Future* (2008) [Appendix A] called for the development of a suite of performance measures and evaluation criteria to track progress toward addressing three key threats to coral reef ecosystems – impacts of climate change, fishing, and land-base sources of pollution. Based on the *NOAA Coral Reef Conservation Program Goals and Objectives 2010-2015* [Appendix B], specific performance measures were developed to track on-the-ground outcomes. In May 2010 the new CRCP Performance Measures were approved by the Senior Management Council and the CRCP Performance Measures Manual was developed to assist CRCP Project Managers to ensure the results of their work contributes to these measures and that they understand the process to report the results of their work.

Though performance measures have not historically been a high priority of the CRCP, the future of the CRCP is in part dictated by its ability to communicate how well it is reaching program Goals – this information comes from performance measures. The current administration has placed greater emphasis on performance, transparency, and achievement of outcomes than before, and in the current fiscal environment the ability of a program to effectively convey it's accomplishments in a quantitative manner is crucial in order to maintain funding levels.

Any Project Manager receiving funds from the CRCP should be aware of and understand that performance measures are required across the entire federal government. The CRCP performance measures are important because they allow the CRCP to provide program performance information to leadership and they also provide data needed for the CRCP to conduct future evaluations of program accomplishments.

The CRCP Performance Measures Manual is a one-stop source for information related to performance measures. In order to get the most out of this document, please follow the recommendations below:

1) This manual is not intended to be read in its entirety!
2) Recipients of CRCP funds are encouraged to read Sections 1-5, plus the information about the Performance Measures in Section 6 that are most relevant to their work. If anyone needs assistance determining which measures their work contributes to please don't hesitate to request help from Susie Holst (Susie.Holst@noaa.gov).
3) The information found in Sections 1 – 4 of this manual pertain to the full suite of CRCP performance measures approved by the SMC in 2010. Section 6 outlines the details for the performance measures that are actively tracked by the Coral Program.
4) Appendices are provided as reference material so that this manual can be a "one-stop shop" for all things Performance Measures related and are referenced throughout.
5) The CRCP Performance Measures Manual in intended to be a working document and will be updated as necessary over time as the program evolves. If anything is missing or could be clarified in future versions, please send your feedback to Susie Holst.

1.0 Definitions

Practitioners of evaluation use a language that is very specific. Terms are used in a consistent way and when engaging in evaluation activities, including reporting on performance measures, it is essential to have a common understanding of how these terms are defined. In order to ensure that all CRCP staff members have this understanding related to performance measurement of the program, the following list of terms and definitions has been compiled using the NOAA Business Operations Manual (version 5.3) as a reference in order to maintain consistency with the terminology used within NOAA. Terms used within the performance measures will be defined as appropriate and will be included in the detailed information associated with each measure.

Activities – Efforts designed and conducted to produce an output/outcome.

Actual – A term used when reporting final values for a measure on a given year.

Annual Operating Plan (AOP) – A plan required by the Deputy Under Secretary (DUS) and produced by the NOAA Line and Staff Offices outlining a schedule of events, responsibilities, and milestones for the current fiscal year. The AOP outlines planned actions to be taken throughout the year to accomplish the approved and appropriated NOAA Program. The status of the AOP schedule is reviewed quarterly by the DUS.

Baseline – A part of a performance measure that establishes the initial level of measurement (value and date) against which targeted progress and success are compared. A baseline includes both a starting date and starting value.

Evaluation – The systematic assessment of how well a program is working toward achieving program goals/objectives. There are four main types of evaluation, including outcome evaluation (what the program accomplished), impact evaluation (net effect of the program), process evaluation (extent the program is operating as intended), and cost-benefit/cost-effectiveness evaluation.

Goal – Long-term, outcome-oriented achievements developed for a program to work towards; the result or achievement toward which effort is directed. It is broader and more general than an objective or an outcome. It may be the result of efforts that the program contributes to, but does not direct.

GPRA – The 1993 *Government Performance and Results Act* (*GPRA*), holds federal agencies accountable for using resources wisely and achieving program results. http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html

Indicator – The part of a performance measure that defines the attribute or characteristic to be measured. (This is the "thing" a performance measure is intended to measure.)

Milestone – A portion of work (i.e. set of tasks completed, set of work products delivered) that marks a step towards completion of a larger objective/goal.

Objective – An elaboration of a goal statement, developing with greater specificity the intent of the goal, which may provide insight into strategy for achieving goal.

Outcome – The end result, expected or unexpected, of the customer's use or application of the organization's outputs. Outcomes may be long-term, mid-term, or short-term in nature.

Output – The products or services resulting from program activities.

Performance Management – The systematic process of monitoring the results of activities. This includes collecting and analyzing performance information to track progress toward planning results, using performance information to inform program decision-making and resource allocation, and communicating results achieved, or not attained, to advance organizational learning and tell the Program and Agency's story.

Performance Measure – Objective, quantifiable indicators used to demonstrate the implementation of activities, creation of outputs, or to quantify progress toward outcomes. A performance measure consists of four parts: indicator, unit of measure, baseline and target.

Target – The part of a performance measure that establishes the desired level to be reached in a defined time period, usually stated as a change relative to the baseline.

Unit of Measure – The part of a performance measure that describes the way an indicator is to be measured (i.e. number of, percent of).

2.0 Purpose and Need for a CRCP Performance Measures Manual

2.1 Purpose:

This document includes all relevant information pertaining to the NOAA Coral Reef Conservation Program (CRCP) performance measures and is available to interested parties who receive or leverage CRCP funding. This manual will clearly provide:

- The rationale for the CRCP performance measures
- Information about how performance measures are connected to internal planning processes within the CRCP and NOAA and to higher levels of government
- Full descriptions, methodologies, reporting guidance information and procedures for each measure

For consistency purposes, CRCP staff, Project Managers, CRCP funded grantees, and partners should refer to this manual whenever performance-related efforts are conducted using CRCP investments. This manual will serve as the primary location for the most current information on CRCP performance measures and will be updated periodically to reflect any changes made as the program evolves. It is critical that the users of this manual understand that the CRCP performance measures are representative of the work done by the program and are not intended to comprehensively capture the entirety of CRCP's activities.

2.2 Need:

The primary need for this manual is for the CRCP, its partners, and grantees, to promote better communication and organization with respect to the use of the CRCP performance measures. Historically, the CRCP performance data was not collected, tracked, managed, or analyzed in a holistic and transparent manner. After the 2007 external review, the CRCP *Roadmap for the Future: A Plan for Developing CRCP Direction Through 2015* (Roadmap) specifically called for increased attention to program evaluation through outcome-oriented performance measures – measures that are focused on the effects of the program's work instead of the products produced. In order to achieve CRCP's conservation goals, CRCP staff, partners, and grantees should all have access to this information to understand their role within the greater CRCP and learn how they can contribute.

CRCP performance information is also used during several steps within annual NOAA business processes. Performance measures and underlying milestones are:
1) necessary to evaluate program accomplishments,
2) used as justification for outyear program increase requests within NOAA, and throughout the budgeting process with the Department of Commerce (DOC) and the Office of Budget and Management (OMB), and
3) specified in the Annual Operating Plan (AOP) to show progress and achievements during the execution year.

CRCP's previous performance measures focused heavily on outputs rather than outcomes. Additionally, the recent focus on the new CRCP Goals and Objectives made many of the previous performance measures outdated. Therefore, it is imperative to have a new set of performance measures designed to show progress of the realigned program. Given the

increased scrutiny of government programs in the current administration, it is important that the CRCP has the ability to report efficiently and effectively on its achievements when information requests from leadership (NOAA, DOC, OMB or Congress) are received. Finally, performance information should be used to communicate about program successes and weaknesses to improve overall program performance.

3.0 Rationale

3.1 History:

NOAA's Coral Reef Conservation Program was established in 2000 to help fulfill NOAA's responsibilities under the Coral Reef Conservation Act of 2000 (CRCA) [Appendix C] and Presidential Executive Order 13089 on Coral Reef Protection [Appendix D]. In 2002, the *National Coral Reef Action Strategy* was developed with thirteen priorities intended for the CRCP to address. By spreading its resources across these thirteen goals, the CRCP significantly increased the understanding of coral reef ecosystem processes and threats. However, that breadth of activity did not permit the program to intensively invest in mitigating or reducing the most serious threats to coral reefs. Additionally, as the program grew and invested program resources into each of these areas, performance measures were developed independently, on an as-needed basis, and resulted in a suite of measures that tracked projects or topics (i.e. "widgets"), but did not provide a strategic picture of the program.

The final report of the 2007 CRCP external review panel strongly recommended the CRCP sharpen its priorities and reconsider the balance of its activities. In response to the 2007 external review, in 2008 the CRCP laid out a process in the Roadmap to develop a new, more focused direction built around priority threats to coral reef ecosystems resulting in the *NOAA Coral Reef Conservation Program Goals & Objectives 2010-2015* (Goals and Objectives). The Roadmap also identified the need for the development of a suite of performance measures and evaluation criteria to track progress toward reaching on-the-ground outcomes of these Goals and Objectives. This document outlines a set of performance measures specifically developed for the CRCP Goals and Objectives which focus on improving the management of U.S. coral reef resources.

3.2 Why CRCP Performance Management Matters:

Performance measures should tell the story about a program's progress toward meeting its goals in a way that shows the program is unique, indispensable, worth continued investment, and achieving results. It is the responsibility of the program's participants – entities receiving CRCP funds – to provide performance information through performance measures as a means of contributing to the information the program is required to provide to leadership to assess its effectiveness. These assessments are conducted at a variety of levels, from within a program all the way up to Congress.

At the highest level, the Government Accountability Office (GAO) released the following in May 2005 regarding GPRA: "*Both the executive branch and congressional committees need evaluative information to help them make decisions about the programs they oversee – information that tells them whether, and in what important ways, a program is working well or poorly, and why… Seeking to promote improved federal management and the increased efficiency and effectiveness of federal programs, GPRA instituted a government-wide requirement for agencies to set goals and report annually on program performance.*"

Historically, the CRCP has not contributed to a NOAA GPRA measure, and although it is not mandatory to contribute to a GPRA measure, it may reflect poorly if a program does not align with any of them. Through the recent process to identify a new suite of measures based on the CRCP Goals and Objectives, the CRCP will prepare to report on the NOAA GPRA measure:

Number of Coastal, Marine, and Great Lakes Habitat Acres Acquired or Designated for Long-term Protection. Since marine protected areas (MPAs) are a management regime commonly used for coral reef conservation this is an appropriate GPRA measure for the program given that the CRCP already invests in MPAs in the U.S. and internationally. Using a new tool developed by the CRCP – the CRCP MPA Management Assessment Checklist [Appendix E] – the acreage of MPAs achieving management capacity sufficient for effective conservation will contribute to this NOAA GPRA measure. After the 2014 reassessment of the 20 priority MPAs that conducted a baseline assessment in 2011, the program will have the information needed to contribute to this GPRA measure. See section 6.11 in future versions of this manual for detailed information on how CRCP efforts will contribute to this measure.

Additionally, with the development of the National Coral Reef Monitoring Plan (NCRMP), the Coral Program will be poised to contribute to another GPRA measure: *Annual number of Coastal, Marine, and Great Lakes Ecological Characterizations that Meet Management Needs*. Starting in FY14, through our annual planning process, contributions to this measure will be known and the program will report on them.

At the program level, performance measures are objective, quantitative indicators of the extent to which the program is meeting targets set for achieving program goals and objectives. They indicate if intended progress is being made but do not indicate why or why not. Performance measures are simply the tools that help identify what may need to be evaluated or when evaluation is needed, but should not be seen as a substitute for program evaluation. Through the use of performance measures a program can keep track of multiple projects that collectively bring about changes to achieve anticipated outcomes.

The National Marine Sanctuaries Performance Evaluation Manual (2007) outlines the benefits of using performance management. Many of those benefits also hold true for the CRCP, including:

- Fostering the development of clear, concise and, whenever appropriate, measureable outcomes that when achieved will advance strategic goals, objectives, and priorities;
- Providing a means for managers to comprehensively evaluate the work that can be achieved with the capabilities and capacities of their organizations in the short, mid and long term;
- Helping managers identify management gaps so they may better plan, support, execute, and evaluate their resources;
- Fostering an internal focus on problem-solving and improved performance;
- Motivating staff with clear policies and focused direction;
- Highlighting successful – or not so successful – efforts to inform adaptive management;
- Providing performance targets that align and integrate the work of partners to achieve shared outcomes and results;
- Improving accountability for achieving outcomes and results that advance targeted outcomes/results;
- Improving communication among staff, stakeholders and the general public; and
- Providing irrefutable and convincing evidence of performance to achieve intended outcomes and results that not only drives improvements to management, but also keeps the public, government, and other interested parties apprised of organizational effectiveness.

3.3 Shifting from Outputs to Outcomes:

Across the Federal Government there is an increased push to achieve outcomes at the resource level and measure those outcomes in a way that captures program investments. A July 2008 GAO publication cites, "*reform efforts have attempted to shift the focus of federal government management from a preoccupation with activities to the results or outcomes of those activities".* Effectively, this requires performance measures that document expected changes that result from the program (outcomes) rather than products or services provided (outputs). Accountability is ensured through performance measures, which are used to track and communicate program performance within NOAA and beyond to DOC, OMB and Congress. The CRCP is supported with federal funding to implement the CRCA, and is the primary federally supported program responsible for the conservation of U.S. coral reefs. CRCP is therefore held accountable to make wise investments to conserve coral reef ecosystems and meet program goals. These new performance measures demonstrate CRCP's leadership by accepting responsibility for outcomes relating to resource condition and not just outputs from activities conducted by the program.

As the CRCP moves towards more strategic investments, outcome measures will become an essential tool for showing progress toward our Goals. However, outcome measures will take a significant amount of time and investment to show any measurable changes resulting from management actions therefore, to effectively show the progress of the CRCP a combination of outcomes, intermediate outcomes/outputs, and short-term outputs will be needed. Of the total number of new performance measures addressing the Goals and Objectives, seven are outcome measures that tie the work done by the CRCP and our partners to coral reef resources. Eleven are outputs that, through CRCP funded activities, are intended to show incremental progress towards reaching the Programs' goals. Table 1 shows the new measures and indicates whether each measure is an outcome measure or an output measure.

For 'outcome' performance measures, it is very likely that multiple projects will work toward achieving the on-the-ground environmental changes we hope to report – it is unlikely that a single project will be able to directly change an outcome measure, however individual projects can indicate that the work they are doing is intended to contribute to the changes reported for an outcome measure.

Table 1. The CRCP Performance Measures. Abbreviations indicate the CRCP Goal addressed and which measure for that Goal it is – for example, for F2 PM2: the F2 stands for Fishing Impacts Goal #2 as detailed in the Goals and Objectives document, and PM2 stands for the second performance measure for that Goal. The measures in blue font are outcome measures that are expected to show on-the-ground environmental changes as a result of CRCP investments. Upon implementation, measures will be tracked internally by the CRCP to follow CRCP's progress towards the Goals of the program.

CRCP Performance Measure	Abbreviation	How to Report
Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification*	C1 PM1	Project Manager indicates contribution in proposal; Program Analyst verifies and begins tracking; upon completion CRCP verifies contribution to PM
Percent of CRCP management partners utilizing comprehensive climate risk and vulnerability assessments to inform their planning processes for coral reef management	C2 PM1	Project Manager indicates contribution in proposal; Program Analyst verifies and begins tracking; upon completion CRCP verifies contribution to PM
Number of acres of coral reefs identified as resilient to climate change and effectively conserved (GPRA)	C2 PM2	Contribution to PM determined using the CRCP MPA Checklist
Percent of jurisdictional residents who are aware of climate change impacts to coral reefs	C2 PM3	Contribution to PM determined using social science surveys
Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification*	C3 PM1	Project Manager indicates contribution in proposal; Program Analyst verifies and begins tracking; upon completion CRCP verifies contribution to PM
Accuracy of models and forecasts regarding climate change impacts to coral reefs	C3 PM2	Project Manager directly contributes to PM at completion of project
Number of intervention strategies developed to reduce climate change and ocean acidification impacts in priority coral reef areas	C4 PM1	Project Manager directly contributes to PM at completion of project
Stable or increasing biomass (g/m2) of key taxa in areas outside of Marine Protected Areas (MPAs)	F1 PM1	Contribution to PM informed by NCRMP Monitoring Data or data collected at priority sites
Stable or increasing biomass (g/m2) of key taxa in MPAs	F2 PM1	Contribution to PM informed by NCRMP Monitoring Data or data collected at priority sites
Increase in management effectiveness of priority coral reef MPAs, measured using the CRCP MPA Management Assessment Checklist	F2 PM2	Contribution to PM determined using the CRCP MPA Checklist
Number of acres of coral reefs effectively conserved within designated MPAs (GPRA)	F2 PM3	Contribution to PM determined using the CRCP MPA Checklist

Percent of jurisdictional residents who have observed non-compliance with local fisheries management regulations	F3 PM1	Contribution to PM determined using social science surveys
Percent of jurisdictional residents who support management approaches including MPAs that reduce fishing impacts to coral reefs	F4 PM1	Contribution to PM determined using social science surveys
Number of priority sites with completed and approved integrated watershed management plans (WMPs) or Conservation Action Plans (CAPs)	L1 PM1	Project Manager indicates contribution in proposal; Program Analyst verifies and begins tracking; upon completion CRCP verifies contribution to PM
Number of projects completed from approved WMPs and CAPs to reduce LBSP in priority coral reef areas	L1 PM2	Project Manager indicates contribution in proposal; Program Analyst verifies and begins tracking; upon completion CRCP verifies contribution to PM
Stable or decreasing suspended sediment load (metric tons/year) measured in target watersheds	L1 PM3	Contribution to PM determined using data collected at priority sites
Stable or improving coral demographics (recruitment, size frequency, mortality) in priority coral reef areas	L2 PM1	Contribution to PM informed by NCRMP Monitoring Data or data collected at priority sites
Number of in-water restoration projects implemented in degraded coral reef ecosystems to reduce accumulated sediments, nutrients, and algae	L2 PM2	Project Manager directly contributes to PM at completion of project
Number of active partnerships established with local, state/territory, federal and/or non-governmental organizations with a common goal to reduce LBSP impacts in priority coral reef areas	L3 PM1	CRCP LBSP Coordinators verify any new CRCP partnerships that have been developed each year

*C1 PM1 and C3 PM1 are worded identically because at the root of both Goals (C1 and C3) is the development of tools to improve management preparedness and response to climate impacts. For C1, the focus of those tools is to provide managers with decision making tools, training tools, communication tools and planning tools for management, while for C3 the focus is more on environmental data products and tools such as forecasts, predictions, models, etc.

As an example, for Land-based Sources of Pollution (LBSP) Goal #1 -- Reduce pollutant loading from watersheds to priority coral reef ecosystems – there are 3 measures that are designed to work together over time to show the progress of CRCP's efforts to achieve this Goal (Figure 1).

1) Measure L1 PM1 [Number of priority sites with completed and approved integrated watershed management plans (WMPs) or Conservation Action Plans (CAPs)] captures the progress of the CRCP to develop integrated WMPs or CAPs for the watersheds that have been identified as priorities in the jurisdictions – a short-term output.
    - To do this, a Project Manager will propose a project to develop a WMP or CAP and will select this measure in the Coral Project Database (Database). Upon completion of the plan, the CRCP will verify that it is complete and approved, and then indicate that the completed plan contributes to L1 PM1.

2) Measure L1 PM2 [Number of projects completed from approved WMPs and CAPs to reduce LBSP in priority coral reef areas] builds off L1 PM1 by tracking the implementation of projects identified in the completed plans – another output.
   - To do this, a Project Manager will propose to implement a project from an approved WMP or CAP and will select this measure in the Database. Upon completion of the project, the CRCP will verify that the project is complete, and then indicate that the completed project contributes to L1 PM2.
3) Measure L1 PM3 [Stable or decreasing suspended sediment load (metric tons/year) measured in target watersheds] measures the changes in suspended sediment load in the watersheds where the CRCP works – an outcome.
   - An entity in each of the jurisdictions will be supported by the CRCP to perform the monitoring activities at priority sites where projects are being implemented to reduce LBSP impacts. The CRCP will work with the entity conducting the monitoring and will receive annual updates on suspended sediment load in each of the watersheds where the CRCP is actively working. *This will show the results of the combined work of all of the projects implemented in L1 PM2.*

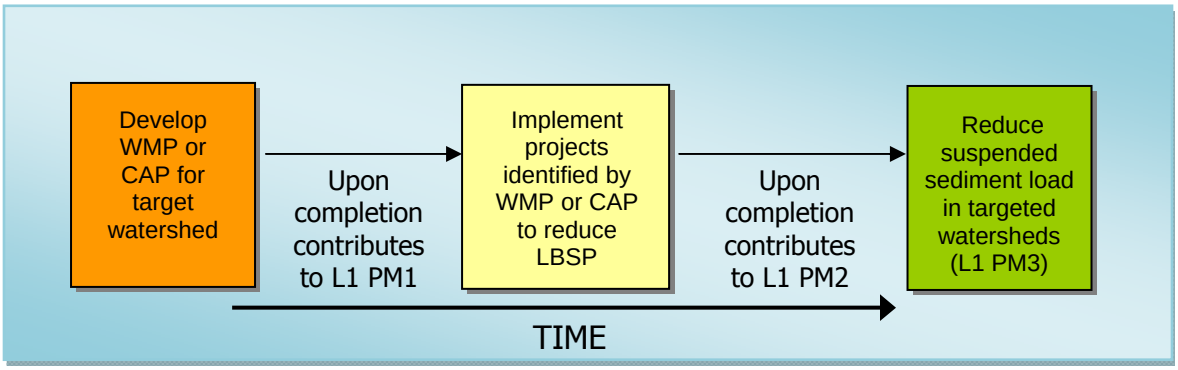

Figure 1. Diagram showing the chronological progression of steps needed to reduce LBSP in target watersheds.

The CRCP also recognizes that achieving desired outcomes for coral reefs cannot be accomplished in isolation. Instead, extensive partnerships are essential in all areas where we work, including local, state, territorial, and federal government agencies, as well as non-governmental and academic institutions. Grantees who receive funding from the CRCP through the grants programs can expect to be asked to contribute to the CRCP performance measures where applicable. The CRCP will work with each grantee to help them navigate the process to contribute their work to the CRCP performance measures.

4.0 Making the Connections: How the CRCP is connected to NOAA, DOC, and OMB

4.1 How CRCP Performance Management Information is Used:

Within NOAA there are several concurrent business processes occurring across different scales within the Agency that feed into the budget planning process for DOC and OMB – performance measures are an integral part of these processes. Specifically, the Annual Operating Plan (AOP) and NOAA's long-term strategic planning through the new Strategy, Execution and Evaluation (SEE) process utilize performance information reported through performance measures.

Annual Operating Plans

For the execution year – the year when requested funding is spent – an annual spend plan is developed for the CRCP by the SEA Team and approved by the Program Manager and Senior Management Council to decide how existing program funds will be invested (~ May – October). Leading up to the start of the fiscal year, a draft AOP is developed by Staff Offices within each of the NOAA Line Offices (LOs) to show how the offices plan to invest a subset of their budgets (this subset consists of major investments) and provides details about expected milestones and products to be delivered (~ October - November). The items funded by the CRCP in the spend plan are used to develop the Coral Program's AOP. Once the President's budget is approved and appropriations are made, the AOP is finalized (timing varies based on when Congress passes an annual budget). Reporting is conducted on a quarterly basis (end of January, March, June and September) to track progress throughout the year and is provided to the appropriate LO, then provided by the LOs to the NOAA Budget Office.

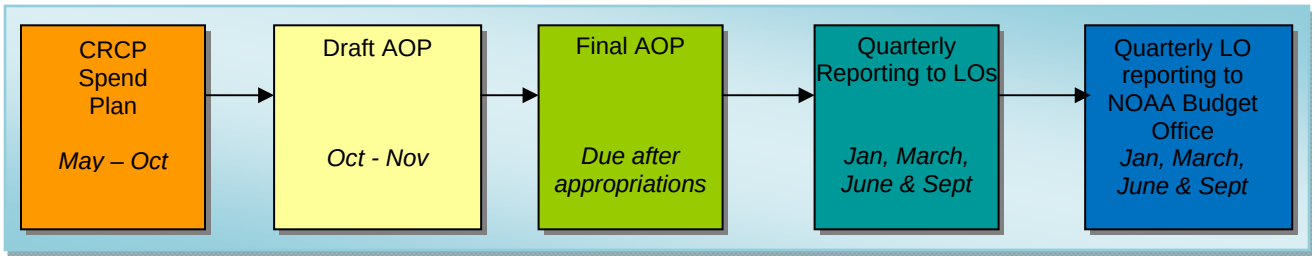

Figure 2. The sequence and timing of steps for execution year reporting on programmatic progress through the AOP.

Budget and Reporting

For CRCP activities, because the CRCP Budget Line comes into NOS, the CRCP reports to NOS through their AOP. The matrix organization of the CRCP makes single LO reporting a challenge since the work of the CRCP is conducted across LOs. To the greatest extent possible, coordination across the LOs for AOP reporting has increased in recent years but each LO has different timelines and processes for reporting. In addition to the quarterly reporting on the AOP, year-end reporting of CRCP Performance Measures is necessary to track program achievements and will follow existing NOAA business process timelines. For all performance measures, a verification process will take place to ensure the information used for reporting on the performance measures is correct. Each year, the Program Analyst will aggregate performance information to enable the CRCP to report to NOAA Leadership on program-wide

contributions to CRCP measures. Tracking of performance measures will be done manually by the Program Analyst in the absence of a module in the CRCP Project Database.

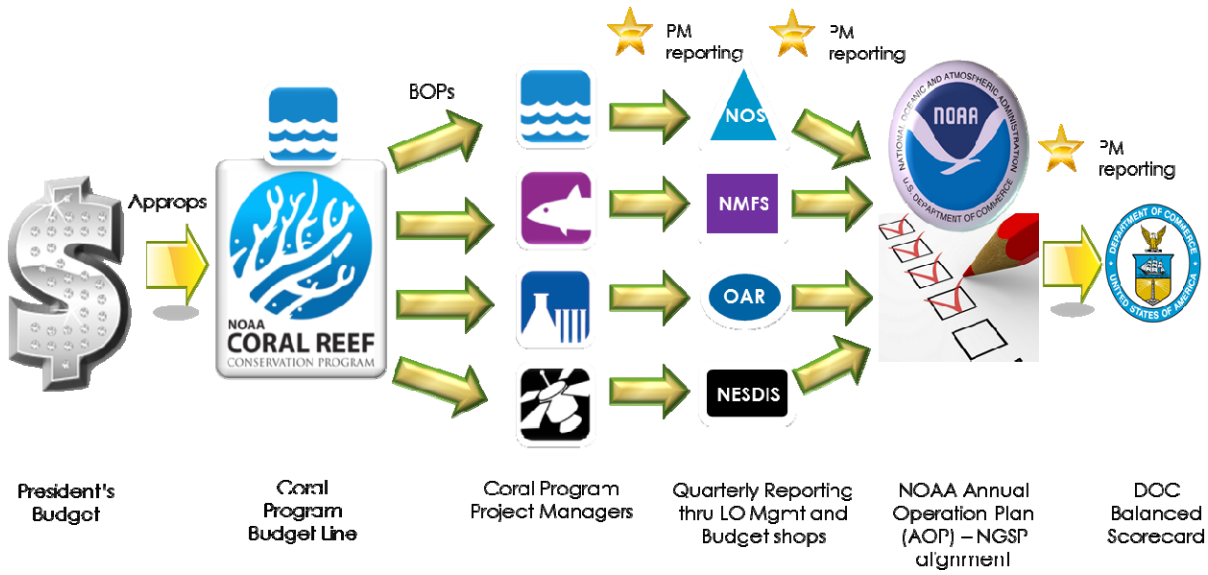

Figure 3. Overview of the budget and reporting processes for the CRCP at NOAA.

Strategic Planning
Long-term strategic planning across NOAA is done using a separate process to request additional funding above base budgets and is overseen by NOAA's Office of Program and Planning Integration (PPI). The new system to implement NOAA's *Next Generation Strategic Plan* (NGSP) [Appendix F] is called Strategy, Execution and Evaluation (SEE) and replaces PPBES. Details about the SEE can be found on PPI's website: https://www.see.noaa.gov/overview.html.

The SEE process provides an opportunity for the CRCP to provide information to leadership on CRCP supported work that could form the basis of future funding increases. As a matrix program, the CRCP conducts work across many NOAA offices. In 2011, during the initial process to develop Implementation Plans for each of the NGSP Objectives, the CRCP found that our work contributes to 15 of the 28 Objectives in the NGSP indicating the considerable breadth of the Program's work. CRCP was designated a "home" NGSP Objective by leadership – "Comprehensive Ocean and Coastal Planning and Management" Objective under the Coastal Goal. The reason for this designation is that the CRCP budget Line comes into NOS and this Objective is where NOS leaderships deemed the best fit for our program.

Under the SEE process, NOAA leadership identifies administration priorities through the Annual Guidance Memorandum (AGM), then looks within the Implementation Plans to identify activities that match the priorities, and requests a Limited Cost Analysis (LCA) as the basis for an increase to the base budget. Unlike PPBES, within the new SEE paradigm, program offices do not have the option to develop increase requests unless they are instructed to do so by NOAA leadership. If an LCA is included in the NOAA Corporate Portfolio Analysis at the end of the

planning cycle, it will go forward to the DOC for consideration. At the DOC level, the request will undergo further scrutiny to determine whether the requested funding supports DOC priorities and if successful there, then the request will go before OMB to decide whether it will receive money in the President's Budget. The use of performance measures to justify requests for budget increases is all but certain, and the CRCP is prepared to engage in this process with our suite of performance measures from short term output measures to show quick changes, to long-term outcome-oriented measures meant to show progress toward our Program's Goals.

5.0 Information for the New Performance Measures

The performance measures will contain a consistent set of information fields that will be detailed in the next section of this manual – these information fields are listed below.

Measure:

CRCP Goal Addressed:

Reporting Responsibility: ……*Who is responsible for reporting?*
Reporting Level: ……..*Internal*
PM Type: ……*Output, Outcome, Efficiency*
PM State of Development: ……*Established, Under Development, Proposed*
Indicator: ……*See Definitions (Section 1.0)*
Unit of Measure: ……..*See Definitions (Section 1.0)*
Reporting Periodicity: ……*Annual or Periodic (if periodic, how often?)*
Baseline: ……*Value and year baseline was established*

Targets: *Out-year targets for each CRCP performance measure indicate the progress expected from the CRCP based on flat funding.*

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target								
Actual								

Goal of this Measure: *A short statement that explains what this measure is intended to track.*

Measurement Description: *An in depth description of the premise for each measure.*

Definitions: S*pecific meaning of terms used in a measure or in the description are defined here.*

Methodology/Procedure used to collect PM actual data: *A description of the method used to calculate the value of the actual for each measure.*

Reporting Procedure:
Reporting on performance measures will be done manually. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process.

Additional contingencies that could potentially impact the result in unanticipated ways: *A list or description of extenuating circumstances or external influence that could affect the results of a performance measure.*

6.0 Performance Measures

In 2010, the CRCP Program Manager decided to take a phased approach to implementation of the new CRCP Performance Measures, and started with six measures identified for implementation and tracking. In 2015 a new measure, C2 PM1 will begin to be used as the climate portfolio of the CRCP has evolved since 2010.

C1 PM1: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification

C2 PM1: Number of climate risk and vulnerability or reef resilience assessments completed and utilized by management partners to inform their planning processes for coral reef management

C3 PM1: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification

F2 PM2: Increase in management effectiveness of priority coral reef MPAs, measured using the CRCP MPA Management Assessment Checklist

L1 PM1: Number of watersheds with completed and approved integrated watershed management plans (WMPs) or Conservation Action Plans (CAPs)

L1 PM2: Number of projects completed from approved WMPs and CAPs to reduce LBSP in priority coral reef areas

L3 PM1: Number of active partnerships established with local, state/territory, federal and/or non-governmental organizations with a common goal to reduce LBSP impacts in priority coral reef areas

If you are unsure of which measure(s) your project contributes to please review the CRCP Performance Measures Dichotomous Key found in Appendix G. If you need additional assistance in determining whether your work contributes to CRCP performance measures please contact Susie Holst (Susie.Holst@noaa.gov).

The Program expects to activate measures in addition to the measures currently under implementation – a revised version of this manual will be prepared and available to include those additional measures.

Climate Change Performance Measures

6.1 C1 PM1: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification

CRCP Goal Addressed: C1. Increase coral reef resilience to climate change and ocean acidification through effective management strategies

Reporting Responsibility: ..... Project Managers, CRCP Management Liaisons, CRCP Climate Coordinator and CRCP Program Analyst
Reporting Level: .....Internal
PM Type: .....Output
PM State of Development: .....Established
Indicator: .....New or enhanced (management) tools implemented by CRCP partners
Unit of Measure: .....Number (cumulative)
Reporting Periodicity: .....Annual
Baseline: 3 (2010)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	3 (Baseline)	4	5	6	7	8	9	10
Actual	3 (Baseline)	5	7	11	25			

Goal of this Measure:
To track the development of management and decision support tools to improve preparedness and response to climate change and ocean acidification and determine whether these tools are being implemented or used by the management community.

Measurement Description:
This performance measure will track progress to achieve Climate Goal #1 which specifically targets the development of management and decision support tools. This performance measure is very closely related to C3 PM1 and the development of forecasts, projections and coupled ecosystem models to inform strategic management decisions. While these two performance measures will be tracked separately for each goal, they will be combined for annual reporting.

This performance measure will account for management and decision support tools developed using CRCP investments. Examples of tools that would fall under this performance measure are those articulated in "A Reef Manager's Guide to Coral Bleaching" (http://coris.noaa.gov/activities/reef_managers_guide/reef_managers_guide.pdf) such as bleaching or climate related crisis response and communication plans, and new strategies or

tools for increasing coral reef ecosystem resilience and implementing frameworks for management response and intervention. In order for a tool developed by the CRCP to count towards this performance measure, it must be implemented or applied by an entity responsible for the management of coral reef resources within the U.S. – see Appendix H for CRCP Management Partners. Therefore, before a tool is developed the Project Manager should be working with a management partner in the U.S coral jurisdictions to identify what is needed to improve their management efforts. Please see Appendix I for best practices when developing tools for decision-makers and managers.

Definitions:
Tools – Management strategies, frameworks, or decision support systems intended to provide event early warning to anticipate stresses, and information and guidance so that managers can make proactive and sound management decisions to minimize climate change and ocean acidification impacts to both coral reef ecosystems and human communities. [For C1, the focus of these tools is to provide managers with decision making tools, training tools, communication tools and planning tools for management, while for C3 the focus is more on environmental information products and tools such as forecasts, predictions, models, etc.]

New – Refers to a tool that is available to the public or intended audience for the first time.

Enhanced – Refers to an existing tool that has been upgraded, improved, etc.

Implemented – Refers to a tool that has been adopted into the planning or decision making process by managers for whom it was intended.

Methodology/Procedure used to collect performance data:
All tools that have completed development each year will be identified. Those tools that are verified as being implemented by a U.S. management entity will represent the year's contribution to the actual for this measure. See 'Reporting Procedure' below for how Project Managers, CRCP Management Liaisons, CRCP Climate Coordinator and CRCP Program Analyst staff will collect information and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding for the development of management and decision support tools to improve management preparedness and response to climate change and ocean acidification, the project manager will select the C1 PM1 measure from the list of performance measures within the CRCP Projects Database. A brief description of each tool to be developed and the target audience/user should be noted at the outset of the project and entered into the database.

CRCP Program Analyst
At the close of each fiscal year, the CRCP Program Analyst will confirm with project managers the completion of any tools scheduled for completion that year. Then will verify with the CRCP Climate Coordinator and/or CRCP Management Liaisons in the jurisdictions the total number of new or enhanced management tools implemented or used by management partners.

For each tool counted towards this performance measure, a description of the tool and the entity(s) using it must be included so the CRCP knows which tools are being implemented and to prevent double counting towards this measure. This information will be useful for future reviews of the products delivered to the management community and may help the CRCP know whether a specific tool has outlived its usefulness and when a tool may need to be enhanced to better fulfill the needs of the management community.

The total for both C1 PM1 and C3 PM1 will be combined and reported together annually.

Additional contingencies that could potentially impact the result in unanticipated ways:
The development and testing of new management and decision support tools can be complex and takes time. Once a need is recognized within the management community, there is a development and testing phase, then once a tool is ready a period of time for outreach and education to the target user group is needed, then feedback is provided for future improvement. It is possible that there will be instances where Project Managers propose a tool that is never implemented.

6.2 C2 PM1: Number of climate risk and vulnerability or reef resilience assessments completed and utilized by management partners to inform their planning processes for coral reef management

Milestone: Number of jurisdictions where up-to-date climate risk and vulnerability assessments and/or reef resilience assessments are available

CRCP Goal Addressed: C2. Identify, understand, and communicate risks and vulnerability of U.S. coral reef ecosystems, ecosystem services, and dependent human communities to climate change and ocean acidification

Reporting Responsibility:	Principal Investigators, CRCP Management Liaisons, and CRCP HQ staff
Reporting Level:	internal
PM Type:	Output
PM State of Development:	Established
Indicator:	Climate resilience, risk, and vulnerability assessments completed and utilized
Unit of Measure:	Number
Reporting Periodicity:	Annual
Baseline:	2 (2014)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	--	--	--	--	2 (Baseline)			
Actual	--	--	--	--	2 (Baseline)			

Goal of this Measure:
To understand the degree to which climate risk and vulnerability assessments and/or reef resilience assessments are used by CRCP management partners to inform management planning for coral reef resources.

Measurement Description:
This performance measure is intended to show the degree to which CRCP management partners in the U.S. coral reef jurisdictions (American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Florida, Hawai'i, Puerto Rico and the U.S. Virgin Islands) are using resilience, risk, and vulnerability assessments for planning and management decisions in the context of climate change. Now that climate change is recognized as a priority threat to coral reefs, the CRCP management partners need access to these assessments for a clearer understanding of the impacts to the resources in their jurisdiction and how climate change will affect their management strategies. The assessments will provide informational resources to jurisdictional managers so that they can be better prepared and able to identify, prioritize, and justify necessary management actions. Climate risk and vulnerability assessments and/or reef resilience assessments can be completed at multiple scales including local, regional, national, and global (such as the IPCC, the GCRMN status of the world's reefs, etc).

Definitions:
Reef Resilience Assessment – Resilience assessments examine the relative capacity of reef sites within a management area to resist and recover from disturbances. Assessment results are used to identify targets for actions that support site and system resilience. For example, areas with high relative resilience potential that are not currently being managed are priority areas for management and conservation.

Risk Assessment - Frequent assessment that integrates the potential impacts posed by climate change to coral reef ecosystems and their dependent human communities, the probability of those impacts increasing in the future, and the vulnerability of those communities (coupled with regional and local stressors like pollution, ecologically unsustainable fishing, and habitat destruction) to determine reef areas and populations most at risk.

Vulnerability - The degree to which a system is susceptible to, and unable to cope with, adverse stressors. Vulnerability is a function of the character, magnitude, variability, and rate of climate change to which a system is exposed, its sensitivity, and its adaptive capacity.

CRCP Management Partners – Entities responsible for the management of coral reef resources in the U.S. coral reef jurisdictions – for full list see Appendix H

Methodology/Procedure used to collect and report data:
Annually any completed assessments will contribute towards the annual actual for this measure. See below for how Project managers, CRCP Management Liaisons, CRCP Climate Coordinator and CRCP Program Analyst will collect information and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually – Susie Holst will work with you to track your projects' contributions to the measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Principal Investigators
When requesting CRCP funding to conduct climate risk and vulnerability or reef resilience assessments the project manager will select C2 PM1 from the list of performance measures within the CRCP Project Database. The PI must provide a brief description of the assessment(s) they plan to conduct and where the assessment(s) will be conducted. The intended management audience should also be specified. Once completed, the final product should be posted to CoRIS and the URL sent to the CRCP Program Analyst.

CRCP Program Analyst
At the close of each fiscal year, the CRCP Program Analyst will confirm with project managers, CRCP Climate Coordinator and/or CRCP Management Liaisons the completion of any climate resilience, risk, and vulnerability assessments each year. The CRCP Analyst will aggregate the information received and report the total number of completed assessments for each fiscal year.

6.3 C2 PM2: Number of acres of coral reefs identified as resilient to climate change and effectively conserved

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.4 C2 PM3: Percent of jurisdictional residents who are aware of climate change impacts to coral reefs

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.5 C3 PM1: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification

CRCP Goal Addressed: C3. Enhance strategic management of coral reef ecosystems through improved and applied understanding, forecasts, and projections of climate change and ocean acidification impacts

Reporting Responsibility: ..... Project Managers, CRCP Management Liaisons, CRCP Climate Coordinator, and CRCP Program Analyst
Reporting Level: .....Internal
PM Type: .....Output
PM State of Development: .....Established
Indicator: ..... New or enhanced tools (forecasts, predictions, models, etc) implemented by CRCP partners
Unit of Measure: .....number (cumulative)
Reporting Periodicity: .....Annual
Baseline: 4 (2010)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	4 (Baseline)	5	6	7	8	9	10	11
Actual	4	6	10	15	22			

Goal of this Measure:
To track the number of forecasts, projections, and coupled ecosystem models the CRCP has produced to improve management preparedness and response to climate change and ocean acidification and determine whether these tools are being implemented or used within the management community.

Measurement Description:
This performance measure will track the progress to achieve Climate Goal #3 which specifically targets the development or enhancement of forecasts, projections and coupled ecosystems models. This performance measure is very closely related to C1 PM1 and the development of management and decision support tools to inform strategic management decisions. While these two performance measures will be tracked separately for each goal, they will be combined for annual reporting.

This performance measure will account for the development or enhancement of forecasts and projections, as well as ecosystem models coupled with these forecasts and projections using CRCP investments with the purpose of improving preparedness and response to climate change impacts, including ocean acidification. In order for a forecast or projection developed by the CRCP to count towards this performance measure, it must be implemented or applied by an

entity responsible for the management of coral reef resources within the U.S. – see Appendix H for CRCP Management Partners. Therefore, before a tool is developed the Project Manager should be working with a management partner in the U.S coral jurisdictions to identify what is needed to improve their management efforts. Please see Appendix I for best practices when developing tools for decision-makers and managers.

Definitions:
New – A tool that is available to the public or intended audience for the first time.

Enhanced – An existing tool that has been upgraded, improved, etc.

Tools – Management strategies, frameworks, or decision support systems intended to provide event early warning to anticipate stresses, and information and guidance so that managers can make proactive and sound management decisions to minimize climate change and ocean acidification impacts to both coral reef ecosystems and human communities. [For C1, the focus of these tools is to provide managers with decision making tools, training tools, communication tools and planning tools for management, while for C3 the focus is more on environmental information products and tools such as forecasts, predictions, models, etc.]

Implemented – A tool that has been adopted into the planning or decision making process by managers for whom it was intended.

Methodology/Procedure used to collect performance data:
All tools that have completed development each year will be identified. Those tools that are verified as being implemented by a U.S. management entity will represent the year's contribution to the actual for this measure. See 'Reporting Procedure' below for how Project Managers, CRCP Management Liaisons, CRCP Climate Coordinator and CRCP Program Analyst staff will collect information and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding for the development of forecasts, projections, and coupled ecosystem models as decision support tools to improve management preparedness and response to climate change and ocean acidification, the project manager will select the C3 PM1 measure from the list of performance measures within the CRCP Projects Database. A brief description of each tool to be developed and the target audience/user should be noted at the outset of the project and entered into the database.

CRCP Program Analyst
At the close of each fiscal year, the CRCP Program Analyst will confirm with project managers the completion of any tools scheduled for completion that year. Then will verify with the CRCP

Climate Coordinator and/or CRCP Management Liaisons in the jurisdictions the total number of new or enhanced environmental data products and tools implemented or used by management partners.

For each tool counted towards this performance measure, a description of the tool and the entity(s) using it must be included so the CRCP knows which tools are being implemented and to prevent double counting towards this measure. This information will be useful for future reviews of the products delivered to the management community and may help the CRCP know whether a specific tool has outlived its usefulness and when a tool may need to be enhanced to better fulfill the needs of the management community.

The total for both C1 PM1 and C3 PM1 will be combined and reported together annually.

Additional contingencies that could potentially impact the result in unanticipated ways:
The development and testing of new management and decision support tools can be complex and takes time. Once a need is recognized within the management community, there is a development and testing phase, then once a tool is ready a period of time for outreach and education to the target user group is needed, then feedback is provided for future improvement. It is possible that there will be instances where project managers propose a tool that is never implemented.

6.6 C3 PM2: Accuracy of models and forecasts regarding climate change impacts to coral reefs

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.7 C4 PM1: Number of intervention strategies developed to reduce climate change and ocean acidification impacts in priority coral reef areas

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

Fishing Impacts Performance Measures

6.8 F1 PM1: Stable or increasing biomass (g/m2) of key taxa in areas outside of Marine Protected Areas (MPAs)

This measure is under active development with members of the National Coral Reef Monitoring Plan working group. Upon agreement of a standard method, the CRCP will activate this measure and information can be found here in a future version.

6.9 F2 PM1: Stable or increasing biomass (g/m2) of key taxa in MPAs

This measure is under active development with members of the National Coral Reef Monitoring Plan working group. Upon agreement of a standard method, the CRCP will activate this measure and information can be found here in a future version.

6.10 F2 PM2: Increase in management effectiveness of priority coral reef MPAs, measured using the CRCP MPA Management Assessment Checklist

CRCP Goal Addressed: F2. Support effective implementation and management of marine protected areas (MPAs) and ecological networks of MPAs that protect key coral reef ecosystem components and functions

Reporting Responsibility: ..... Project Managers, CRCP Management Liaisons, NMFS Coral Coordinators, MPA Checklist Coordinators and CRCP Program Analyst
Reporting Level: .....internal
PM Type: .....Outcome (intermediate)
PM State of Development: .....Established
Indicator: .....Improvement in management effectiveness
Unit of Measure: ..... Percent
Reporting Periodicity: .....Every 3 years
Baseline: 57.98% (2011)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	--	58% (Baseline)	--	--	63%	--	--	+5%
Actual		58% (Baseline)	--		62.6%			

Goal of this Measure:
This measure will track the incremental progress towards increasing management effectiveness of eligible MPA sites in priority geographic areas where the CRCP works – see Appendix J for the list of MPA sites where progress will be tracked using this performance measure. For the purposes of this measure, management effectiveness directly correlates to the capacity of the management program for an MPA. This is different from MPA effectiveness which considers whether or not an MPA is achieving its identified goals and objectives. This measure does not seek to evaluate whether or not an MPA is working, rather it seeks to assess whether or not all of the essential components of an effective MPA management program exist.

Measurement Description:
Evaluating the current status of MPA implementation and management can lead to improved MPA effectiveness and performance. The CRCP MPA Management Assessment Checklist (Checklist) [Appendix E] was developed as a simple tool to assess the management of MPAs in priority coral reef sites in U.S. jurisdictions and international areas important to the CRCP and jurisdictional partners. This Checklist will allow the CRCP to better understand the needs of its partners in the MPA management community and help managers build and/or maintain the management capacity necessary for successful implementation of their MPA management goals and objectives. Within the Checklist, three tiers of management activity are defined and

presented under each assessment area (see Appendix E for these definitions). The CRCP seeks to apply this assessment tool to eligible MPA sites in priority geographic areas to elevate their management capacity to effectively conserve the resources within MPAs by providing funding and technical assistance to help MPA managers progress from tier one activity towards higher tiers of management activity in each of the assessment areas identified in the Checklist.

The Checklist serves to break down the many components of management activities occurring at MPA sites by identifying 14 categories for assessment (management planning, ecological network development, governance, on-site management, enforcement, boundaries, biophysical monitoring, socioeconomic monitoring, MPA effectiveness evaluation and adaptive management, stakeholder engagement, financing, outreach and education, conflict resolution mechanisms, and resilience to climate change). The information gathered for the MPAs, collected through interviews with site managers, will provide insight into management strengths and needs. The CRCP can then make more informed decisions about where to strategically invest limited resources to address priority MPA management capacity gaps. Additionally, this will provide a transparent process for identifying management gaps to the resource managers responsible for MPA management. The intended result is for managers to have the information needed to request funding, technical support and other forms of assistance through targeted proposals to the CRCP and other funders, thereby increasing the capacity of our partners in the management community to effectively conserve their coral reef resources.

NOAA Project Managers interested in increasing the management effectiveness of priority MPAs should first review the results of the most recent assessment of the MPA using the latest completed Checklist where they plan to work to see what management gaps exist. The results of the 2011 baseline assessments are available in the materials that accompany the annual RFP. Project Managers should partner with the site manager, community based management leader, or other site based staff of their chosen MPA and develop a project to improve the management areas that need additional support. The goal of the CRCP is to ensure MPA management capacity is at a level to effectively conserve coral reef resources (see Table 2). Using the table below, the management assessment areas for an MPA that fall below the Tier indicating "effective conservation" are areas where funding should be requested to build the capacity for this management assessment area. For MPAs already meeting the Tiers indicated for effective conservation, requests for funds to maintain that level of management activity will still be eligible for support from CRCP.

Table 2. This table identifies the Tier designations for minimum levels of management activity needed for effective conservation of coral reefs within MPAs. This represents a working definition of the term "effectively conserved".

Assessment Area	Tier 1	Tier 2	Tier 3
Management Planning			Effective Conservation
Ecological Network Development			
Governance			Effective Conservation
On-site management			Effective Conservation
Enforcement			Effective Conservation
Boundaries			Effective Conservation
Biophysical monitoring			Effective Conservation
Socioeconomic monitoring			Effective Conservation
MPA Effectiveness evaluation		Effective Conservation	
Stakeholder engagement		Effective Conservation	
Financing		Effective Conservation	
Outreach and Education		Effective Conservation	
Conflict Resolution Mechanism			Effective Conservation
Climate Change Resilience			

Definitions:
Management Assessment Area – Essential components of an effective MPA management program.

Management Effectiveness – The capacity of the management program at an MPA to achieve its stated goals and objectives. The level of management capacity at an MPA site is determined using information collected from implementing the CRCP MPA Management Assessment Checklist.

Effectively conserved – The CRCP has developed a working definition for this term using the CRCP MPA Management Assessment Checklist. Of the 14 management assessment areas in the checklist, 12 have been identified as necessary for effective conservation to take place. In addition, there are three Tiers or levels of management activity, progressing from Tier 1 to Tier

3 as management activities are more formalized and ratified. Table 2 summarizes the Tiers needed across the management areas to qualify for effective conservation. Note that Tier 3 status is not always necessary to achieve effective conservation – the CRCP will not require 100% management effectiveness. The current requirements equal a management effectiveness score of 76.2%.

Methodology/Procedure used to collect performance data:
Results from the MPA checklist will be used to track CRCP performance at addressing the management needs identified during assessment interviews conducted for MPAs in priority areas. Through initial assessments and periodic re-evaluations consistent with the MPA Management Assessment Checklist Users Guide [Appendix K] and the CRCP workflow guidelines and process [Appendix L], the CRCP will track incremental progress made at MPA sites and identify new or emerging issues that may impede management success. The CRCP will compile and report on progress across the MPAs where we work through this NOAA performance measure.

Initial assessments were completed in 2011 for each of the MPAs associated with the CRCP's priority coral reef areas to provide the baseline information for the starting management status for each of the MPAs.

The following methodology describes the calculation of a numerical score for management effectiveness within each of the priority MPAs using the 2011 results from implementing the MPA Checklist. Within each management assessment area, each MPA will fall into Tier 1, Tier 2, or Tier 3 depending on the level of management activity occurring. A total score will be determined by tallying all 14 of the management assessment areas based on the results of the initial assessment interview with each Tier 1 designation equal to 1 point, Tier 2 equal to 2 points, and Tier 3 equal to 3 points. This score will be the baseline for this site and will be used to determine the initial management effectiveness of that site by dividing it by the highest possible score (e.g. 3 x 14 = 42). This score will be used only for internal purposes to track the progress of the CRCP and increasing the management effectiveness score by addressing management needs for the MPAs. The score will not be used to compare different MPA sites.

Based on site specific needs and which assessment areas need to be improved to achieve "effective conservation" status, strategic CRCP investments will be made through targeted requests for support. After sufficient time has gone by to fully implement the requested CRCP support, a follow-up assessment interview will determine whether the MPA has succeeded in moving its management activity for specific assessment areas to a higher Tier. A second score will be determined at this time and by converting this score (by dividing the score by 42) a new management effectiveness rating can be determined. The difference between the first and follow-up ratings will show percent change in management effectiveness through CRCP investments at an MPA site. At a minimum, the priority MPAs with be re-assessed once every three years.

EXAMPLE: If MPA X is assessed and has an initial score of 22 after the initial assessment interview using the Checklist, and a follow-up score of 25 after CRCP investments have been implemented, then the following management effectiveness improvements can be reported:

Initial management effectiveness:	22/42 = 52.4%
Follow-up management effectiveness:	25/42 = 59.5%
Total improvement in management effectiveness:	59.5% - 52.4% = 7.1%

Thus for the CRCP investments made to MPA X, the management effectiveness has increased by 7.1%.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding to support management needs at one or more MPAs, the Project Manager will indicate their project contributes to the F2 MP2 measure in the CRCP Project Database. The Project Manager must specify which MPA(s) they will be working with, the Assessment Areas their work will address, and the change in Tiers that their work is expected to produce.

CRCP Management Liaisons/NMFS Coral Coordinators/ MPA Checklist Coordinators
Each MPA site underwent an initial assessment using the CRCP MPA Checklist by the CRCP Management Liaison or NMFS Coral Coordinator in the jurisdiction where the MPA is located to gather baseline information. For each assessment completed, baseline and future re-assessments, this person will provide their completed Checklists to either the Atlantic/Caribbean or Pacific MPA Checklist Coordinator. The MPA Checklist Coordinator will review the completed Checklist to ensure consistency and work with the original interviewer if any discrepancies are identified, or alternatively, if the Checklist receives their approval they will send the completed Checklist to the CRCP Program Analyst.

CRCP Program Analyst
The Program Analyst will be responsible for posting the completed Checklist for each MPA in a place accessible to all CRCP staff to foster the development of future proposals to improve the MPAs. The Program Analyst will also build and post an associated scorecard specific to each MPA using the latest Checklist results to highlight areas in need of further investment. Over time, the management activity will be monitored using the CRCP MPA Management Assessment Checklist, and subsequent Checklist results will be reported to the Program Analyst after each assessment has been conducted so they may be posted and accessible to all CRCP staff.

The management effectiveness values will be aggregated every three years and reported as the overall percent increase in management effectiveness for CRCP priority coral reef MPAs.

Additional contingencies that could potentially impact the result in unanticipated ways:
Changes in management staff of MPAs could potentially result in less consistency in the answers during evaluation interviews. Significant ecological or political events could also impact MPA

management and conservation and overshadow impacts from CRCP investments. The success of MPAs also depends on the political will of the region where the MPA is located and leadership changes which can have profound effects on resources or support for marine conservation and may impact the rate at which an MPA is designated or the implementation of an existing management plan. Additionally, even if management activities are in place such that the MPA can be defined as "effectively conserved", ecological factors such as climate change, pervasive exposure to land-based sources of pollution, or events such as oil spills or hurricanes could lead to declines in coral reef resources within the MPA.

6.11 F2 PM3: Number of acres of coral reefs effectively conserved within designated MPAs

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.12 F3 PM1: Percent of jurisdictional residents who have observed non-compliance with local fisheries management regulations

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.13 F4 PM1: Percent of jurisdictional residents who support management approaches including MPAs that reduce fishing impacts to coral reefs

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

LBSP Performance Measures

6.14 L1 PM1: Number of priority sites with completed and approved integrated watershed management plans (WMPs) or Conservation Action Plans (CAPs)

CRCP Goal Addressed: L1. Reduce pollutant loading from watersheds to priority coral reef ecosystems

Reporting Responsibility: ..... Project Managers, CRCP Management Liaisons, CRCP LBSP Coordinator, and CRCP Program Analyst
Reporting Level: .....Internal
PM Type: .....Output
PM State of Development: .....Established
Indicator: ..... Watersheds with completed and approved integrated WMPs or CAPs
Unit of Measure: .....Number (cumulative)
Reporting Periodicity: .....Annual
Baseline: 4 (2010)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	4 (Baseline)	8	13	16	18	19	20	21
Actual	4	6	12	15	17			

Goal of this Measure:
This measure will show the number of priority sites with completed and approved WMPs or CAPs where the CRCP intends to work to reduce LBSP.

Measurement Description:
This is one of three CRCP performance measures for LBSP Goal #1: Reduce pollutant loading from watersheds to priority coral reef ecosystems. This output measure is the first of a sequence of measures developed to show progress of the CRCP's efforts towards reducing pollutant loading from watersheds to priority coral reef areas identified through the jurisdictional management priority setting process. As a first step, the CRCP will work with partners to develop watershed management plans (WMPs) in target watersheds identified during the jurisdictional management priority setting process. In order for these WMPs to be most relevant for the CRCP, management plans should incorporate a ridge to reef approach and include the participation of key marine and terrestrial stakeholders.

The development of WMPs using the nine EPA required elements for a WMP [Appendix N] should be encouraged where practicable, and projects developing WMPs should use the EPA Watershed Planning Handbook (Chapter 2.6) http://www.epa.gov/nps/watershed_handbook/) as a framework so that these WMPs can be eligible for EPA Section 319 funds available through

the Clean Water Act or EPA State Revolving Funds (SRF). See the following links for further details on the 319 and SRF funds, and procedures for applying for them: http://www.epa.gov/nps/funding.html, http://www.epa.gov/owm/cwfinance/cwsrf/final.pdf, and http://www.epa.gov/owow/nps/319hfunds.html.

In addition to the ongoing work through the Local Action Strategies and efforts to develop Conservation Action Plans (CAPs) in the target watersheds, the intent of following the EPA framework is to encourage the CRCP to work more closely with the regional EPA staff in these watersheds as a means to increase the likelihood of leveraging additional funds from outside of the CRCP in order to implement a portion of the projects identified in the WMPs. To this end, the CRCP will work to develop WMPs from completed CAPs to allow these efforts to be eligible for EPA funding streams. The CRCP recognizes that extensive partnerships will be required to achieve LBSP Goal #1 and acknowledges that the funding needed for these efforts will be more than what the CRCP can invest alone. The CRCP should identify additional sources of external funding for this work beyond the EPA.

As a first step, the CRCP will support partners in the priority watersheds, defined by the jurisdictions, to deliver a completed and approved WMP or CAP that identifies actions to reduce land-based pollutant sources to adjacent coral reefs. For this measure, only completed and approved WMPs and CAPs will be counted. However, the CRCP understands that the development of these plans can be a substantial effort.

Definitions:
Complete WMP – a watershed management plan that has included, to the greatest extent possible, the nine required elements of a WMP according to the EPA Section 319 program and includes a ridge to reef approach so that the downstream coral reef ecosystems are integrated into the watershed planning process.

Complete CAP – a conservation action plan that has been developed with the participation of key marine and terrestrial stakeholders using a ridge to reef approach. The Nature Conservancy uses this tool to guide conservation teams to develop focused strategies and measures of success. For more info please see: http://conserveonline.org/workspaces/cbdgateway/cap/index_html

Approved WMP – Watershed management plans include to the greatest extent practicable, the nine (9) required elements of a WMP according to the EPA Section 319 program and include a ridge to reef approach to ensure coral reef ecosystems are integrated into watershed planning processes.

Methodology/Procedure used to collect performance data:
Each year, all priority sites developing WMPs or CAPs will be identified, and those that have completed a WMP or CAP will represent the contribution towards the annual actual for this measure. See 'Reporting Procedure' below for how Project Managers, CRCP Management Liaisons, CRCP LBSP Coordinator and CRCP Program Analyst will gather data and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding to develop a WMP or CAP, the Project Manager will indicate their project contributes to measure L1 PM1 in the CRCP Project Database. Under this measure the Project Manager should also specify the name and location of the priority area(s) and watershed(s) where the project will take place.

CRCP Program Analyst
At the close of each fiscal year, the CRCP Program Analyst will confirm with project managers, CRCP LBSP Coordinators and/or CRCP Management Liaisons the completion of any WMPs or CAPs scheduled for completion that year. For each completed plan, a description of the completed plan must be included using the name and location of the priority area(s) and watershed(s). The CRCP Program Analyst will aggregate the information received and report the total number of watersheds with completed and approved WMPs or CAPs for the year.

Additional contingencies that could potentially impact the result in unanticipated ways:
A complete WMP can be developed but may not receive additional EPA Section 319 funding due to factors outside of the CRCP's control.

6.15 L1 PM2: Number of projects completed from approved WMPs and CAPs to reduce LBSP in priority coral reef areas

CRCP Goal Addressed: L1. Reduce pollutant loading from watersheds to priority coral reef ecosystems

Reporting Responsibility: ..... Principal Investigators, CRCP Management Liaisons, and CRCP HQ staff
Reporting Level: .....Internal
PM Type: ..... Output
PM State of Development: .....Established
Indicator: ..... Projects completed from approved WMPs and CAPs
Unit of Measure: ..... Number (cumulative)
Reporting Periodicity: .....Annual
Baseline: 0 (2010)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	0 (Baseline)	2	4	6	8	10	12	14
Actual	0	0	6	9	13			

Goal of this Measure:
This measure will indicate the progress made to implement WMPs and CAPs in target watersheds to reduce LBSP.

Measurement Description:
This is one of three CRCP performance measures for LBSP Goal #1: Reduce pollutant loading from watersheds to priority coral reef ecosystems. This output measure is the second of a sequence of measures developed to show progress of the CRCP's efforts towards reducing pollutant loading from watersheds to priority coral reef areas identified through the jurisdictional management priority setting process. After a WMP or a CAP has been completed and approved for a target watershed, projects identified within these plans will undergo implementation. This measure is meant to reflect the number of these projects that have been completed using CRCP funding.

For this measure, only completed projects from WMPs and CAPs will be counted.

Definitions: Same as previous measure.

Methodology/Procedure used to collect and report data:
All of the projects from existing WMPs and CAPs that are expected to be completed each year will be identified, and those that are verified as being complete will represent the year's contribution to the annual actual for this measure. See 'Reporting Procedure' below for how Project Managers, CRCP Management Liaisons, CRCP LBSP Coordinator and CRCP Program Analyst will collect information and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding to implement projects identified within a WMP or CAP, the project managers will indicate their project will contribute to measure L1 PM2 in the CRCP Project Database. Under this measure, the project managers should also provide a brief description of the project(s) they plan to conduct and include: 1) the WMP or CAP their work will address and, 2) specify the recommendation from the WMP or CAP their project will implement.

CRCP Program Analyst
At the close of each fiscal year, the CRCP Program Analyst will confirm with project managers, CRCP LBSP Coordinators and/or CRCP Management Liaisons the completion of any projects identified within a WMP or CAP undergoing implementation scheduled for completion that year. For each completed project, a description of the completed project must be included using the name of the WMP or CAP, and the specific recommendation addressed from the WMP or CAP. The CRCP Program Analyst will aggregate the information received and report the total number of projects completed in target watersheds for the year.

Additional contingencies that could potentially impact the result in unanticipated ways:
N/A

6.16 L1 PM3: Stable or decreasing suspended sediment load (metric tons/year) measured in target watersheds

This measure is under active development and is being piloted in Faga'alu, American Samoa. Upon agreement of a standard method, the CRCP will activate this measure and information can be found here in a future version.

6.17 L2 PM1: Stable or improving coral demographics (recruitment, size frequency, mortality) in priority coral reef areas

This measure is under active development with members of the National Coral Reef Monitoring Plan working group. Upon agreement of a standard method, the CRCP will activate this measure and information can be found here in a future version.

6.18 L2 PM2: Number of in-water restoration projects implemented in degraded coral reef ecosystems to reduce accumulated sediments, nutrients, and algae

This measure has not yet been selected for implementation. Once activated, details for this measure will be available here in a future version of this manual.

6.19 L3 PM1: Number of active partnerships established with local, state/territory, federal and/or non-governmental organizations with a common goal to reduce LBSP impacts in priority coral reef areas

CRCP Goal Addressed: L3. Build and sustain management capacity at the local level through local, state, regional, and federal coordination of financial, institutional, and human resources to reduce and prevent the impacts from LBSP on coral reef ecosystems

Reporting Responsibility: ..... Project Managers, CRCP LBSP Coordinators, CRCP Partnerships Lead, and CRCP Program Analyst
Reporting Level: .....Internal
PM Type: .....Output
PM State of Development: .....Established
Indicator: .....1) Priority sites where partnership activities are underway,
2) Active partnerships established to reduce LBSP impacts to priority coral reef areas (for each site)
Unit of Measure: .....Number (cumulative)
Reporting Periodicity: .....Annual
Baseline: .....4 sites; 14 partners (2010)

Targets:

Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Target	--	+1; 1	+1; 1	+1; 1	+1; 1	+1; 1	+1; 1	+1; 1
Actual	17; 125 (baseline)	22; 199	22; 223	22; 294	24; 333			

Values indicate # of priority sites with partnerships and the # of cumulative partners (not including NOAA CRCP) at those sites across all partnerships (# sites; # partners)

Goal for this Measure:
To track the number of sites where partnership activities are underway and the number of active partnerships established at those sites to reduce LBSP impacts to priority coral reef areas.

Measurement Description:
The CRCP understands that numerous partnerships are needed to effectively reduce land-based inputs to downstream coral reef areas. As pollutants move into coastal waters, they cross multiple boundaries with the authority and responsibility to address them falling to a multitude of governmental and jurisdictional levels. Identifying the governmental entities and other organizations with a common goal to reduce LBSP in the U.S. coral jurisdictions is a first step towards building enhanced coordination to LBSP issues. Further, formalizing partnerships to promote consistent, strengthened, and complementary application and enforcement of laws and authorities intended to address LBSP will go a long way to effectively manage these issues. Finally, land-based pollution control measures can be expensive to implement and maintain, therefore it is essential that new sources of funding (beyond the CRCP) and new mechanisms to cost-share are identified and institutionalized.

Definitions:
Active partnership – A collaboration between two or more parties contributing to a common goal and providing resources (funding, staff, in-kind, etc) in order to achieve that goal. Partnership activities considered for this performance measure should contribute significant resources and/or expertise/technical capacity and should be envisioned as a long-term relationship through the life of the project.

Methodology/Procedure used to collect performance data:
All of the projects that are expected to establish partnerships each year will be identified by the CRCP LBSP Coordinators, and those that are verified as being complete will represent the year's contribution to the PM Actual for this measure. See 'Reporting Procedure' below for how Project Managers, LBSP Coordinators, CRCP Partnership Lead, and the CRCP Program Analyst will collect information and report on this measure.

Reporting Procedure:
Reporting on performance measures will be done manually -- Susie Holst will work with you to track your project's contributions to this measure. The CRCP Project Database may expand to include a module for tracking the performance measures, and at that time detailed work-flows will be built into the system to guide CRCP funding recipients through the process. Until then please follow the guidance below.

Project Managers
When requesting CRCP funding to develop a partnership with another entity with a common goal to reduce LBSP, the Project Manager will indicate their project contributes to measure L3 PM1 in the CRCP Project Database. Under this measure, the Project Manager should also provide a brief description of the partnership they plan to develop.

CRCP LBSP Coordinators
The LBSP Coordinators will ensure that all new partnerships related to LBSP are flagged for contribution to this measure in the year they were developed.

CRCP Program Analyst
Annually, the CRCP Program Analyst will consult with the LBSP Coordinators to account for all new partnerships developed each year. The CRCP Program Analyst will then report the total number of sites with active partnerships and the total number of external partners for each site where the CRCP has made investments to reduce LBSP impacts.

Additional contingencies that could potentially impact the result in unanticipated ways:
The following list includes items that may impact the results of partnerships:
1) A project partner loses funding and pulls out of the project
2) Political climate changes and partnership can't proceed
3) Key contact leaves before partnership is formalized
4) Partnership is informal and process for formalizing (MOU etc) takes longer than expected

Additionally, the CRCP has limited resources and the leverage we offer for other interested parties may not be enough to formalize a partnership.

Appendices

Appendix A: CRCP Roadmap for the Future

Please see:
http://coralreef.noaa.gov/aboutcrcp/strategy/reprioritization/roadmap/resources/crcproadmap.pdf

Appendix B: CRCP Goals and Objectives 2010-2015

Please see:
http://coralreef.noaa.gov/aboutcrcp/strategy/currentgoals/resources/3threats_go.pdf

Appendix C: Coral Reef Conservation Act of 2000

CORAL REEF CONSERVATION ACT OF 2000
[P.L. 106-562; 16 U.S.C. 6401 et seq; December 23, 2000]

TITLE II--CORAL REEF CONSERVATION

SEC. 201. SHORT TITLE.

This title may be cited as the `Coral Reef Conservation Act of 2000'.

SEC. 202. PURPOSES.

The purposes of this title are--

(1) to preserve, sustain, and restore the condition of coral reef ecosystems;

(2) to promote the wise management and sustainable use of coral reef ecosystems to benefit local communities and the Nation;

(3) to develop sound scientific information on the condition of coral reef ecosystems and the threats to such ecosystems;

(4) to assist in the preservation of coral reefs by supporting conservation programs, including projects that involve affected local communities and nongovernmental organizations;

(5) to provide financial resources for those programs and projects; and

(6) to establish a formal mechanism for collecting and allocating monetary donations from the private sector to be used for coral reef conservation projects.

SEC. 203. NATIONAL CORAL REEF ACTION STRATEGY.

(a) IN GENERAL- Not later than 180 days after the date of the enactment of this Act, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and to the Committee on Resources of the House of Representatives and publish in the Federal Register a national coral reef action strategy, consistent with the purposes of this title. The Administrator shall periodically review and revise the strategy as necessary. In developing this national strategy, the Secretary may consult with the Coral Reef Task Force established under Executive Order 13089 (June 11, 1998).

(b) GOALS AND OBJECTIVES- The action strategy shall include a statement of goals and objectives as well as an implementation plan, including a description of the funds obligated each fiscal year to advance coral reef conservation. The action strategy and implementation plan shall include discussion of—

(1) coastal uses and management;

(2) water and air quality;

(3) mapping and information management;

(4) research, monitoring, and assessment;

(5) international and regional issues;

(6) outreach and education;

(7) local strategies developed by the States or Federal agencies, including regional fishery management councils; and

(8) conservation, including how the use of marine protected areas to serve as replenishment zones will be developed consistent with local practices and traditions.

SEC. 204. CORAL REEF CONSERVATION PROGRAM.

(a) GRANTS- The Secretary, through the Administrator and subject to the availability of funds, shall provide grants of financial assistance for projects for the conservation of coral reefs (hereafter in this title referred to as `coral conservation projects'), for proposals approved by the Administrator in accordance with this section.

(b) MATCHING REQUIREMENTS-

(1) Fifty percent- Except as provided in paragraph (2), Federal funds for any coral conservation project under this section may not exceed 50 percent of the total cost of such project. For purposes of this paragraph, the non-Federal share of project costs may be provided by in-kind contributions and other noncash support.

(2) WAIVER- The Administrator may waive all or part of the matching requirement under paragraph (1) if the Administrator determines that no reasonable means are available through which applicants can meet the matching requirement and the probable benefit of such project outweighs the public interest in such matching requirement.

(c) ELIGIBILITY- Any natural resource management authority of a State or other government authority with jurisdiction over coral reefs or whose activities directly or indirectly affect coral reefs, or coral reef ecosystems, or educational or nongovernmental institutions with demonstrated expertise in the conservation of coral reefs, may submit to the Administrator a coral conservation proposal under subsection (e).

(d) GEOGRAPHIC AND BIOLOGICAL DIVERSITY- The Administrator shall ensure that funding for grants awarded under subsection (b) during a fiscal year are distributed in the following manner:

(1) No less than 40 percent of funds available shall be awarded for coral conservation projects in the Pacific Ocean within the maritime areas and zones subject to the jurisdiction or control of the U.S..

(2) No less than 40 percent of the funds available shall be awarded for coral conservation projects in the Atlantic Ocean, the Gulf of Mexico, and the Caribbean Sea within the maritime areas and zones subject to the jurisdiction or control of the U.S..

(3) Remaining funds shall be awarded for projects that address emerging priorities or threats, including international priorities or threats, identified by the Administrator. When identifying emerging threats or priorities, the Administrator may consult with the Coral Reef Task Force.

(e) PROJECT PROPOSALS- Each proposal for a grant under this section shall include the following:

(1) The name of the individual or entity responsible for conducting the project.

(2) A description of the qualifications of the individuals who will conduct the project.

(3) A succinct statement of the purposes of the project.

(4) An estimate of the funds and time required to complete the project.

(5) Evidence of support for the project by appropriate representatives of States or other government jurisdictions in which the project will be conducted.

(6) Information regarding the source and amount of matching funding available to the applicant.

(7) A description of how the project meets one or more of the criteria in subsection (g).

(8) Any other information the Administrator considers to be necessary for evaluating the eligibility of the project for funding under this title.

(f) PROJECT REVIEW AND APPROVAL-

(1) IN GENERAL- The Administrator shall review each coral conservation project proposal to determine if it meets the criteria set forth in subsection (g).

(2) REVIEW; APPROVAL OR DISAPPROVAL- Not later than 6 months after receiving a project proposal under this section, the Administrator shall--

(A) request and consider written comments on the proposal from each Federal agency, State government, or other government jurisdiction, including the relevant regional fishery management councils established under the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.), or any National Marine Sanctuary, with jurisdiction or management authority over coral reef ecosystems in the area where the project is to be conducted, including the extent to which the project is consistent with locally-established priorities;

(B) provide for the merit-based peer review of the proposal and require standardized documentation of that peer review;

(C) after considering any written comments and recommendations based on the reviews under subparagraphs (A) and (B), approve or disapprove the proposal; and

(D) provide written notification of that approval or disapproval to the person who submitted the proposal, and each of those States and other government jurisdictions that provided comments under subparagraph (A).

(g) CRITERIA FOR APPROVAL- The Administrator may not approve a project proposal under this section unless the project is consistent with the coral reef action strategy under section 203 and will enhance the conservation of coral reefs by--

(1) implementing coral conservation programs which promote sustainable development and ensure effective, long-term conservation of coral reefs;

(2) addressing the conflicts arising from the use of environments near coral reefs or from the use of corals, species associated with coral reefs, and coral products;

(3) enhancing compliance with laws that prohibit or regulate the taking of coral products or species associated with coral reefs or regulate the use and management of coral reef ecosystems;

(4) developing sound scientific information on the condition of coral reef ecosystems or the threats to such ecosystems, including factors that cause coral disease;

(5) promoting and assisting to implement cooperative coral reef conservation projects that involve affected local communities, nongovernmental organizations, or others in the private sector;

(6) increasing public knowledge and awareness of coral reef ecosystems and issues regarding their long term conservation;

(7) mapping the location and distribution of coral reefs;

(8) developing and implementing techniques to monitor and assess the status and condition of coral reefs;

(9) developing and implementing cost-effective methods to restore degraded coral reef ecosystems; or

(10) promoting ecologically sound navigation and anchorages near coral reefs.

(h) PROJECT REPORTING- Each grantee under this section shall provide periodic reports as required by the Administrator. Each report shall include all information required by the Administrator for evaluating the progress and success of the project.

(i) CORAL REEF TASK FORCE- The Administrator may consult with the Coral Reef Task Force to obtain guidance in establishing coral conservation project priorities under this section.

(j) IMPLEMENTATION GUIDELINES- Within 180 days after the date of the enactment of this Act, the Administrator shall promulgate necessary guidelines for implementing this section. In developing those guidelines, the Administrator shall consult with State, regional, and local entities involved in setting priorities for conservation of coral reefs and provide for appropriate public notice and opportunity for comment.

SEC. 205. CORAL REEF CONSERVATION FUND.

(a) FUND- The Administrator may enter into an agreement with a nonprofit organization that promotes coral reef conservation authorizing such organization to receive, hold, and administer funds received pursuant to this section. The organization shall invest, reinvest, and otherwise administer the funds and maintain such funds and any interest or revenues earned in a separate interest bearing account, hereafter referred to as the Fund, established by such organization solely to support partnerships between the public and private sectors that further the purposes of this Act and are consistent with the national coral reef action strategy under section 203.

(b) AUTHORIZATION TO SOLICIT DONATIONS- Pursuant to an agreement entered into under subsection (a) of this section, an organization may accept, receive, solicit, hold, administer, and use any gift to further the purposes of this title. Any moneys received as a gift shall be deposited and maintained in the Fund established by the organization under subsection (a).

(c) REVIEW OF PERFORMANCE- The Administrator shall conduct a continuing review of the grant program administered by an organization under this section. Each review shall include a written assessment concerning the extent to which that organization has implemented the goals and requirements of this section and the national coral reef action strategy under section 203.

(d) ADMINISTRATION- Under an agreement entered into pursuant to subsection (a), the Administrator may transfer funds appropriated to carry out this title to an organization. Amounts received by an organization under this subsection may be used for matching, in whole or in part, contributions (whether in money, services, or property) made to the organization by private persons and State and local government agencies.

SEC. 206. EMERGENCY ASSISTANCE.

The Administrator may make grants to any State, local, or territorial government agency with jurisdiction over coral reefs for emergencies to address unforeseen or disaster-related circumstance pertaining to coral reefs or coral reef ecosystems.

SEC. 207. NATIONAL PROGRAM.

(a) IN GENERAL- Subject to the availability of appropriations, the Secretary may conduct activities to conserve coral reefs and coral reef ecosystems, that are consistent with this title, the National Marine Sanctuaries Act, the Coastal Zone Management Act of 1972, the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act of 1973, and the Marine Mammal Protection Act of 1972.

(b) AUTHORIZED ACTIVITIES- Activities authorized under subsection (a) include--

(1) mapping, monitoring, assessment, restoration, and scientific research that benefit the understanding, sustainable use, and long-term conservation of coral reefs and coral reef ecosystems;

(2) enhancing public awareness, education, understanding, and appreciation of coral reefs and coral reef ecosystems;

(3) providing assistance to States in removing abandoned fishing gear, marine debris, and abandoned vessels from coral reefs to conserve living marine resources; and

(4) cooperative conservation and management of coral reefs and coral reef ecosystems with local, regional, or international programs and partners.

SEC. 208. EFFECTIVENESS REPORTS.

(a) GRANT PROGRAM- Not later than 3 years after the date of the enactment of this Act, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report that documents the effectiveness of the grant program under section 204 in meeting the purposes of this title. The report shall include a State-by-State summary of Federal and non-Federal
contributions toward the costs of each project.

(b) NATIONAL PROGRAM- Not later than 2 years after the date on which the Administrator publishes the national coral reef strategy under section 203 and every 2 years thereafter, the Administrator shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Resources of the House of Representatives a report describing all activities undertaken to implement that strategy, under section 203, including a description of the funds obligated each fiscal year to advance coral reef conservation.

SEC. 209. AUTHORIZATION OF APPROPRIATIONS.

(a) IN GENERAL- There are authorized to be appropriated to the Secretary to carry out this title $16,000,000 for each of fiscal years 2001, 2002, 2003, and 2004, which may remain available until expended.

(b) ADMINISTRATION- Of the amounts appropriated under subsection (a), not more than the lesser of $1,000,000 or 10 percent of the amounts appropriated, may be used for program administration or for overhead costs incurred by the National Oceanic and Atmospheric Administration or the Department of Commerce and assessed as an administrative charge.

(c) CORAL REEF CONSERVATION PROGRAM- From the amounts appropriated under subsection (a), there shall be made available to the Secretary $8,000,000 for each of fiscal years 2001, 2002, 2003, and 2004 for coral reef conservation activities under section 204.

(d) NATIONAL CORAL REEF ACTIVITIES- From the amounts appropriated under subsection (a), there shall be made available to the Secretary $8,000,000 for each of fiscal years 2001, 2002, 2003, and 2004 for activities under section 207.

SEC. 210. DEFINITIONS.

In this title:

(1) ADMINISTRATOR- The term `Administrator' means the Administrator of the National Oceanic and Atmospheric Administration.

(2) CONSERVATION- The term `conservation' means the use of methods and procedures necessary to preserve or sustain corals and associated species as diverse, viable, and self-perpetuating coral reef ecosystems, including all activities associated with resource management, such as assessment, conservation, protection, restoration, sustainable use, and management of habitat; mapping; habitat monitoring; assistance in the development of management strategies for marine protected areas and marine resources consistent with the National Marine Sanctuaries Act (16 U.S.C. 1431 et seq.) and the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.); law enforcement; conflict resolution initiatives; community outreach and education; and that promote safe and ecologically sound navigation.

(3) CORAL- The term `coral' means species of the phylum Cnidaria, including--

(A) all species of the orders Antipatharia (black corals), Scleractinia (stony corals), Gorgonacea (horny corals), Stolonifera (organpipe corals and others), Alcyanacea (soft corals), and Coenothecalia (blue coral), of the class Anthozoa; and (B) all species of the order Hydrocorallina (fire corals and hydrocorals) of the class Hydrozoa.

(4) CORAL REEF- The term `coral reef' means any reefs or shoals composed primarily of corals.

(5) CORAL REEF ECOSYSTEM- The term `coral reef ecosystem' means coral and other species of reef organisms (including reef plants) associated with coral reefs, and the nonliving environmental factors that directly affect coral reefs, that together function as an ecological unit in nature.

(6) CORAL PRODUCTS- The term `coral products' means any living or dead specimens, parts, or derivatives, or any product containing specimens, parts, or derivatives, of any species referred to in paragraph (3).

(7) SECRETARY- The term `Secretary' means the Secretary of Commerce.

(8) STATE- The term `State' means any State of the U.S. that contains a coral reef ecosystem within its seaward boundaries, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands, and any other territory or possession of the U.S., or separate sovereign in free association with the U.S., that contains a coral reef ecosystem within its seaward boundaries.

Appendix D: Executive Order 13089

Executive Order 13089 of June 11, 1998
Coral Reef Protection

By the authority vested in me as President by the Constitution and the laws of the United States of America and in furtherance of the purposes of the Clean Water Act of 1977, as amended (33 U.S.C. 1251, *et seq.*), Coastal Zone Management Act (16 U.S.C. 1451, *et seq.*), Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801, *et seq.*), National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321, *et seq.*), National Marine Sanctuaries Act, (16 U.S.C. 1431, *et seq.*), National Park Service Organic Act (16 U.S.C. 1, *et seq.*), National Wildlife Refuge System Administration Act (16 U.S.C. 668dd-ee), and other pertinent statutes, to preserve and protect the biodiversity, health, heritage, and social and economic value of U.S. coral reef ecosystems and the marine environment, it is hereby ordered as follows:

Section 1. *Definitions.* (a) "U.S. coral reef ecosystems" means those species, habitats, and other natural resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., Federal, State, territorial, or commonwealth waters), including reef systems in the south Atlantic, Caribbean, Gulf of Mexico, and Pacific Ocean. (b) "U.S. Coral Reef Initiative" is an existing partnership between Federal agencies and State, territorial, commonwealth, and local governments, nongovernmental organizations, and commercial interests to design and implement additional management, education, monitoring, research, and restoration efforts to conserve coral reef ecosystems for the use and enjoyment of future generations. The existing U.S. Islands Coral Reef Initiative strategy covers approximately 95 percent of U.S. coral reef ecosystems and is a key element of the overall U.S. Coral Reef Initiative. (c) "International Coral Reef Initiative" is an existing partnership, founded by the United States in 1994, of governments, intergovernmental organizations, multilateral development banks, nongovernmental organizations, scientists, and the private sector whose purpose is to mobilize governments and other interested parties whose coordinated, vigorous, and effective actions are required to address the threats to the world's coral reefs.

Sec. 2. *Policy.* (a) All Federal agencies whose actions may affect U.S. coral reef ecosystems shall: (a) identify their actions that may affect U.S. coral reef ecosystems; (b) utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and (c) to the extent permitted by law, ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems.

(b) Exceptions to this section may be allowed under terms prescribed by the heads of Federal agencies:

(1) during time of war or national emergency;

(2) when necessary for reasons of national security, as determined by the President;

(3) during emergencies posing an unacceptable threat to human health

or safety or to the marine environment and admitting of no other feasible solution; or
(4) in any case that constitutes a danger to human life or a real threat to vessels, aircraft, platforms, or other man-made structures at sea, such as cases of *force majeure* caused by stress of weather or other act of God.
Sec. 3. *Federal Agency Responsibilities.* In furtherance of section 2 of this order, Federal agencies whose actions affect U.S. coral reef ecosystems, shall, subject to the availability of appropriations, provide for implementation of measures needed to research, monitor, manage, and restore affected ecosystems, including, but not limited to, measures reducing impacts from pollution, sedimentation, and fishing. To the extent not inconsistent with statutory responsibilities and procedures, these measures shall be developed in cooperation with the U.S. Coral Reef Task Force and fishery management councils and in consultation with affected States, territorial, commonwealth, tribal, and local government agencies, nongovernmental organizations, the scientific community, and commercial interests.
Sec. 4. *U.S. Coral Reef Task Force.* The Secretary of the Interior and the Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration, shall co-chair a U.S. Coral Reef Task Force ("Task Force"), whose members shall include, but not be limited to, the Administrator of the Environmental Protection Agency, the Attorney General, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Defense, the Secretary of State, the Secretary of Transportation, the Director of the National Science Foundation, the Administrator of the Agency for International Development, and the Administrator of the National Aeronautics and Space Administration. The Task Force shall oversee implementation of the policy and Federal agency responsibilities set forth in this order, and shall guide and support activities under the U.S. Coral Reef Initiative ("CRI"). All Federal agencies whose actions may affect U.S. coral reef ecosystems shall review their participation in the CRI and the strategies developed under it, including strategies and plans of State, territorial, commonwealth, and local governments, and, to the extent feasible, shall enhance Federal participation and support of such strategies and plans. The Task Force shall work in cooperation with State, territorial, commonwealth, and local government agencies, nongovernmental organizations, the scientific community, and commercial interests.
Sec. 5. *Duties of the U.S. Coral Reef Task Force.* (a) *Coral Reef Mapping and Monitoring.* The Task Force, in cooperation with State, territory, commonwealth, and local government partners, shall coordinate a comprehensive program to map and monitor U.S. coral reefs. Such programs shall include, but not be limited to, territories and commonwealths, special marine protected areas such as National Marine Sanctuaries, National Estuarine Research Reserves, National Parks, National Wildlife Refuges, and other entities having significant coral reef resources. To the extent feasible, remote sensing capabilities shall be developed and applied to this program and local communities

should be engaged in the design and conduct of programs.
(b) *Research.* The Task Force shall develop and implement, with the scientific community, research aimed at identifying the major causes and consequences of degradation of coral reef ecosystems. This research shall include fundamental scientific research to provide a sound framework for the restoration and conservation of coral reef ecosystems worldwide. To the extent feasible, existing and planned environmental monitoring and mapping programs should be linked with scientific research activities. This Executive order shall not interfere with the normal conduct of scientific studies on coral reef ecosystems.
(c) *Conservation, Mitigation, and Restoration.* The Task Force, in cooperation with State, territorial, commonwealth, and local government agencies, nongovernmental organizations, the scientific community and commercial interests, shall develop, recommend, and seek or secure implementation of measures necessary to reduce and mitigate coral reef ecosystem degradation and to restore damaged coral reefs. These measures shall include solutions to problems such as land-based sources of water pollution, sedimentation, detrimental alteration of salinity or temperature, over-fishing, over-use, collection of coral reef species, and direct destruction caused by activities such as recreational and commercial vessel traffic and treasure salvage. In developing these measures, the Task Force shall review existing legislation to determine whether additional legislation is necessary to complement the policy objectives of this order and shall recommend such legislation if appropriate. The Task Force shall further evaluate existing navigational aids, including charts, maps, day markers, and beacons to determine if the designation of the location of specific coral reefs should be enhanced through the use, revision, or improvement of such aids.
(d) *International Cooperation.* The Secretary of State and the Administrator of the Agency for International Development, in cooperation with other members of the Coral Reef Task Force and drawing upon their expertise, shall assess the U.S. role in international trade and protection of coral reef species and implement appropriate strategies and actions to promote conservation and sustainable use of coral reef resources worldwide. Such actions shall include expanded collaboration with other International Coral Reef Initiative ("ICRI") partners, especially governments, to implement the ICRI through its Framework for Action and the Global Coral Reef Monitoring Network at regional, national, and local levels.
Sec. 6. This order does not create any right or benefit, substantive or procedural, enforceable in law or equity by a party against the United States, its agencies, its officers, or any person.

Appendix E:

NOAA Coral Reef Conservation Program
MPA Management Assessment Checklist

Evaluating the current status of marine protected area (MPA) implementation and management can lead to improved MPA effectiveness and performance. Strengthening MPA management to conserve coral reef resources remains a pillar of NOAA's Coral Reef Conservation Program (CRCP) efforts both domestically and internationally (http://coralreef.noaa.gov/about crcp/strategy/currentgoals/). With its focus on conservation of coral reefs and the human communities that depend upon them, a priority goal of the CRCP is to support effective implementation and management of marine protected areas (MPAs) and ecological networks of MPAs that protect key coral reef ecosystem components and functions. This MPA Management Assessment Checklist was developed as a simple tool to assess the management of MPAs in priority coral reef sites in U.S. jurisdictions and internationally, areas important to the CRCP and jurisdictional partners. This checklist will allow the CRCP to better understand the needs of its partners in the MPA management community and help managers build and/or maintain the management capacity necessary for successful implementation of their MPA management goals and objectives.

The information gathered for the MPAs, collected through interviews with site managers, will provide insight into management strengths and needs. With this information, the CRCP can make more informed decisions about where to strategically invest limited resources to address priority MPA management capacity gaps. Additionally this will provide a transparent process to the resource managers responsible for MPA management. Managers will then have the information needed to request funding, technical support, and other forms of assistance through targeted proposals to the CRCP and other funders, thereby increasing the capacity of partners in the management community to effectively conserve their coral reef resources.

This tool will also be used to track the performance of the CRCP at addressing the management needs identified using the checklist. Through initial assessments and periodic re-evaluations, the CRCP will track incremental progress made at MPA sites and identify new or emerging issues that may impede management success. The CRCP will compile and report on this progress through a NOAA performance measure - therefore, the performance of the CRCP will be tied to the overall management effectiveness of the MPAs that it strives to support.

The checklist includes fourteen assessment areas that are key components of a successful MPA management program: management planning, ecological network development, governance, on-site management, enforcement, boundaries, biophysical monitoring, socioeconomic monitoring, MPA effectiveness evaluation and adaptive management,

stakeholder engagement, financing, outreach and education, conflict resolution mechanisms, and planning for resilience to climate change.

Assessment Criteria

In order to be eligible for assessment an MPA site needs to:

- Be located in one of the priority geographic areas as identified by the CRCP (Domestic priorities include: American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Flower Garden Banks, Florida (Martin County to the Dry Tortugas), Puerto Rico, and the U.S. Virgin Islands. International priorities include jurisdictions located in the follow four regions: the Wider Caribbean, Micronesia, Samoa and the Southwest Pacific, and the Coral Triangle.)

- Be a legally established MPA recognized by appropriate government authority or under equivalent customary tenure or other form of community-based protection status

- Have some ongoing management activity

Three tiers of management activity are defined and presented under each assessment area. The NOAA CRCP seeks to apply this assessment tool to eligible MPA sites in priority geographic areas and to improve management capacity by providing funding and technical assistance to help MPA managers progress from tier one activity towards tier two and tier three management activity in each of these fourteen assessment areas.

MPA Name and Location:

Total Area of MPA:

Site Manager:

Person(s) Interviewed (if different from or in addition to site manager) :

Contact Email(s):

Date:

Interview Type (circle one): Initial assessment or Re-evaluation

MPA Management Assessment Area 1: Management Planning

Tier 1 ☐ Some management activity being implemented, but no management plan in place

Tier 2 ☐ Some management activity being implemented and management plan developed

Tier 3 ☐ Approved management plan that is being implemented

Site Specific Comments and Information on Management Planning:

MPA Management Assessment Area 2: Ecological Network Development

Tier 1 ☐ Site is either not associated with a network or is part of an ecological MPA network but is not designed to support network goals and management is not coordinated across the network

Tier 2 ☐ Site is part of an ecological MPA network and site is designed to support the goals of an ecological network but management is not coordinated across the network

Tier 3 ☐ Site is part of an ecological MPA network, site is designed to support the goals of an ecological network and site management coordinated with other sites across the ecological network

Site Specific Comments and Information on Ecological Network Development:

MPA Management Assessment Area 3: Governance

Tier 1 ☐ Site has been legally established or is under equivalent customary tenure or other form of community-based protection status, but there are few or no official or community based rules and regulations in place supporting the MPA and its management plan

Tier 2 ☐ Laws or customary instruments for the establishment of the MPA are in place, and official or community based rules or regulations governing some specific activities within the MPA are also in place

Tier 3 ☐ Clearly defined laws or customary instruments and official or community based rules and regulations governing all specific activities included in the objectives of the site management plan are in place

Site Specific Comments and Information on Governance:

MPA Management Assessment Area 4: On-Site Management

Tier 1 ☐ No management personnel assigned to site and/or little or no formalized community oversight

Tier 2 ☐ Some management personnel assigned to site or some formalized community oversight

Tier 3 ☐ Full-time site manager and programmatic personnel assigned to site or local community based management leader in place that has been formally designated and accepted and is able to dedicate sufficient time to the management of the site

Site Specific Comments and Information on On-Site Management:

MPA Management Assessment Area 5: Enforcement

Tier 1 ☐ Few or no established rules and regulations exist or there is little or no enforcement of existing rules and regulations

Tier 2 ☐ Inconsistent enforcement of rules and regulations

Tier 3 ☐ Active and consistent enforcement of rules and regulations

Site Specific Comments and Information on Enforcement:

MPA Management Assessment Area 6: Boundaries

Tier 1 ☐ Lack of clearly defined boundaries and/or zones

Tier 2 ☐ Clearly defined boundaries and/or zones

Tier 3 ☐ Clearly defined boundaries and zones and information on boundary locations and permitted activities in various zones (if applicable) provided to public and MPA stakeholders

Site Specific Comments and Information on Boundaries:

MPA Management Assessment Area 7: Biophysical Monitoring

Tier 1 ☐ Little or no existing biophysical monitoring activity

Tier 2 ☐ Existing biophysical monitoring program

Tier 3 ☐ Data produced from biophysical monitoring program being evaluated and used to inform management decisions

Site Specific Comments and Information on Biophysical Monitoring:

MPA Management Assessment Area 8: Socioeconomic Monitoring

Tier 1 ☐ Little or no existing socioeconomic monitoring activity

Tier 2 ☐ Existing socioeconomic monitoring program

Tier 3 ☐ Data produced from socioeconomic monitoring program being evaluated and used to inform management decisions

Site Specific Comments and Information on Socioeconomic Monitoring:

MPA Management Assessment Area 9: MPA Effectiveness Evaluation and Adaptive Management

Tier 1 ☐ Little or no evaluation of MPA effectiveness

Tier 2 ☐ MPA effectiveness evaluated but no ongoing effectiveness monitoring and evaluation program in place

Tier 3 ☐ MPA effectiveness evaluated and effectiveness monitoring and evaluation program in place with findings being applied to adapt management strategies

Site Specific Comments and Information on MPA Effectiveness Evaluation and Adaptive Management:

MPA Management Assessment Area 10: Stakeholder Engagement

Tier 1 ☐ Little or no community and stakeholder engagement in management planning

Tier 2 ☐ Community and stakeholder engagement in management planning

Tier 3 ☐ Community and stakeholder engagement in management planning and implementation of site management efforts

Site Specific Comments and Information on Stakeholder Engagement:

MPA Management Assessment Area 11: Financing

Tier 1 ☐ Little or no reliable source of funding identified to support management activities

Tier 2 ☐ Existing funding for management activities

Tier 3 ☐ Sustainable finance plan being implemented that provides long term sustainable funding mechanisms

Site Specific Comments and Information on Financing:

MPA Management Assessment Area 12: Outreach and Education

Tier 1 ☐ Little or no ongoing outreach and education activities exist

Tier 2 ☐ Ongoing outreach and education activities in support of the MPA

Tier 3 ☐ Existence of an outreach and education program with various activities and strategies focused on the MPA that helps achieve the MPA's goals and objectives

Site Specific Comments and Information on Outreach and Education:

MPA Management Assessment Area 13: Conflict Resolution Mechanisms

Tier 1 ☐ Little or no existing mechanism to resolve conflict with MPA stakeholders

Tier 2 ☐ Mechanism for conflict resolution with MPA stakeholders is available but is not being used and stakeholders are not aware of this mechanism

Tier 3 ☐ Mechanism for conflict resolution is available and MPA stakeholders are aware of and use this mechanism

Site Specific Comments and Information on Conflict Resolution Mechanisms:

MPA Management Assessment Area 14: Planning for Resilience to Climate Change

Tier 1 ☐ Little or no consideration of climate change resilience in the management of the MPA.

Tier 2 ☐ Management includes actions intended to increase the resilience of coral reef resources to the effects of climate change

Tier 3 ☐ Site is designed to increase resilience of coral reef resources to the effects of climate change and management includes actions necessary to avoid or minimize impacts and spread the risk due to climate change

Site Specific Comments and Information on Resilience to Climate Change:

MPA Management Assessment Score Card
(check tier that applies to each assessment area)

Assessment Area	Tier 1	Tier 2	Tier 3
1. Management Planning			
2. Ecological Network Development			
3. Governance			
4. On-site management			
5. Enforcement			
6. Boundaries			
7. Biophysical monitoring			
8. Socioeconomic monitoring			
9. MPA Effectiveness evaluation			
10. Stakeholder engagement			
11. Financing			
12. Outreach and Education			
13. Conflict Resolution Mechanism			
14. Resilience to Climate Change			

Appendix F: NOAA's Next Generation Strategic Plan

Please see:
http://www.ppi.noaa.gov/wp-content/uploads/NOAA_NGSP.pdf

Appendix G: Dichotomous Key for CRCP Performance Measures

This key is intended to assist those requesting CRCP funds to identify whether their work will contribute to one or more of the six performance measures being implemented by the CRCP (see Table 1 below) – additional measures will be phased into implementation in subsequent years. Please start at the top of the next page and work your way down to identify the CRCP Performance Measure(s) to which your work will contribute. *If your project is multi-faceted and contributes to more than one of the threat areas (Climate Change, Fishing Impacts and LBSP) please run through this key once for each of the threat areas.* Please contact Susie Holst (Susie.Holst@noaa.gov) if you have any questions.

Table 1. The CRCP is taking a phased approach to implementing the new CRCP Performance Measures. For FY2011-12 the following 6 measures will be tracked.

C1 PM1*: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification ***Milestone: Number of tools developed to improve management preparedness and response to climate change and ocean acidification***
C3 PM1*: Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification ***Milestone: Number of tools developed to improve management preparedness and response to climate change and ocean acidification***
F2 PM2: Increase in management effectiveness of priority coral reef MPAs, measured using the CRCP MPA Management Assessment Checklist ***Milestone: Number of projects to increase management effectiveness of priority coral reef MPAs***
L1 PM1: Number of watersheds with completed and approved integrated watershed management plans (WMPs) or Conservation Action Plans (CAPs) ***Milestone: Number of watersheds developing WMPs or CAPs***
L1 PM2 : Number of projects completed from approved WMPs and CAPs to reduce LBSP in priority coral reef areas ***Milestone: Number of projects from approved WMPs and CAPs undergoing implementation***
L3 PM1: Number of active partnerships established with local, state/territory, federal, and/or non-governmental organizations with a common goal to reduce LBSP impacts in priority coral reef areas

**C1 PM1 and C3 PM1 are worded identically because at the root of both Goals (C1 and C3) is the development of tools to improve management preparedness and response to climate impacts. For C1, the focus of those tools is to provide managers with decision making tools, training tools, communication tools and planning tools for management, while for C3 the focus is more on environmental information products and tools such as forecasts, predictions, models, etc.*

1) START HERE

1a) Does your project address climate change threats to coral reefs?

⇨ If yes **go to #2**, if no please continue.

1b) Does your project address fishing related threats to coral reefs?

⇨ If yes **go to #3**, if no please continue.

1c) Does your project address LBSP threats to coral reefs?

⇨ If yes **go to #4**, if no please continue.

1d) Your project may not address the top threats to coral reefs or it may be a project with larger programmatic implications (i.e. staffing, coordination, programmatic support). Please review the six performance measures undergoing implementation in the table on the previous page of this document, and if you feel your project should contribute, please contact Susie Holst.

2) CLIMATE

2a) Does your project include activities to develop decision support tools, training tools, communication tools, and/or planning tools for management?

⇨ If yes, your project will likely contribute to **C1 PM1**. Does this performance measure cover the full extent of your projects' activities and deliverables? If no please continue to 2b to see whether your project may contribute to additional measures.

2b) Does your project include activities to develop environmental information products and/or tools such as forecasts, predictions, models, etc?

⇨ If yes your project will likely contribute to **C3 PM1**. Does this performance measure cover the full extent of your projects' activities and deliverables? If no please continue to 2c to see whether your project may contribute to additional measures.

2c) Your project may contribute to another CRCP performance measure that has not yet been implemented.

3) FISHING

3a) Does your project include activities to work in a priority MPA (for the list of these MPAs see the CRCP Performance Measures Manual) and will those activities be addressing an Assessment Area from the CRCP MPA Management Assessment Checklist (also available in the CRCP Performance Measures Manual)?

- ⇨ If yes, your project will likely contribute to **F2 PM2**. If no please continue.

3b) Your project may contribute to another CRCP performance measure that has not yet been implemented.

4) LBSP

4a) Does your project include activities to develop a watershed management plan (WMP) or a Conservation Action Plan (CAP) in a priority watershed?

- ⇨ If yes, your project will likely contribute to **L1 PM1**. Does this performance measure cover the full extent of your projects' activities and deliverables? If no please continue to 4b to see whether your project may contribute to additional measures.

4b) Does your project include activities to carry out projects identified in a WMP or CAP from a priority watershed?

- ⇨ If yes, your project will likely contribute to **L1 PM2**. Does this performance measure cover the full extent of your projects' activities and deliverables? If no please continue to 4b to see whether your project may contribute to additional measures.

4c) Does your project focus on creating lasting partnerships for place-based work to reduce LBSP impacts in priority watersheds?

- ⇨ If yes, your project will likely contribute to **L3 PM1**. Does this performance measure cover the full extent of your projects' activities and deliverables? If no please continue to 4d to see whether your project may contribute to additional measures.

4d) Your project may contribute to another CRCP performance measure that has not yet been implemented.

Appendix H: CRCP Management Partners

Definition – CRCP Management Partners: *Entities that have legal management authority of coral resources in the seven U.S. coral jurisdictions.*

American Samoa
NOAA-Pacific Islands Regional Office,
American Samoa Department of Commerce (DOC),
American Samoa DOC—Coastal Management Program,
American Samoa Department of Marine and Wildlife Resources,
American Samoa Environmental Protection Agency,
American Samoa National Parks,
Fagatele Bay National Marine Sanctuary
U.S. National Parks Service

CNMI
CNMI Division of Environmental Quality,
CNMI Coastal Resources Management Office,
Department of Lands & Natural Resources–Division of Fish and Wildlife,
NOAA National Marine Fisheries Service (NMFS)/Pacific Islands Regional Office,
Western Pacific Regional Fishery Management Council

Florida
Florida Department of Environmental Protection - Coral Reef Conservation Program (FDEP–CRCP),
Florida Department of Environmental Protection - Florida Park Service (FDEP -FPS),
Florida Keys National Marine Sanctuary (FKNMS),
Florida Fish and Wildlife Conservation Commission (FWC)
Gulf of Mexico Fishery Management Council
National Park Service (NPS) – Biscayne, Everglades and Dry Tortugas National Parks,
NOAA National Marine Fisheries Service (NMFS) - Southeast Regional Office,
South Atlantic Fishery Management Council
U.S. Fish and Wildlife Service (USFWS),
Martin County,
Palm Beach County,
Broward County,
Miami-Dade County,
Monroe County

Guam
Bureau of Statistics and Plans Coastal Management Program,
Department of Defense Joint Program Office,
Guam Department of Agriculture/Division of Aquatic and Wildlife Resources,
Guam Department of Agriculture/Division of Forestry and Soil Resources,
Guam Environmental Protection Agency,
NOAA National Marine Fisheries Service (NMFS),
U.S. National Park Service,
Western Pacific Regional Fishery Management Council

Hawaii
CZM: State of Hawai'i, Coastal Zone Management Program (Department of Business, Economic Development and Tourism)
DAR: DLNR–Division of Aquatic Resources
DLNR: State of Hawai'i, Department of Land and Natural Resources
DOA: State of Hawai'i, Department of Agriculture
DOFAW: DLNR–Division of Forestry and Wildlife
DOH: State of Hawai'i, Department of Health, Clean Water Branch
National Oceanic and Atmospheric Administration, Coral Reef Ecosystem Division
National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Pacific Islands Regional Office, Habitat Conservation Division
Papahānaumokuākea Marine National Monument
U.S. Army Corps of Engineers, Honolulu District, Civil and Public Works Branch
U.S. Environmental Protection Agency, Pacific Islands Contact Office
U.S. Fish and Wildlife Service, Pacific Islands Coastal Program
U.S. National Park Service, University of Hawai'i Cooperative Ecosystem Unit

Puerto Rico
NOAA–National Marine Fisheries Service (NMFS) - Southeast Regional Office,
NOAA–NMFS/Caribbean Fisheries Management Council,
Puerto Rico Department of Natural and Environmental Resources (DNER)–Bureau of Fish and Wildlife,
Puerto Rico DNER–Bureau of Coasts, Reserves and Refuges,
Puerto Rico DNER–Bureau of State Forests,
Puerto Rico DNER–Bureau of Enforcement,
Puerto Rico Conservation Trust,
Puerto Rico Environmental Quality Board (EQB),
San Juan Bay Estuary Program (EPA),
U.S. Fish and Wildlife Service

USVI
Caribbean Fishery Management Council,
National Park Service - Virgin Islands National Park and Buck Island National Marine Monument,
NOAA National Marine Fisheries Service (NMFS) - Southeast Regional Office,
US Fish and Wildlife Service – Sandy Point and Green Cay National Wildlife Refuges,
USVI Department of Planning and Natural Resources (DPNR)–Division of Coastal Zone Management,
USVI DPNR –Division of Environmental Protection,
USVI DPNR –Division of Fish and Wildlife,
USVI DPNR–Division of Environmental Enforcement

Appendix I: *Best Practices for Developing Tools that Get Used: Lessons Learned from another NOAA Program*

Background

Research is a fundamental activity for moving coral reef conservation forward and the Coral Reef Conservation Program (CRCP) has invested in relevant science since the program began in 2000. In looking forward, the CRCP is placing a renewed emphasis on science and research answering questions relevant to the management community with which we work. Primarily, the Program is working domestically in the seven coral reef jurisdictions and with international partners to address emerging climate impacts as well as the impacts of land-based sources of pollution and fishing, and tools are being developed based on the research conducted by CRCP principal investigators. It's important that the tools being developed meet the needs articulated by the management community. To this end, the CRCP may be able to learn from a program created in 1998 between NOAA and the University of New Hampshire – the Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) – to develop tools to detect, prevent, and reverse the negative impacts of pollution and habitat degradation on the coast. Specifically, these lessons learned could inform work to develop tools to supports managers' needs to protect coral reefs against climate change and ocean acidification related impacts as called for in the CRCP Goals and Objectives. Given that these efforts should contribute to the new CRCP performance measures focused on tool development, the CRCP may be able to use information gathered by CICEET to improve Program performance.

Evaluation of CICEET

A main goal of CICEET was to increase its capacity to select projects with the greatest likelihood of generating science and technology that decision makers need to address their priority problems. In 2009 CICEET conducted a retrospective analysis, both within their program and with coastal decision makers, to determine if the research it funded was being used. For the purposes of this exercise, the term "use" was determined by CICEET to be consistent with the statement that their primary interest was to fund science that is "used" in a way that had significant impact on how a particular resource was managed. During the evaluation, the staff explicitly asked the researchers they had funded and the intended users of their work whether CICEET-sponsored science was used, why or why not, and what influence the CICEET program managers had on this. The basic questions CICEET addressed in their analysis included:

- Are decision makers applying CICEET-sponsored science to address coastal management problems?
- Does science have a greater likelihood of being applied when users of the science are involved in the research process?
- Can the design of the competitive funding opportunities influence the use of the science generated by the projects they fund?

CICEET's Findings

Prior to the evaluation, through direct observation and a review of the literature on science technology policy, the CICEET staff began to believe that the application of science was hindered by a range of social, economic, and political barriers. To overcome these barriers, researchers needed input from the people they hoped would use the knowledge and technology they generated (intended users) and those whose influence could facilitate or limit this use (relevant stakeholders). Absent engagement with these

groups, projects that set out to develop and apply the most innovative science-based tools and information were much less likely to succeed. By 2008, CICEET's RFP specified that each proposal had to include an intended user as a member of the project's team of investigators, and the 2011RFP requires an explicit plan for the interaction of applied science investigators and intended users throughout the project.

Information was gathered from 130 projects funded between 1997 and 2006 with 116 different principal investigators (PIs) through an electronic survey of the PIs and phone interviews with a subset of the PIs and intended users. ***An analysis of the data collected indicated that approximately one-third of the projects funded reported some amount of use.*** It also yielded the following lessons for funding programs that want to optimize the process by which research is converted into knowledge and technology that decision makers can use:

- Projects with the most impact had the most involvement with intended users throughout the project. Funding programs need to have this as a goal and structure their program and investments to ensure that it happens.
- Simply asking PIs to connect their work to intended users did not seem to increase actual use. Resources to do this—whether they were administered at the program level or called for and funded through an RFP—are likely required.
- Projects that took steps to insure that the proposed research was relevant to its intended users and their particular contexts seemed to increase likelihood that their outcomes would be used. Funding organizations can use the request for proposals to encourage this.
- Demonstrating the applicability of knowledge or technology in a particular region or context increased the trust of intended users and also seemed to increase its use. Demonstration projects are a good use of research funds for programs that want to make an impact.
- Respondents felt that connecting the research process to intended users of the science is important, but neither scientists nor users felt that this was their job. In the interviews, both PIs and intended users indicated that funders were in a better position to catalyze and guide activities related to connecting knowledge to application.
- Many respondents felt that a longer timeframe than the typical two year research grant is needed to get end users sufficiently involved in the science. Science programs should consider longer research projects that allow more time for interactions between scientists and end users.

How the CRCP Can Use these Lessons Learned

Many of the findings from CICEET can be adopted by the CRCP to increase the likelihood that the research we fund to produce tools – whether they are management-related tools or models, forecasts, predictions, etc – will be used by the intended users. By sharing this information, those developing the CRCP RFP and the PIs who propose to develop tools based on their research can achieve the goal of providing decision makers with tools that are easy-to-use and relevant to their management needs. Finally, by applying these principles, the CRCP can better contribute to the performance measure that relates to tool development related to climate threats: *Number of new or enhanced tools implemented to improve management preparedness and response to climate change and ocean acidification.*

Appendix J: CRCP Priority MPAs

MPAs Selected by CRCP for MPA Checklist Performance Measure (F2 PM2)

Jurisdiction	Priority Area	MPA
American Samoa	Vatia	Vatia Community-based Fisheries Management Program Reserve
CNMI	Lao Lao Bay	LauLau Bay Sea Cucumber Sanctuary
CNMI	Garapan	Managaha Marine Conservation Area
Guam	Apra Harbor	Sasa Bay Marine Preserve
Guam	Piti-Asan	Piti Bomb Holes Marine Preserve
Guam	Manell-Geus	Achang Reef Flat Marine Preserve
Hawaii	Kaanapali-Kahekili	Kahekili Herbivore Fisheries Management Area
Hawaii	Pelekane Bay-Pauko-Anaeho-omalu Bay	Puako Bay/Reef Fishery Management Area
Hawaii	Pelekane Bay-Pauko-Anaeho-omalu Bay	Puako-Anaeho'omalu Fisheries Replenishment Area (part of the West Hawaii Fisheries Management Area Network)
Hawaii	Pelekane Bay-Pauko-Anaeho-omalu Bay	Waialea Bay MLCD
Puerto Rico	Culebra	Canal Luis Pena Natural Reserve
Puerto Rico	Northeast Reserves	Arrecifes de la Cordillera Natural Reserve
Puerto Rico	Northeast Reserves	Cabezas de San Juan Natural Reserve
Puerto Rico	Cabo Rojo	Arrecifes de Tourmaline Natural Reserve
Puerto Rico	Cabo Rojo	Abrir La Sierra Bank Red Hind Spawning Aggregation Area
Puerto Rico	Guanica	Guanica State Forest and NR marine extension
Puerto Rico	Other	La Parguera Natural Reserve
USVI	Coral Bay, St. John	Coral Bay Area of Particular Concern
USVI	St. Thomas East End Reserve	STEER
USVI	St. Croix East End Marine Park	St. Croix East End Marine Park

Appendix K:
User's Guide for the NOAA Coral Reef Conservation Program MPA Checklist

Purpose

This user's guide was developed as a reference to be used with the NOAA Coral Reef Conservation Program MPA Checklist to provide further clarification on the fourteen assessment areas addressed in the checklist, and to assist assessment participants in the selection of a specific tier for each assessment area. The guide includes instructions on how to conduct assessment interviews and how to complete the checklist document. The user's guide also provides a detailed description of the intention behind each of the 14 assessment areas to help the interviewer clearly explain the significance of and differentiate between each tier in an individual assessment area. This helps to ensure that the correct tier is selected so that management capacity can be accurately assessed and all gaps and needs can be appropriately identified. Many of the assessment area descriptions also include a section entitled "helpful resources" that refers to additional information related to that assessment area that is either made available in the appendix to the user's guide or as a web link.

The MPA Checklist

Evaluating the current status of marine protected area (MPA) implementation and management can lead to improved MPA effectiveness and performance. Strengthening MPA management to conserve coral reef resources remains a pillar of NOAA's Coral Reef Conservation Program (CRCP) efforts both domestically and internationally (http://coralreef.noaa.gov/about crcp/strategy/currentgoals/). With its focus on conservation of coral reefs and the human communities that depend upon them, a priority goal of the CRCP is to support effective implementation and management of marine protected areas (MPAs) and ecological networks of MPAs that protect key coral reef ecosystem components and functions. This MPA Management Assessment Checklist was developed as a simple tool to assess the management of MPAs in priority coral reef sites in U.S. jurisdictions and international areas important to the CRCP and jurisdictional partners. This checklist will allow the CRCP to better understand the needs of its partners in the MPA management community and help managers build and/or maintain the management capacity necessary for successful implementation of their MPA management goals and objectives.

The information gathered for the MPAs, collected through interviews with site managers and other key staff, will provide insight into management strengths and needs. With this information, the CRCP can make more informed decisions about where to strategically invest limited resources to address priority MPA management

capacity gaps. Additionally this will provide a transparent process to the resource managers responsible for MPA management. Managers will then have the information

needed to request funding, technical support, and other forms of assistance through targeted proposals to the CRCP and other funders, thereby increasing the capacity of partners in the management community to effectively conserve their coral reef resources.

This tool will also be used to track the performance of the CRCP at addressing the management needs identified using the checklist. Through initial assessments and periodic re-evaluations, the CRCP will track incremental progress made at MPA sites and identify new or emerging issues that may impede management success. The CRCP will compile and report on this progress through a NOAA performance measure
- therefore, the performance of the CRCP will be tied to the overall management effectiveness of the MPAs that it strives to support.

It should also be noted and explained that this tool is NOT designed to evaluate MPA effectiveness and not assess whether or not an MPA is functioning effectively to achieve the specific goals and objectives around which the site was designed. There are several different existing tools that can be used to evaluate site effectiveness (www.mpa.gov/nationalsystem/effectiveness/). In contrast, this tool assesses whether or not the core components of an MPA management program exist. Addressing programmatic gaps that are identified through this assessment process will increase the likelihood of effective site implementation.

Additionally, the results of this assessment will not be analyzed to grade sites (e.g. excellent, good, bad) based on a set of standards. While results from each site assessment can be collated to explore common capacity gaps within a jurisdiction, country or region, this tool is not designed to provide quantitative results to compare management effectiveness between multiple sites. It is intended to be applied at the individual MPA site level to reveal management capacity strengths and gaps, and to inform in-depth discussion on possible needs and planning to build capacity within
the assessed site.

In summary, the NOAA CRCP MPA checklist was designed to gather information to guide NOAA CRCP activities and investments to better meet identified capacity gaps and needs of specific priority MPAs. Additionally, it was designed to allow NOAA CRCP to measure progress in building MPA management capacity at these specific sites over time with the ultimate goal of improving management effectiveness.

Eligibility Requirements for Assessment by CRCP

In order to be eligible for assessment by NOAA's CRCP an MPA site needs to meet the following three criteria:

- **Be located in one of the priority geographic areas as identified by the CRCP** (Domestic priorities include: American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Flower Garden Banks, Florida (Martin County to the Dry Tortugas), Puerto Rico, and the U.S. Virgin Islands. International priorities include jurisdictions located in the follow four regions: the Wider Caribbean, Micronesia, Samoa and the Southwest Pacific, and the Coral Triangle.) Priority sites within U.S. jurisdictions as well as priority countries within some of our international priority regions have been identified. As such these places are a priority for CRCP support and investment. *(provide link to priority setting docs and international implementation plans on CRCP website).*
- **Be a legally established MPA**

  In order to be assessed by the CRCP, the site must be recognized by appropriate government authority or under equivalent customary tenure or other form of community-based protection status.
- **Have some ongoing management activity**

  In order to be assessed and to be eligible for future CRCP support, the site must be actively managed at some level. Before the CRCP will invest time and resources into a site, support for the implementation of that site, through management activity, must be demonstrated by the governing authority or local community that is responsible for the MPA. No "paper parks" will be assessed by the CRCP.

Assessment Areas

The MPA Checklist was developed to provide a simple approach to measuring management capacity of a site against a specific set of core MPA management program components. The checklist includes fourteen assessment areas that are key components of a successful MPA management program:

1. Management planning,
2. Ecological network development,
3. Governance,
4. On-site management,
5. Enforcement,
6. Boundaries,
7. Biophysical monitoring,
8. Socioeconomic monitoring,

9. MPA effectiveness evaluation and adaptive management,
10. Stakeholder engagement,
11. Financing,
12. Outreach and education,
13. Conflict resolution mechanisms, and
14. Planning for resilience to climate change.

These specific assessment areas reflect capacities that NOAA, as well as other governmental and non-governmental organizations that provide resources for MPA initiatives, could support through grants, technical assistance, and trainings. Three tiers of management activity are defined and presented under each assessment area. The NOAA CRCP seeks to apply this assessment tool to eligible MPA sites in priority geographic areas and to improve management capacity by providing funding and technical assistance to help MPA managers progress from tier one activity towards tier two and tier three management activity in each of these fourteen assessment areas. It may neither be realistic nor appropriate to achieve tier 3 level status in all assessment areas. The NOAA CRCP has identified targets for what it considers effective conservation in each assessment area. Individual sites and programs that choose to use this tool need to identify those targets for their site or sites.

Approach

Assessment Interviews

The assessment is meant to be administered through an interview process and to collect both specific rankings under each of the 14 assessment areas as well as qualitative information for each area explaining the specific issues and situation that led to the selection of a tier. Interviewers should conduct the consultation directly with the site manager. If a site manager has not been assigned to the MPA the interview can be conducted with a knowledgeable representative from the government agency, community or non-governmental organization that has been authorized to oversee the management of the site.

If appropriate, including other site staff or local partners in the interview process, whether in a group discussion or as separate individual interviews, can enhance the quality of the assessment and provide further detail on specific issues and efforts for the site that the site manager may not be able to provide. This additional insight from staff or key site management partners can facilitate the selection of specific strategies to address a capacity gap. Although these additional discussions with staff and local partners can prove useful, the main interviewee should be someone who has a comprehensive understanding of the MPA and its management program.

If multiple agencies/organizations are involved in different aspects of managing the site, it would be important to conduct either a group interview with all of them or individual discussions with appropriate representatives from each. **No matter how many discussions and meetings are conducted to gather information on a specific site, only one checklist should be completed for each site.** If there are multiple participants in the discussion and there is a difference of opinion regarding which tier to select for an assessment area, the interviewer should try and facilitate a consensus decision around one tier. If this is not feasible, the site manager or lead agency representative for the site should make the tier selection. Depending on the number of people involved in the discussion and the level of ongoing activity within the MPA, each interview discussion can take anywhere between one and three hours to collect the desired information. This process can take several days for sites that require multiple meetings with managers, staff and partners.

In many places one agency or manager has oversight responsibility over a system of sites or multiple sites. It is very important to note, that in order to be able to understand and address capacity at the individual site level, **a separate checklist should be completed for each individual MPA**. Although the information for several sites may be gathered through a single meeting with a site manager or agency representative, it is essential that an individual assessment is completed for each site.

Tiered Ranking

The checklist was designed using a tiered approach with the first tier reflecting little to no capacity in an individual assessment area and the third tier reflecting high capacity in the assessment area. While not absolute, it's likely that MPAs that are recently established or are just beginning to implement management activities will normally rank at tier one or two for most assessment areas. Additionally, MPAs that are more mature and that have been carrying out management programs for some time are more likely to rank at tier two or three.

During the assessment the interviewer should clearly define the three different tiers for each assessment area and answer any questions that the interview participant(s) may have about the significance of each tier before a selection is made. After a tier is selected, the interviewer should encourage discussion to gather in-depth understanding about why the interview participant(s) has chosen a particular tier for each assessment area and ensure that it is the most appropriate selection. The
follow up question after each tier selection should be "Why did you select this tier?" and the interviewer should promote open dialogue about the site capacity and the issues and efforts that influenced the ranking decision. This is especially true for sites that are in tier one or two for a particular assessment area. For these areas it is important to document the specific challenges and needs within the site management regime and to present

ideas on what may be required to reach higher tiers in that assessment area. Understanding the root causes for challenges and capacity gaps along with the identification of specific needs to address them can help resource organizations provide more strategic support to increase MPA management capacity. This data should be recorded in the "site specific comments and information" boxes that are provided for each assessment area. This information will also be useful if a reassessment interview is completed in the future, especially if the interview participants change. The selected tiers for each assessment area should also be recorded in the MPA Management Assessment Score Card that is provided at the end of the checklist document.

After completing the assessment interview, the site manager and any other staff or partners that participated in the discussions should be provided with a copy of the assessment. The site management can then work with key MPA funders and supporters such as NOAA CRCP; other government agencies at the national, state or local level; or MPA practitioners and resource partners in the NGO and academic communities to develop a management capacity building plan for their site. This plan should identify which assessment areas the site management would like to address and which tier for each of these assessment areas that they wish to reach. Once the capacity building goals are clearly defined, specific management capacity building strategies can be identified based on the specific issues and needs of the site. This plan can then be used to inform funding decisions and proposal for funding, training or technical support.

Assessment Area Descriptions

This section provides a detailed description of the intention behind each of the 14 assessment areas to help the interviewer clearly explain the significance of and differentiate between each tier in an individual assessment area. This helps to ensure that the correct tier is selected so that management capacity can be accurately assessed and all gaps and needs can be appropriately identified.

1. *Management Planning*

Tier 1	Some management activity being implemented, but no management plan in place
Tier 2	Some management activity being implemented and management plan developed
Tier 3	Approved management plan that is being implemented

The management plan is often considered to be the foundation of an MPA management program as it states the mission, goals, and objectives of an MPA and

identifies the specific actions that should be carried out in order to achieve these goals and objectives and therefore effectively manage the site. Having a management plan is considered one of the key components of a successful MPA management program as it can serve to guide activities in a strategic direction to achieve site goals.

The three tiers presented in this assessment area are to be used to understand the overall level of management activity in the MPA and what is guiding those activities.

In tier one, some activities (e.g. enforcement, outreach, monitoring, etc) may be occurring but they are being identified and implemented in an opportunistic manner and are not being driven by a strategic plan.

In tier two, activities are occurring and a plan has been developed, but those activities are not necessarily driven by the plan. Sites which fall under tier two in this assessment area often have had a management plan developed for them, but the plan is not actively referred to and applied. The management activities that are being implemented may have been ongoing before the plan was developed.

In tier three, a management plan exists and is being implemented. The site managers and/ or site staff or responsible community members are referring to the plan and making strategic decisions about the implementation of management activities in the site.

HELPFUL RESOURCES:

See **Appendix 1** of this user guide for "Site Planning Guidelines" for MPA management plans from R.V. Salm, John Clark, and Erkki Siirila (2000). *Marine and Coastal Protected Areas: A guide for planners and managers.* IUCN. Washington DC. Xxi. p.41

Appendix 2 provides information on the structure , content and characteristics of a good management plan.

2. *Ecological Network Development*

Tier 1	Site is either not associated with a network or is part of an ecological MPA network but is not designed to support network goals and management is not coordinated across the network
Tier 2	Site is part of an ecological MPA network and site is designed to support the goals of an ecological network but management is not coordinated across the network
Tier 3	Site is part of an ecological MPA network, site is designed to support the goals of an ecological network and site management coordinated with other sites across the ecological network

It is recognized that ecological network development is a relatively new concept for many regions and in most cases existing MPAs have not been established to meet ecological network goals and will therefore be at tier one. As such, tier one sites are neither designed to meet ecological network goals, nor coordinated with other sites in a network.

However it is hoped that over time and with further MPA networking support to jurisdictions, new sites will be developed based on larger networking concepts (e.g. ecological connectivity) and therefore identified as tier two or three. In both tiers two and three, sites have been designed to meet ecological network goals.

In tier two the site was designated to function as part of an ecological network of MPA sites that has system level goals and objectives, but the site is beingmanaged as an independent unit and is not coordinated with other sites in the system.

In tier three, the site management is coordinated with other sites in the network and management activities and programs are designed and implemented on a system wide scale.

An additional point of clarification is where "ecological network plans" have been developed after site designation. Often times these networks incorporate existing sites for ecological services they provide to the network and then new sites are planned to fill in gaps. In this case, existing sites can be at tier two or three depending on how the site is managed.

HELPFUL RESOURCES:

A guide for developing MPA networks has been developed by the IUCN World Commission on Protected Areas, NOAA and The Nature Conservancy and is available at: http://www.wdpa-marine.org/MPAResources/MPAPlanningResources/Docs/Establishing%20resilient

%20MPA%20networks-making%20it%20happen.pdf (IUCN World Commission on Protected Areas (IUCN-WCPA) (2008). *Establishing Marine Protected Area Networks—Making It Happen.* Washington, D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy. 118 p.).

The Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) provides some "Rules of Thumb for MPA Network Design" at http://www.piscoweb.org/policy/marine-protected-areas/marine-protected-area-design

3. Governance

Tier 1	Site has been legally established or is under equivalent customary tenure or other form of community-based protection status, but there are few or no official or community based rules and regulations in place supporting the MPA and its management plan
Tier 2	Laws or customary instruments for the establishment of the MPA are in place, and official or community based rules or regulations governing some specific activities within the MPA are also in place
Tier 3	Clearly defined laws or customary instruments and official or community based rules and regulations governing all specific activities included in the objectives of the site management plan are in place

This assessment area aims to evaluate the regulatory framework for the site. As provided in the eligibility requirements on p.3 of this user guide, the MPA checklist is aimed at assessing legally designated sites. Therefore, tier one states that the site is legally established but DOES NOT HAVE any specific rules and regulations to support the MPA goals and objectives.

In tier two the site is legally established and there are some rules and regulations governing only SOME of the specific uses and activities targeted for management within the site. For example, users of the site might include boaters, divers, and fishers but rules might only exist to regulate fishing activity.

In tier three there are rules and regulations to govern ALL targeted uses and activities in the site. In this case, the activities in the management plan are legally backed by enforceable policies.

It is important to remember that in some cases, new rules and regulations are developed through the management planning process but might not have proper legislative backing. In this instance a legal review and revisions to relevant laws or approval of new legislation may be needed to fully support the site rules. The interviewee should discuss this with site managers to understand the enforceability of the rules and regulations of the site.

4. *On-site Management*

Tier 1	No management personnel assigned to site and/or little or no formalized community oversight
Tier 2	Some management personnel assigned to site or some formalized community oversight
Tier 3	Full-time site manager and programmatic personnel assigned to site or local community based management leader in place that has been formally designated and accepted and is able to dedicate sufficient time to the management of the site

This assessment area evaluates the physical absence or presence of staff at the MPA site.

In tier one sites there are no specific staff or community members responsible for the oversight of the MPA.

In tier two sites there may be staff that work out of a central office and visit the site occasionally to carry out activities, but there are no "on-site staff" physically stationed at the site. Sites that have a manager who is responsible for multiple sites, and is physically located at a central office or at one of the other sites would qualify as tier two sites.

In tier three sites there is a full-time site manager who is physically stationed at the site or local community members living at a co-managed site who are able to formally carry out management activities (outreach, surveillance, monitoring, etc.)

5. *Enforcement*

Tier 1	Few or no established rules and regulations exist or there is little or no enforcement of existing rules and regulations
Tier 2	Inconsistent enforcement of rules and regulations
Tier 3	Active and consistent enforcement of rules and regulations

The intent of this assessment area is to understand the degree of enforcement of the site rules and regulations.

In tier one sites there is an overall lack of enforcement. This may because there are no rules and regulations governing specific activities within the MPA, or due to a lack of enforcement staff and/or resources to monitor compliance with existing rules and regulations.

The second and third tiers explore varying degrees of enforcement of the site with the only difference being that tier two has inconsistent enforcement activity (lack of regularly scheduled patrols, lack of a regular presence at the site, etc.) and tier three has deliberate and regular enforcement activity.

6. Boundaries

Tier 1	Lack of clearly defined boundaries and/or zones
Tier 2	Clearly defined boundaries and/or zones
Tier 3	Clearly defined boundaries and zones and information on boundary locations and permitted activities in various zones (if applicable) provided to public and MPA stakeholders

The intention of this assessment area is to understand if the geographical boundaries (e.g. through GPS points or specific land markers) have been defined and if they have been made available to public. Additionally the tiers make reference "zones". If the site includes various zones with different allowable activities in different areas within the bigger MPA, the location and boundaries of the zones should also be clearly defined and marked for the public.

Sites in tier one do not have specific boundaries that have been defined in any way. Sites

in tier two have defined boundaries either in the legislation that established the area or in the site management plan, but they may not be easily understood by the public (i.e. there are no maps which clearly show where the boundaries are and have been made readily available to the public and there are no markers and/or signage that clearly delineate the site).

In tier three sites the boundaries are well defined and the information is readily available to the public (i.e. there are maps which clearly show where the boundaries are and these maps have been made readily available to the public; and/or there are visible markers and/or signage that clearly delineate the site).

7. Biophysical Assessment and Monitoring

Tier 1	Little or no existing biophysical monitoring activity
Tier 2	Existing biophysical monitoring program
Tier 3	Data produced from biophysical monitoring program being evaluated and used to inform management decisions

This assessment area seeks to evaluate the degree of bio-physical monitoring occurring at the site and how the information that results from that monitoring effort is being used.

In the first tier, the site may have had a baseline assessment of habitat, species or other biophysical resources at some point, but there are no repeated observations of the status of these resources and therefore there is no on-going monitoring occurring.

In the second tier the site has an on-going monitoring program. This could include opportunistic monitoring or a defined monitoring plan that has been developed and regular monitoring of the status and condition of the resources within the MPA.

The third tier is achieved when the results of the monitoring effort are being applied to inform management activities through adaptive management.

As part of the discussion with managers and site staff, interviewers should try to understand what specific biological information is being collected and why; and whether or not the information being collected is based on the goals and objectives of the site. This can lead to a better understanding of the capacity of the site to reach tier three status.

8. Socioeconomic Assessment and Monitoring

Tier 1	Little or no existing socioeconomic monitoring activity
Tier 2	Existing socioeconomic monitoring program
Tier 3	Data produced from socioeconomic monitoring program being evaluated and used to inform management decisions

Similar to the previous assessment area on biophysical monitoring, the aim of this area is to understand the degree of socio-economic monitoring occurring at the site and how the resulting information is being used.

In the first tier, the site may have had some kind of socioeconomic assessment such as an economic valuation study or social survey at some point; but there are no repeated observations of socioeconomic conditions or indicators and therefore there is no monitoring occurring.

In the second tier the site has a socioeconomic monitoring program. This entails repeated observations of identified social indicators and could be based on a socioeconomic monitoring plan that has been developed for the site.
The third tier is achieved when the results of the monitoring effort are being applied to inform management activities through adaptive management.

As part of the discussion with managers and site staff, interviewers should try to understand what specific socioeconomic information is being collected, why and whether or not the information being collected is based on the goals and objectives of the site. This can lead to a better understanding of the capacity of the site to reach tier three status.

HELPFUL RESOURCES:

"SocMon" (The Global Socioeconomic Monitoring Initiative for Coastal Management) is an initiative being implemented at the global and regional levels aimed at helping coastal, marine and MPA managers better understand and incorporate the socioeconomic context into their management programs (www.socmon.org). SocMon works through regional and local partners to facilitate community-based socioeconomic monitoring. Several regionally specific publications providing guidelines on socioeconomic monitoring for coastal managers are available at *http://www.socmon.org/publications.aspx*

9. *Effectiveness Evaluation and Adaptive Management*

Tier 1	Little or no evaluation of MPA effectiveness
Tier 2	MPA effectiveness evaluated but no ongoing effectiveness monitoring and evaluation program in place
Tier 3	MPA effectiveness evaluated and effectiveness monitoring and evaluation program in place with findings being applied to adapt management strategies

This assessment area is linked to assessment areas 7 and 8. If the site is at tier three in both of the previous questions, meaning the information being collected is directly correlated to their management plan objectives, and the data is being used to inform adaptive management strategies; then MPA effectiveness is indeed being evaluated. However, some sites may not have on-going monitoring programs but have developed programs to evaluate the site at given time periods and are using a specific tool to look at various indicators of effectiveness. It is good for the interviewer to explore how the site evaluates whether or not the MPA goals and objectives are being achieved and whether or not any specific effectiveness evaluation tools are being used.

In tier one sites there is no effort to evaluate whether or not the MPA goals and objectives are being met.

In tier two sites there is some effort to evaluate whether or not the MPA goals and objectives are being met, but this information is not being applied to inform changes in management strategies.

In tier three sites there is some effort to evaluate whether or not the MPA goals and objectives are being met, and this information is being used to inform changes in management strategies.

HELPFUL RESOURCES:

For a list of some of the existing tools that can be used to assess MPA effectiveness see Appendix 3.

10. Stakeholder Engagement

Tier 1	Little or no community and stakeholder engagement in management planning
Tier 2	Community and stakeholder engagement in management planning
Tier 3	Community and stakeholder engagement in management planning and implementation of site management efforts

It is widely recognized that stakeholder engagement in MPA management processes and efforts is critical for success. As such, this question is aimed at understanding how involved local stakeholders are in the both the development of MPA management plans and the implementation of management strategies and activities. This could include activities such as community watch programs to complement enforcement efforts or community lead outreach and education activities. This question can be used to gauge the interest of managers in building stakeholder engagement programs and processes.

The first two tiers solely focus on involvement in the management planning process. This assessment area assumes that a management plan exists for the site or that a planning process is underway, as this is a starting point for stakeholder engagement as it is one of the critical steps in which stakeholders should be involved (i.e. through developing the site vision, targets, threats, objectives, actions, etc.). However, there may be cases where a plan is not in place or in development, but stakeholder engagement activities are still occurring (e.g. outreach, monitoring, etc). In this case, the interviewer should discuss the option of indicating that the site is at tier one in this assessment area, but include details about existing stakeholder activities in the comments. This could identify the need again for capacity support to develop a management plan for the site as a first step, and to include stakeholders in the development of that plan.

In tier three stakeholders were involved in management plan development for the site and are also involved in implementing management activities.

11. Financing

Tier 1	Little or no reliable source of funding identified to support management activities
Tier 2	Existing funding for management activities
Tier 3	Sustainable finance plan being implemented that provides long term sustainable funding mechanisms

This assessment area is aimed at understanding the sources of funding provided for MPA management. The key word in tier one is "reliable" which means some kind of on-going financial commitment. For example, if a site has only received funds for individual projects through short term grants, then they would likely be in tier one because the funding sources are not ongoing.

The second tier states that the site does have access to on-going funding, although it might not be nearly enough to fully manage the site. Tier two would also include sites where a sustainable finance plan has been developed but is not being implement to ensure long term support for the MPA.

Finally, the third tier describes a case where there is a deliberate effort to provide sustainable financing for site management activities. These sources could include user fees, or conservation tax funds that support MPA management.

HELPFUL RESOURCES:

"Sustainable Financing of Protected Areas: A global review of challenges and options" available at http://data.iucn.org/dbtw-wpd/edocs/PAG-013.pdf.

A list of various publications on conservation finance is provided by The Nature Conservancy at *http://www.parksinperil.org/resources/art18405.html#consfinance* .

12. Outreach and Education

Tier 1	Little or no ongoing outreach and education activities exist
Tier 2	Ongoing outreach and education activities in support of the MPA
Tier 3	Existence of an outreach and education program with various activities and strategies focused on the MPA that helps achieve the MPA's goals and objectives

This assessment area is intended to draw out information on the amount and type of outreach and education activities that occur at the site. The first tier explains that no (or little) ongoing outreach and education activities occur. This may mean that there have

been some outreach events that have occurred but that these were one-time events and no ongoing activities exist, or that the site is used by the management agency for public events related to their mission and programs but that these events are not targeted at achieving specific goals and objectives for that site.

The second and third tiers describe a situation where there are continual outreach and education activities that directly support the MPA. This means that the outreach and education occurring at the site or for the site is not a general outreach activity carried out by the management agency but is specific to supporting the MPA goals. The difference between tiers two and three is that tier two level sites may have ongoing activities but they are not necessarily designed as a program. Tier three level sites have outreach and education programs with defined target audiences, messages and strategies. For example, a tier three MPA might include an outreach strategy that provides users such as fishermen with ecological information that helps them understand the purpose of the site, or outreach to boaters on mooring protocols.

13. Conflict resolution mechanism

Tier 1	Little or no existing mechanism to resolve conflict with MPA stakeholders
Tier 2	Mechanism for conflict resolution with MPA stakeholders is available but is not being used and stakeholders are not aware of this mechanism
Tier 3	Mechanism for conflict resolution is available and MPA stakeholders are aware of and use this mechanism

Conflicts with stakeholders and MPA resource users arise in even the most capable MPAs. The existence of a specific mechanism by which to resolve these potential conflicts provides a transparent process for the public, increasing the credibility of the MPA management program. It also promotes efficient resolution of conflicting issues. MPAs in tier one for this assessment area have no established process or mechanism by which to resolve conflict in a consistent manner.

Tier two MPAs may have made the effort to define a process or mechanism for conflict resolution in their management plan or as a part of their management program, but the process is not applied consistently when conflict situations arise, or MPA users and stakeholders are not aware of the established mechanism.

Tier three MPAs have an established process or mechanism for conflict resolution that is consistently applied to resolve conflict situations AND most MPA users and stakeholders are well aware of the mechanism and how to utilize it.

14. Planning for resilience to climate change

Tier 1	Little or no consideration of climate change resilience in the management of the MPA.

Tier 2	Management includes actions intended to increase the resilience of coral reef resources to the effects of climate change
Tier 3	Site is designed to increase resilience of coral reef resources to the effects of climate change and management includes actions necessary to avoid or minimize impacts and spread the risk due to climate change

Like ecological networking, climate change resilience principles (see appendix 4) are a relatively new concept and therefore many sites were not designed to include them. However, as more and more managers become familiar with these concepts, it is desired that new MPAs will be designed and/or existing sites will be revised to include some of these principles. Specifically, these principles within the site could include zoning or specific protections for reef areas that have shown resilience to past bleaching events, protections of representative habitats within the site (e.g. reef, seagrass, mangrove), coordination with land based management to reduce or minimize land based sources of pollution, or protection of critical coastal land areas to allow for migration of species and habitats such as mangroves with sea level rise.

Tier one sites under this assessment area have little to no consideration for these principles in their management plans and management programs. These may be older sites that were established before the concept of resilience was introduced to the MPA and coral reef management communities and for which no effort has been made to update management plans or activities based on this concept.

Tier two sites were not deliberately designed and located in order to build the resilience of coral reef ecosystems to the impacts of climate change but the management plans and programs for these sites include actions that are intended to support resilient reef resources. These may also be older sites that were established before the concept of resilience was introduced to the MPA and coral reef management communities, but in these sites intentional effort has been made to update management plans or activities based on this concept.

Tier three sites are much rarer and are sites that have been established, designed and are managed with the specific intent of building coral reef ecosystem resilience.
These are most likely MPAs that have been more recently established but may also include older sites that have been redesigned or rezoned with the specific intent of building coral reef ecosystem resilience.

HELPFUL RESOURCES:

Appendix 4 provides a list of principles for incorporating resilience to climate change in the design and management of marine protected areas.

More information on reef resilience as well as a toolkit that provides coral reef managers with guidance on building resilience to climate change into the design of MPAs and daily management activities is available at http://www.reefresilience.org/

APPENDICES

APPENDIX 1 : Site Planning Guidelines

R.V. Salm, John Clark, and Erkki Siirila (2000). *Marine and Coastal Protected Areas: A guide for planners and managers.* IUCN. Washington DC. Xxi. p.41

1. The strategy document identifies steps to establish a protected area and forms the foundation for the Management Plan. It is the preliminary document by which approvals are gained and designation of an MPA site is formalized. The strategy document is thus an important part of the management process.

2. The Management Plan for the site is the operational guide for the MPA and identifies actions to resolve specific management issues. It is thus a guiding tool for management.

3. The principal goal of the Management Plan is generally to maintain the natural resource values (seascapes, species habitats, ecological processes) of an area, and to ensure that all uses are compatible with that aim.

4. The Management Plan should aim to conserve natural values, optimize economic uses, and integrate traditional uses. Through zoning, it should attempt to separate incompatible activities, ensuring that particular uses are permitted only in suitable areas and sustainable levels of use are specified.

5. The Management Plan derives directly from management issues and their related objectives and activities. It needs to encompass legal and administrative concerns and educational and social objectives along with ecological and physical ones.

6. The Management Plan should function to achieve interagency coordination and cooperation among stakeholders (management authority, concerned departments of government, neighboring communities and other user groups) and to facilitate communication between MPA administration and management.

7. Initiation of site management need not be delayed until a MPA plan is completed. In countries where lengthy bureaucratic procedures or other factors delay the completion of the plan, an interim management document (operational plan) can be formulated and implemented.

8. Management plans may be required to function as interpretive documents, being designed for the public as well as for management. Planning workshops should be conducted to garner interest from the nearby community as well as certain sectors of the public.

9. Planning should examine the effects that MPAs have on local people and find ways to avoid negative effects or compensate for these. Public consultation is important both to identify current uses and to avoid conflict with local traditions and to encourage participation in planning.

APPENDIX 2 : CONTENTS OF A GOOD MPA MANAGEMENT PLAN

Developed by NOAA CRCP and the Pacific Islands MPA Management Community (PIMPAC)

1. **TITLE PAGE – name of site; names of lead group(s); date; version**

2. **EXECUTIVE SUMMARY – key issues and decisions; summary aims, approach, and actions**

3. **TABLE OF CONTENTS**

4. **INTRODUCTION** – Define purpose and scope of the plan; explain legislative basis and authority for the plan's development; summary timeline of plan development;

5. **SITE DESCRIPTION:**

(a.) Location and Governance:

- Location and size of the area
- What is the purpose of the area? (why was it created)
- What is the legal status of the area?
- Who has the legal authority to manage the area?
- What is the current management system?

(b.) Biophysical Setting:

- What are the key Physical features of the area (climate, geology, geomorphology, hydrology, soil characteristics)
- What are its key biological features of the area? (communities, flora and fauna, including any outstanding natural resource features)What are the Historical features of the area?
- What are the natural resource targets for conservation (the ecosystems, habitats, populations and species that are the target of MPA conservation efforts) for the area?

(c.) *Socioeconomic and Cultural Setting;*

- What are its cultural features? (traditional communities, cultural features and practices)

- What are the Socio-economic features of the area? (occupancy, access, income, tenure, other basic data and trends among local communities and their dependence on protected areas).
- What are the stakeholder groups with an interest in the area?
- What are the socioeconomic and cultural targets for the area?

(d.) *Conservation Status;*

- What are the current uses of the area?
- What are the threats to the area?
- What are the obstacles to effective management
- What are the management successes in the area?
- What are the current management challenges to the area?
- What is the history of management planning in the area?
- Why has a decision been made to complete this Management Plan?

6. THE MANAGEMENT APPROACH

(a.) Description of the Management Planning Process that was Used to Develop the Document
(b.) Vision and Mission Statement

(c.) Analysis of Strengths, Weaknesses, Opportunities and Threats

(d.) Goal and Objectives

(e.) Management Activities

(f.) Zoning and Regulations

7. OPTIONAL SECTIONS

(g.) Enforcement Approach

(h.) Biological and Socioeconomic Monitoring Approach

(I.) Roles and Responsibilities of Partners

(j.) Administration

(k.) Financing

(l.) Sustainability

8. APPENDICES (Suggested)

- Boundaries

- Maps (see list below)
- Habitat classifications
- Plant species (flora)
- Animal species (fauna)
- Special features at the site
- Legal language/regulation (actual)

  - Map 1 - Location
  - Map 2 - Land/water tenure and jurisdiction
  - Map 3 - Land topography and seabed bathymetry
  - Map 4 - Geology
  - Map 5/6 - Dominant plant and animal communities
  - Map 7/8 - Major commercial and non-commercial uses
  - Map 9 - Major use conflicts and threatened resources
  - Map 10 - Zoning

In general a Good Management Plan has the following characteristics:

1. **Clear**: easy to read, jargon free and well presented.
2. **Concise and comprehensive**: no longer than is absolutely necessary, but with enough information to fulfill its functions.
3. **Accurate**: without major errors or statements likely to date? and with the reasons for all judgments clearly explained.
4. **Logical**: With management policies derived from an assessment of the site and with a clear rationale given for all proposals (e.g. based on best scientific information available).
5. **Acceptable:** to all those with interests in and emotional attachment to the site.
6. **Practical**: with clear objectives, realistic methods for achieving them, resulting in desired outcomes which can be monitored.
7. **Focused**: fulfilling its purpose as a tool for site management, meeting the needs of its users and satisfying any legal or other obligations.

APPENDIX 3 : MPA Effectiveness Evaluation Tools

"How Is Your MPA Doing?" a guidebook of natural and social indicators for evaluating MPA management effectiveness (IUCN, NOAA, WWF.
http://www.mpa.gov/pdf/national-system/mpadoing.pdf

WWF's Rapid Assessment and prioritization of protected area management (RAPPAM)
http://assets.panda.org/downloads/rappam.pdf

Score Card to Assess Progress in Achieving Management Effectiveness Goals for Marine Protected Areas (WWF and World Bank)
http://siteresources.worldbank.org/EXTBIODIVERSITY/Resources/MPA_tool.pdf

World Commission on Protected Areas has provided a list of "Protected Areas Management Effectiveness Methodologies" at *http://www.wdpa.org/ME/tools.aspx*

APPENDIX 4: Resilience Principles

The Nature Conservancy
http://reefresilience.org/Toolkit_Coral/C1c0_Principles.html

Ecosystem resilience refers to the ability of an ecosystem to maintain key functions and processes in the face of stresses, or pressures, by either resisting or adapting to change.

Principle 1: Representation and Replication (and risk-spreading) can help increase likelihood of reef survival. By ensuring that resilient species and habitats are well represented and replicated throughout an MPA network, coral reef managers can decrease risk of catastrophic events, like bleaching, from destroying entire reef ecosystems.

Principle 2: Critical Areas are vital to survival and sustainability of marine habitats. These areas may provide secure and essential sources of larvae to enhance replenishment and recovery of reefs damaged by bleaching, hurricanes or other events. They also include high-priority conservation targets, such as fish spawning aggregations and nursery habitats.

Principle 3: Connectivity influences the design of marine protected area networks. Preserving connectivity among reefs and their associated habitats ensures replenishment of coral communities and fish stocks from nearby healthy reefs, and may enhance recovery.

Principle 4: Effective Management is essential to meeting goals and objectives of an MPA, and ultimately keeping reefs vibrant and healthy. Reducing threats is the foundation for successful conservation and the core of our resilience-based strategies. Measuring effective management provides the foundation for adaptive management. Investments in human capacity and long-term financing are also crucial to sustaining effective management for the future.

Appendix L: Work Flow Process for CRCP Performance Measure F2 PM2

Outlined below are the essential steps needed to implement the CRCP MPA Checklist from conducting the MPA Checklist interviews with MPA site managers to reporting on the CRCP Performance Measure associated with the MPA Checklist (F2 PM2).

CRCP Performance Measure F2 PM2: *Increase in management effectiveness of priority coral reef MPAs, measured using the CRCP MPA Management Assessment Checklist*

Step 1 – Baseline Interviews

1) CRCP has identified the MPAs that will be used for F2 PM2 – see Appendix J on page 88.

2) CRCP Liaisons/NMFS Coral Coordinators will conduct a baseline assessment interview at each MPA site identified as a priority MPA using the MPA Checklist. For the full interview and re-assessment cycle see Figure 1.

3) After completing each interview the Liaisons/Coordinators send their completed Checklist(s) to the CRCP MPA Coordinator for their respective basin – Dana Wusinich-Mendez for Atlantic/Caribbean MPAs and Mike Lameier for Pacific MPAs – to verify that the checklist meets the consistency requirements identified in the MPA Checklist User's Guide.

- If inconsistencies are present, the MPA Coordinator will identify the inconsistency and request the Liaison/Coordinator to fix the problem and re-submit the completed Checklist for review to the MPA Coordinator.

4) Once consistency with the User's Guide is verified by the MPA Coordinator, the completed MPA Checklist(s) are sent to the CRCP Program Analyst (Susie Holst).

5) The CRCP Program Analyst saves the completed MPA Checklist as a PDF and posts it to a common area where the wider CRCP staff can access it.

6) The CRCP Program Analyst prepares a scorecard (see Figure 2) for each MPA site using the information from the completed Checklists to identify gaps across the 14 assessment areas and posts a PDF of this scorecard to a common area where the wider CRCP staff can access it.

Step 2 – Re-assessments

1) For each MPA where CRCP funding has been invested to address a capacity gap identified in an earlier assessment, a follow-up interview will be conducted to track progress. At a minimum, the follow-up re-assessment interviews should happen at least once within the reporting period for this performance measure – every three years – but interim re-assessments can be made more often as projects are completed.

2) Follow-up re-assessment interviews should follow items 2-6 from Step 1 outlined above for collecting baseline interviews. Additionally, when conducting re-assessments, the liaison/coordinator should review the most recent MPA Checklist completed for that MPA site as a reference. As re-assessments are received, the CRCP Program Analyst will post the most recent Checklist and scorecard.

Step 3 – Reporting on the Performance Measure F2 PM2

1) The CRCP Program Analyst reports on F2 PM2 for the CRCP every 3 years starting in FY11 with the baseline.

2) To better inform CRCP RFP development, the CRCP Program Analyst will update all scorecards using the most recent re-assessment information.

3) If not done already, prior to reporting (every three years -- FY11, FY14, FY17…) the CRCP Program Analyst prepares an up-to-date scorecard for each MPA site and ensures that the most recent re-assessment results are used.

4) On reporting years, the CRCP Program Analyst calculates the % management effectiveness score for each MPA according to the methodology outlined in the CRCP Performance Measures Manual and aggregates the % management effectiveness information from all MPA sites to report an updated PM Actual for F2 PM2.

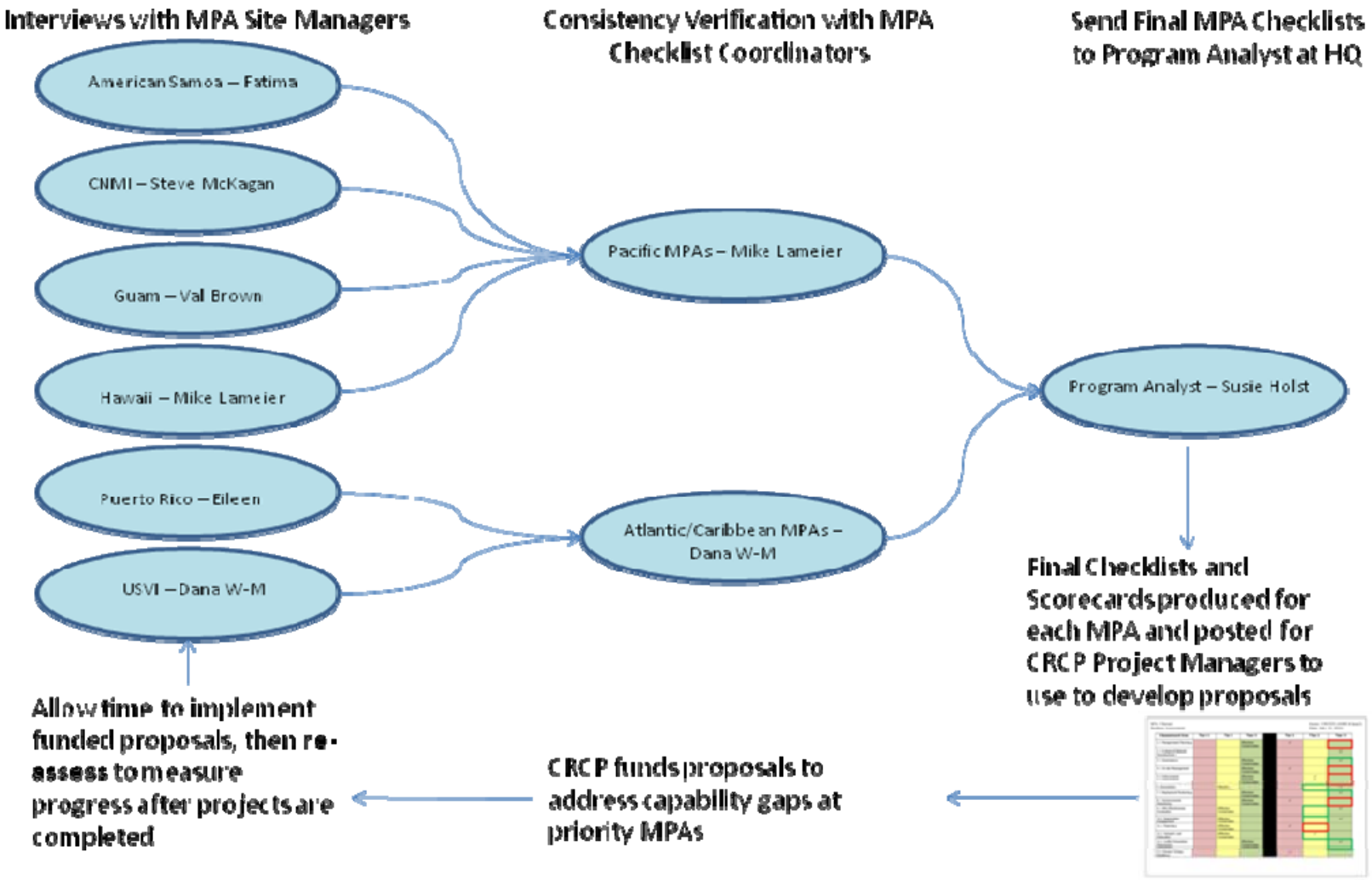

Figure 1. Interview and Re-assessment cycle for implementation of the MPA Checklist at priority MPAs.

MPA: Coral Bay, Area of Particular Concern (APC), St. John, USVI
Baseline Assessment

Acres: 3972.22 acres
Date: June 1, 2010

Assessment Area	Tier 1	Tier 2	Tier 3		Tier 1	Tier 2	Tier 3
1. Management Planning			Effective Conservation		√		
2. Ecological Network Development					√		
3. Governance			Effective Conservation		√		
4. On-site Management			Effective Conservation		√		
5. Enforcement			Effective Conservation		√		
6. Boundaries			Effective Conservation			√	
7. Biophysical Monitoring			Effective Conservation		√		
8. Socioeconomic Monitoring			Effective Conservation		√		
9. MPA Effectiveness Evaluation		Effective Conservation			√		
10. Stakeholder Engagement		Effective Conservation				√	
11. Financing		Effective Conservation				√	
12. Outreach and Education		Effective Conservation			√		
13. Conflict Resolution Mechanism			Effective Conservation		√		
14. Climate Change Resilience						√	

CRCP Staff Interviewer: Dana Wusinich-Mendez
Interview Participants: Site manager position does not exist. Interview with JP Oriol (USVI DPNR CZM Assistant Director) and Alex Holecek (USVI DPNR CZM APC Coordinator)

Management Effectiveness Score: 18/42 = 42.9%

Figure 2. Example Scorecard for an MPA Site showing assessment areas that meet "Effective Conservation" targets outlined in green and assessment areas that need increased capacity to meet these targets outlined in red.

Appendix M: EPA Section 319 Nine Minimum Required Elements for a Watershed Management Plan

2.6 9 Nine Minimum Elements to Be Included in a Watershed Plan for Impaired Waters Funded Using Incremental Section 319 Funds

Although many different components may be included in a watershed plan, EPA has identified nine key elements that are critical for achieving improvements in water quality. (↳ Go to **www.epa.gov/owow/nps/cwact.html** for a copy of the FY 2004 *Guidelines for the Award of Section 319 Nonpoint Source Grants to States and Territories*).

What Does This Mean?

9 Shows you where one or more of the nine minimum elements are specifically discussed.

EPA requires that these nine elements be addressed in watershed plans funded with incremental Clean Water Act section 319 funds and strongly recommends that they be included in all other watershed plans intended to address water quality impairments. In general, state water quality or natural resource agencies and EPA will review watershed plans that provide the basis for section 319-funded projects. Although there is no formal requirement for EPA to approve watershed plans, the plans must address the nine elements discussed below if they are developed in support of a section 319-funded project.

In many cases, state and local groups have already developed watershed plans for their rivers, lakes, streams, wetlands, estuaries, and coastal waters. If these existing plans contain the nine key elements listed below, they can be used to support section 319 work plans that contain projects extracted from the plan. If the existing plans do not address the nine elements, they can still provide a valuable framework for producing updated plans. For example, some watershed management plans contain information on hydrology, topography, soils, climate, land uses, water quality problems, and management practices needed to address water quality problems but have no quantitative analysis of current pollutant loads or load reductions that could be achieved by implementing targeted management practices. In this case, the plan could be amended by adding this information and other key elements not contained in the original plan. If separate documents support the plan and the nine elements listed below but are too lengthy to be included in the watershed plan, they can be summarized and referenced in the appropriate sections of the plan. EPA supports this overall approach—building on prior efforts and incorporating related information—as an efficient, effective response to the need for comprehensive watershed plans that address impaired and threatened waters.

Figure 2-3 highlights where the nine key elements fit into the overall watershed planning process. Once the plan has been developed, plan sponsors can select specific management actions included in the plan to develop work plans for nonpoint source section 319 support and to apply for funding to implement those actions (↳ chapter 12).

The nine elements are provided below, listed in the order in which they appear in the guidelines. Although they are listed as *a* through *i*, they do not necessarily take place sequentially. For example, element *d* asks for a description of the technical and financial assistance that will be needed to implement the watershed plan, but this can be done only after you have addressed elements *e* and *i*.

Explanations are provided with each element to show you what to include in your watershed plan. In addition, chapters where the specific element is discussed in detail are referenced.

Nine Elements of Watershed Plans

a. Identification of causes of impairment and pollutant sources or groups of similar sources that need to be controlled to achieve needed load reductions, and any other goals identified in the watershed plan. Sources that need to be controlled should be identified at the significant subcategory level along with estimates of the extent to which they are present in the watershed (e.g., X number of dairy cattle feedlots needing upgrading, including a rough estimate of the number of cattle per facility; Y acres of row crops needing improved nutrient management or sediment control; or Z linear miles of eroded streambank needing remediation).
(↳ Chapters 5, 6, and 7.)

What does this mean?

Your watershed plan should include a map of the watershed that locates the major causes and sources of impairment. To address these impairments, you will set goals that will include (at a minimum) meeting the appropriate water quality standards for pollutants that threaten or impair the physical, chemical, or biological integrity of the watershed covered in the plan.

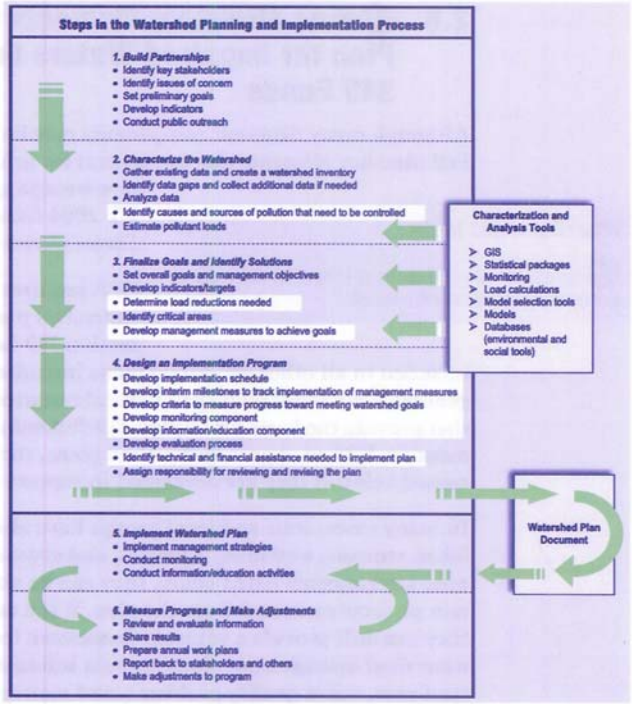

Figure 2-3. Incorporating the Nine Minimum Elements into Your Watershed Plan

This element will usually include an accounting of the significant point and nonpoint sources in addition to the natural background levels that make up the pollutant loads causing problems in the watershed. If a TMDL exists, this element may be adequately addressed. If not, you will need to conduct a similar analysis to do this. The analytical methods may include mapping, modeling, monitoring, and field assessments to make the link between the sources of pollution and the extent to which they cause the water to exceed relevant water quality standards.

b. An estimate of the load reductions expected from management measures.

What does this mean?

On the basis of the existing source loads estimated for element *a*, you will similarly determine the reductions needed to meet the water quality standards. You will then identify various management measures (see element *c* below) that will help to reduce the pollutant loads and estimate the load reductions expected as a result of these management measures to be implemented, recognizing the difficulty in precisely predicting the performance of management measures over time.

Estimates should be provided at the same level as that required in the scale and scope component in paragraph *a* (e.g., the total load reduction expected for dairy cattle feedlots, row crops, or eroded streambanks). For waters for which EPA has approved or established

TMDLs, the plan should identify and incorporate the TMDLs. Applicable loads for downstream waters should be included so that water delivered to a downstream or adjacent segment does not exceed the water quality standards for the pollutant of concern at the water segment boundary. The estimate should account for reductions in pollutant loads from point and nonpoint sources identified in the TMDL as necessary to attain the applicable water quality standards. (↳ Chapters 8 and 9.)

c. A description of the nonpoint source management measures that will need to be implemented to achieve load reductions in paragraph 2, and a description of the critical areas in which those measures will be needed to implement this plan.

What does this mean?

The plan should describe the management measures that need to be implemented to achieve the load reductions estimated under element *b*, as well as to achieve any additional pollution prevention goals called out in the watershed plan (e.g., habitat conservation and protection). Pollutant loads will vary even within land use types, so the plan should also identify the critical areas in which those measures will be needed to implement the plan. This description should be detailed enough to guide implementation activities and can be greatly enhanced by identifying on a map priority areas and practices. (↳ Chapters 7, 8, 9, 10, and 11.)

d. Estimate of the amounts of technical and financial assistance needed, associated costs, and/or the sources and authorities that will be relied upon to implement this plan.

What does this mean?

You should estimate the financial and technical assistance needed to implement the entire plan. This includes implementation and long-term operation and maintenance of management measures, I/E activities, monitoring, and evaluation activities. You should also document which relevant authorities might play a role in implementing the plan. Plan sponsors should consider the use of federal, state, local, and private funds or resources that might be available to assist in implementing the plan. Shortfalls between needs and available resources should be identified and addressed in the plan. (↳ Chapter 12.)

e. An information and education component used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented.

What does this mean?

The plan should include an I/E component that identifies the education and outreach activities or actions that will be used to implement the plan. These I/E activities may support the adoption and long-term operation and maintenance of management practices and support stakeholder involvement efforts. (↳ Chapters 3 and 12.)

f. Schedule for implementing the nonpoint source management measures identified in this plan that is reasonably expeditious.

What does this mean?

You should include a schedule for implementing the management measures outlined in your watershed plan. The schedule should reflect the milestones you develop in *g*. (↳ Chapter 12.)

g. A description of interim measurable milestones for determining whether nonpoint source management measures or other control actions are being implemented. (↳ Chapter 12.)

What does this mean?

You'll develop interim, measurable milestones to measure progress in implementing the management measures for your watershed plan. These milestones will measure the implementation of the management measures, such as whether they are being implemented on schedule, whereas element *h* (see below) will measure the effectiveness of the management measures, for example, by documenting improvements in water quality.

h. A set of criteria that can be used to determine whether loading reductions are being achieved over time and substantial progress is being made toward attaining water quality standards.

What does this mean?

As projects are implemented in the watershed, you will need water quality benchmarks to track progress. The *criteria* in element *h* (not to be confused with *water quality criteria* in state regulations) are the benchmarks or waypoints to measure against through monitoring. These interim targets can be direct measurements (e.g., fecal coliform concentrations) or indirect indicators of load reduction (e.g., number of beach closings). You should also indicate how you'll determine whether the watershed plan needs to be revised if interim targets are not met. These revisions could involve changing management practices, updating the loading analyses, and reassessing the time it takes for pollution concentrations to respond to treatment. (↳ Chapters 12 and 13.)

i. A monitoring component to evaluate the effectiveness of the implementation efforts over time, measured against the criteria established under item h *immediately above.*

What does this mean?

The watershed plan should include a monitoring component to determine whether progress is being made toward attaining or maintaining the applicable water quality standards. The monitoring program should be fully integrated with the established schedule and interim milestone criteria identified above. The monitoring component should be designed to determine whether loading reductions are being achieved over time and substantial progress in meeting water quality standards is being made. Watershed-scale monitoring can be used to measure the effects of multiple programs, projects, and trends over time. Instream monitoring does not have to be conducted for individual BMPs unless that type of monitoring is particularly relevant to the project. (↳ Chapters 6, 12, and 13.)

The remainder of this handbook proceeds through the watershed planning process, addressing these elements in detail to show you how to develop and implement watershed plans that will achieve water quality and other environmental goals.

The level of detail (figure 2-4) needed to address the nine key elements of watershed management plans listed above will vary in proportion to the homogeneity or similarity of land use types and variety and complexity of pollution sources. Urban and suburban watersheds will therefore generally be planned and implemented at a smaller scale than watersheds with large areas of a similar rural character. Similarly, existing watershed plans and strategies for larger river basins often focus on flood control, navigation, recreation, and water supply but contain only summary information on existing pollutant loads. They often generally identify only source areas and types of management practices. In such cases, smaller subbasin and

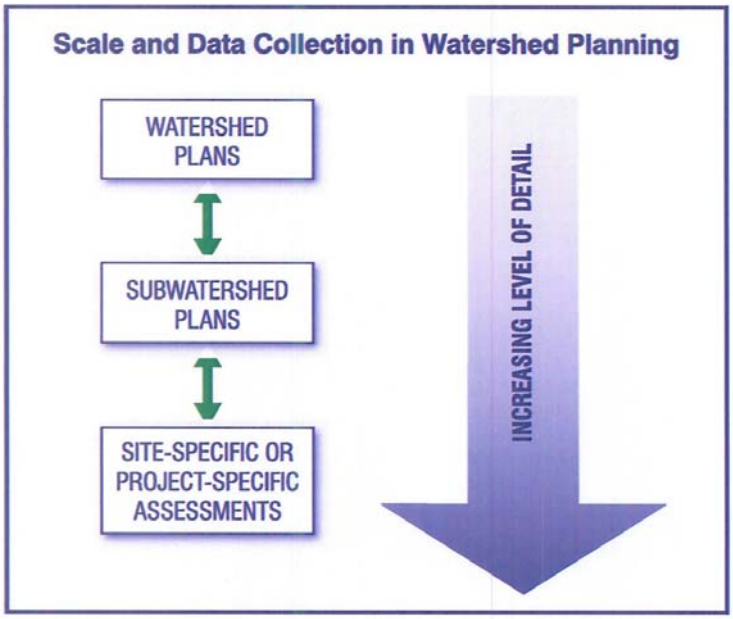

Figure 2-4. Level of Detail for Watershed Management Plans

watershed plans and work plans developed for nonpoint source management grants, point sources, and other stormwater management can be the vehicles for providing the necessary management details. A major purpose of this manual is to help watershed managers find planning tools and data for managing watersheds at an appropriate scale so that problems and solutions can be targeted effectively.