

Exhibit 2: Summary tables of EBM Objectives & Deliverables

<i>Water Quality</i>		
Objectives	Key Deliverables	Management Value
<ul style="list-style-type: none"> <li>• Deploy instrument arrays at 5 locations including the creek mouths, the bay/estuary, and the open coast</li> <li>• Monitor changes in nitrates so as to create mass balance budgets to determine sources and sinks of nutrients to the bay</li> <li>• Delineate phytoplankton communities (Harmful Algal Blooms included) and also use backscatter as a proxy for sedimentation</li> <li>• Provide real-time data via a web-based interface including budgets of nitrate, DO, sediment and chlorophyll a for the bay based on the sources and sinks in the system</li> <li>• Determine for the “Morro Bay Ecosystem” how water quality from the watershed affects water quality on the open coast.</li> </ul>	<ul style="list-style-type: none"> <li>• Design and implementation of a proven system to monitor physical and chemical parameters of the “Morro Bay Ecosystem”.</li> <li>• Mass balance budgets to determine sources and sinks of nutrients to the bay</li> <li>• Delineation of phytoplankton communities (Harmful Algal Blooms included)</li> <li>• Estimates of sources and load of sediment to the estuary</li> <li>• Real-time data via a web-based interface including budgets of nitrate, DO, sediment and chlorophyll a for the bay based on the sources and sinks in the system</li> </ul>	<p>A vital baseline “backbone” for understanding ecosystem dynamics—causative mechanisms, effectiveness of watershed policies and restoration projects, and management decisions.</p>

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<b><i>Biological Indicators of Organismal and Ecosystem Health</i></b>		
<b>Objectives</b>	<b>Key Deliverables</b>	<b>Management Value</b>
<ul style="list-style-type: none"> <li>• Determine which target organisms are most useful to track environmental changes</li> <li>• Correlate changes in molecular response of organisms with changes in physical and chemical parameters being monitored from the water quality project</li> <li>• Develop useable indicators for managers to assess ecosystem health</li> </ul>	<ul style="list-style-type: none"> <li>• Determine the species that promise to provide the strongest and most comprehensive information to track environmental change and monitor ecosystem health.</li> <li>• For those model indicator species, establish a list of key proteins that are going to be useful as biochemical indicators of organismal health</li> <li>• Develop the most useful indicators for resource managers in order to assess ecosystem health using organismal-level responses.</li> <li>• Provide resource agencies with methodologies that allow application of these data for management and ultimately their decision making processes.</li> </ul>	<p>Specific tools to assess actual effects of changing conditions and resource management decisions on ecosystem life, resolution of concurrent factors affecting the ecosystem, and early leading indicators of ecosystem changes for mitigating or corrective action.</p>

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<i>Socioeconomic Indicators of Ecosystem Health</i>		
Objectives	Key Deliverables	Management Value
<ul style="list-style-type: none"> <li>• Create a web-based database of socio-economic indicators.</li> <li>• Develop a baseline of economic uses associated with the Morro Bay estuary and near shore ocean.</li> <li>• Provide an annual analysis of changes and trends in the economic output of estuary and nearshore ocean based activities.</li> <li>• Create a model of the functional links between ecosystem indicators and economic productivity and value (based on a time-series (panel) analysis of ecosystem and economic indicators).</li> </ul>	<ul style="list-style-type: none"> <li>• Web-based database of socio-economic indicators (collected annually or bi-annually depending upon the indicator).</li> <li>• Baseline of economic uses associated with the Morro Bay estuary and nearshore coastal ocean.</li> <li>• Annual analysis of changes and trends in the economic output of estuary and nearshore coastal ocean based activities.</li> <li>• Model of the functional links between ecosystem indicators and economic productivity and value (based on a time-series (panel) analysis of ecosystem and economic indicators).</li> </ul>	<p>Critical tool to understand and evaluate the human consequences of environmental policies and develop ecosystem-based management that supports conservation, restoration, and sustainable use.</p>

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<b><i>Institutional Framework to Translate Science into Enhanced Ecosystem Health</i></b>		
<b>Objectives</b>	<b>Deliverables</b>	<b>Management Value</b>
<ul style="list-style-type: none"> <li>• Integration and collaboration of resource managers and stakeholders across the ecosystem.</li> <li>• Informed public with tools to understand and contribute to ecosystem health.</li> <li>• Platform for advancing ecosystem understanding and replication elsewhere.</li> </ul>	<ul style="list-style-type: none"> <li>• Active Advisory Committee engaging all major resource agencies and stakeholder interests in the execution and application of Program activities for ecosystem health.</li> <li>• Public kick off, semiannual workshops, and biennial “State of the Bay...and Beyond” conference with cable TV coverage and archiving.</li> <li>• Interactive web site and email list serve to involve “citizen scientists” , provide an “ecosystem dashboard” summarizing results, and interpret results via a “Bay Blog”.</li> <li>• Ecosystem Interns aiding integration of results into decision making.</li> <li>• Peer-reviewed articles and access to data sets for researchers and resource managers elsewhere.</li> </ul>	<p>Improved coordination of resource management activities; increased public interest, understanding, and support for ecosystem health; and effective replication elsewhere.</p>

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<i>Human Access</i>		
Objectives	Key Deliverables	Management Value
<ul style="list-style-type: none"> <li>• Identify and locate the bay and coastal habitats and species at greatest risk to human uses.</li> <li>• Determine the levels of impacts that can occur to rocky intertidal habitats at the popular Montaña de Oro State Park due to visitor use.</li> <li>• Determine the types of uses and levels of use (“carrying capacity”) that could be allowed that still protect the biological integrity of these habitats.</li> </ul>	<ul style="list-style-type: none"> <li>▪ GIS of coastal areas of San Luis Obispo County showing physical and biological characteristics from data collected in early 1980s as part of a statewide data collection effort.</li> <li>▪ Updated data layers for GIS of coastal biological resources for Montana de Oro and Estero Bluffs State Parks collected as part of this study.</li> <li>▪ Results of studies on human effects on rocky intertidal communities that will be used to manage visitor access.</li> <li>▪ Baseline biological data for Montana de Oro and Estero Bluffs that can be used as a basis for long-term monitoring.</li> <li>▪ Recommendations for visitor management, environmental education, and outreach.</li> <li>▪ Recommendations for long-term monitoring</li> </ul>	<ul style="list-style-type: none"> <li>▪ The GIS will provide resource managers with a valuable tool that can be used to help manage access to coastal resources that avoids impacts to sensitive habitats and species..</li> <li>▪ Results of studies on human effects on rocky intertidal communities will help park managers determine and justify possible changes in visitor access to sensitive rocky intertidal areas.</li> <li>▪ The recommendations for managing visitor access to sensitive coastal habitats will help protect resources and reduce human impacts and can be used as a basis for establishing management plans at the new Estero Bluffs and Hearst Ranch State Parks</li> </ul>

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<i><b>Critical Spawning and Nursery Areas for Nearshore Fish and Invertebrate Species</b></i>		
<b>Objectives</b>	<b>Key Deliverables</b>	<b>Management Value</b>
<p><i>Habitat:</i></p> <ul style="list-style-type: none"> <li>• Provide high-resolution (1-3m grid) bathymetry and habitat GIS products for the areas within the scope of the Morro Bay EBM Program.</li> <li>• Leverage CI-CORE funding to provide a more complete picture of the habitats in the “Morro Bay Ecosystem”.</li> </ul> <p><i>Faunal:</i></p> <ul style="list-style-type: none"> <li>• Determine what fish species are obligate residents or obligate seasonal residents of the Morro Bay Estuary and how they are distributed among the available habitats.</li> <li>• Determine the proportion of the California halibut population in the “Morro Bay Ecosystem” that is a product of the Morro Bay Estuary.</li> </ul>	<p><i>Habitat:</i></p> <ul style="list-style-type: none"> <li>• Final GIS products will include: xyz point data and ArcGIS compatible grids, contour vector themes, geotifs of DEMs in shaded relief, sidescan sonar mosaics, ground-truth video clips, and the results from the spatial data model analyses listed above.</li> <li>• Original video as well as XTF and HDCS acoustic data files and full FGDC-compliant metadata for all files will also be included.</li> </ul> <p><i>Faunal:</i></p> <ul style="list-style-type: none"> <li>• Species lists of fish will be generated for the bay, which will be made available to resource managers and stakeholders.</li> <li>• Web interface for citizen scientists and volunteer monitoring participants to peruse and update (with confirmation from appropriate EBM scientists) species lists</li> <li>• Understanding of the degree to which the bay serves as a nursery ground for one of California’s most commercially important fish species.</li> </ul>	<p>Detailed knowledge of the extent and distribution of fish and invertebrate habitats in the bay and estuary, role of the bay/estuary for commercially and recreationally important fish species, and, thereby, specific guidance on the importance of ecosystem health.</p>