



# PACIFIC SOUTHWEST REGION INVENTORY & MONITORING INITIATIVE

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Annual Work Plan FY 2013



The Pacific Southwest Region Inventory and Monitoring initiative identifies important natural resources on National Wildlife Refuge System lands and provides information to support and evaluate management of these resources under the influence of climate change and other environmental threats.

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*FY 2013 Pacific Southwest Region Inventory & Monitoring Initiative  
Annual Work Plan Approvals*

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Regional Chief  
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## *Pacific Southwest Region I&M FY 2013 Annual Plan*

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## Introduction

The Pacific Southwest Region Inventory and Monitoring initiative (I&M) identifies important natural resources on National Wildlife Refuge System (NWRS) lands and provides information to support and evaluate management of these resources under the influence of climate change and other environmental threats. I&M is part of the NWRS regional biological program and works in conjunction with the Landscape Conservation Cooperatives (LCCs) initiatives. Our basic philosophy is that inventory and monitoring information should support management decision-making at multiple spatial scales. The regional program steps down from the national *Strategic Plan* and *Operational Blueprint*.

National Wildlife Refuges and Wildlife Management Areas are the foundation of the I&M initiative. We provide support to the Pacific Southwest Region field stations by identifying priority conservation and management issues and tracking the status and trends of biotic and abiotic factors needed to effectively manage refuge lands and waters. We provide technical guidance and expertise to stations to develop planning documents, monitoring protocols, databases, and data analysis strategies so that information is available and accessible to make the best management decisions. We support refuges to document the status of, and detect changes in their diverse biotic communities and physical resources, including water, air and soils, to support relevant, science-based conservation planning and management at all spatial scales. We develop I&M protocols and data standards jointly with refuges and others to provide for consistent, scientifically credible data collection and data management across refuges and to ensure utility, timeliness, availability, and long-term integrity of the information collected. We help identify landscape level priorities for monitoring on refuges by coordinating with internal and external partners, particularly LCCs, to share information, enhance cooperation, and raise the quality of science and resource management across the landscape.

The *FY 2013 Working Strategy* outlines priorities for the Pacific Southwest Region I&M initiative this fiscal year. It presents the program's three long-term goals, which describe a core commitment to address priority needs of refuges across the region:

- ❖ accessing information for effective decision-making
- ❖ assessing and managing threats to target resources
- ❖ strategic planning and partnering to meet priority refuge needs

The plan identifies seven major I&M program areas, with 22 specific objectives to be achieved by October 2013 that will lay the foundation for future work on these goals. For each objective, the lead staff responsible are identified and essential key actions or major tasks are outlined. I&M is a new program and this annual plan is ambitious, given current staff resources. Therefore, the I&M team will adaptively manage the tasks and timeframes throughout the year, in close collaboration with refuge staff, the national I&M staff in the Natural Resources Program Center (NRPC) and other key partners.

**Figure 1. National Wildlife Refuges and Wildlife Management Areas Served by Pacific Southwest Region I&M Initiative**





## The Planning Process

- Definitions:
  - **Goal:** long term vision
  - **Thematic areas:** groupings of objectives on topics of foundational importance to I&M
  - **Objective:** what success looks like; the outcome desired
  - **key action:** task someone needs to do to achieve the outcome
- Starting with a list of priorities garnered from national I&M strategic planning documents and regional projects ongoing in Fiscal Year (FY) 2012, the team determined top priorities by consensus based on **importance and impact** for resources and refuges and on **feasibility**. Feasibility was further examined by projecting staff time and resources required to implement, including interdependencies within the team and with partners.
- The I&M team reviewed draft plans to identify thematic areas and clarified objectives using the **SMART** criteria (specific, measurable, achievable, relevant, and time-bound). All key actions were further tested and strengthened to ensure that every action in the plan is **essential** and together **sufficient** for achieving the objectives.
- A Lead person was identified for each thematic area, and for objectives and key actions where different (see Table 1 for staff abbreviations).

## Pacific Southwest Region Inventory & Monitoring Long-Term Goals

- ❖ Goal 1 *Accessing Information for Effective Decision Making*: Refuges and their partners have **easy access to priority refuge natural resource data** to support effective analysis and decisions, meet legal requirements, protect NWRS investment in data collection, and provide continuity when staff changes.
- ❖ Goal 2 *Assessing and Managing Threats to Target Resources*: Refuges and their partners have the **information, resources and technical guidance needed to assess and manage the impact of key threats** or stressors on their target species and ecosystems at the local and landscape scales, starting with invasive species, water resources and climate change.
- ❖ Goal 3 *Strategic Planning and Partnering To Meet Priority Refuge Needs*: The Pacific Southwest Region I&M team demonstrates the **effective use of strategic planning and partnerships to meet priority refuge needs** and leverage impact of our services and products.

## FY 2013 Objectives (Obj)

### GOAL 1: Accessing Information for Effective Decision-making

#### Thematic Area: Informatics

- Obj 1.1 Develop a legacy data plan to ***capture documents that are currently in refuges files and provide access through the Service Catalog (ServCat)***. Prioritize collection of documents that support management decisions, baseline inventories, monitoring and research.
- Obj 1.2 Use the PRIMR database and other standardized data systems to ***document inventory and monitoring surveys*** currently conducted on Region 8 refuges to understand refuge needs and determine how refuge surveys can contribute to landscape scale conservation..
- Obj 1.3 Initiate a project to provide NWR staff with ***easy access to defensible species lists*** generated from existing refuge data to support refuge management and I&M plan development.
- Obj 1.4 Provide GIS support to develop ***functional GIS libraries and methods for long-term maintenance of spatial data***.

### GOAL 2: Assessing and Managing Threats to Target Resources

#### Thematic Area: Invasive Species

- Obj 2.1 ***Complete the National I&M Invasive Plant Inventory Pilot Project*** in FY 2013 and develop a guide to planning and conducting invasive plant inventories in the National Wildlife Refuge System in FY 2014.
- Obj 2.2 Create a desktop tool to ***identify, document and prioritize invasive plant threats for strategic management*** and at least two refuges use the tool to assess the status of priority invasive plants.
- Obj 2.3 Develop an ***adapted statewide spatial tool (WHIPPET) to strategically allocate limited resources for invasive plant treatment actions*** at a local refuge scale (using spatial inventory data) by the summer of FY 2014. Test the tool using one to two refuge inventory datasets in FY 2013.
- Obj 2.4 ***Demonstrate the utility of invasive plant inventory and monitoring data to develop or refine a strategic plan for invasive plant management*** at one refuge , and share results with refuges throughout the Pacific Southwest Region.

#### Thematic Area: Refuge Water Resources

- Obj 2.5 Complete ***three Water Resources Inventories and Assessments (WRIA)*** at stations identified in FY 2012 that can be used by refuge staff to make water management decisions.
- Obj 2.6 Develop a ***plan to improve access to water rights information*** for refuges in Pacific Southwest Region to help refuges meet legal requirements.

### Thematic Area: Climate Change

- Obj 2.7 Provide refuge-scale climate modeling information to four coastal tidal marsh refuges that evaluates ***ecosystem response to sea level rise*** and provides information needed to assess vulnerability of priority natural resources and develop climate adaptation strategies.
- Obj 2.8 Analyze the ***effects of climate change on refuge water resources*** (water supply and evapotranspirative demands) for a selected refuge and begin evaluating feasibility of applying this analysis to additional refuges.

## GOAL 3: Strategic Planning and Partnering To Meet Priority Refuge Needs

### Thematic Area: Habitat Management Plans (HMP) And Inventory & Monitoring Plans (IMP)

- Obj 3.1 Develop a ***streamlined process for creating concise, user-friendly HMPs and IMPs*** that will help refuge staff improve decision-making about managing habitats for resources of concern and can be created within 9 months.
- Obj 3.2 Create a ***pilot HMP and IMP*** for at least one refuge.
- Obj 3.3 Develop a ***regional timeline for completing HMPs and IMPs*** that will lead to completed plans for each refuge by FY 2016.

### Thematic Area: Coordinated Bird Monitoring

- Obj 3.4 Complete the second year of a pilot project to implement a national standardized marsh bird monitoring protocol with San Francisco Estuary refuges and partners to ***demonstrate how new standardized survey protocols can be adopted while maintaining continuity with refuge legacy data.***
- Obj 3.5 Complete a new GPS-based aerial survey protocol and data reporting process for San Francisco Estuary Mid-Winter Waterfowl Surveys to ***demonstrate how data from large-scale monitoring efforts can be used to serve refuge-specific information needs.***
- Obj 3.6 Complete a draft database of regional or national bird conservation and/or monitoring plans, evaluate refuge participation in these plans and ***identify gaps where greater support for coordinated bird monitoring is needed in the region*** to support HMP and IMP development.

### Thematic Area: I&M Planning and Partnerships

- Obj 3.7 Complete the Pacific Southwest Region Needs Assessment to ***understand the needs of refuges***, and use the Assessment to guide I&M annual work plans and 5-year strategic plan.
- Obj 3.8 All Pacific Southwest Region I&M program services and products ***reflect the natural resource priorities of refuges*** and address strategic input from key partners and stakeholders.
- Obj 3.9 ***Identify strategic Service and non-Service partners*** to communicate and advocate for refuge needs with key decision makers.



## FY 2013 Key Actions

### GOAL 1: Accessing Information for Effective Decision-Making

Thematic Area: Informatics [Lead: Kaylene Keller]

**Objective 1.1** *Develop a legacy data plan to capture documents that are currently in refuges files and provide access through ServCat. Prioritize collection of documents that support management decisions, baseline inventories, monitoring and research.*

#### Key Actions

1. Complete the legacy data pilot projects for Modoc NWR and Stone Lakes NWR by September 30, 2013. **KK, University of California, Davis Cooperative Ecosystems Studies Unit (CESU)**
2. Based on information provided in pilot projects develop implementation plan for capturing documents at all Pacific Southwest Region Refuges by the end of FY 2013. **KK, KL**
3. Hire a zonal data manager and biotech to implement the legacy project to capture legacy data by March 2013. The success of the legacy data project implementation across the region is dependent on hiring in house staff or contracting the work to outside support.
4. Develop Sharepoint 2010 site for Pacific Southwest Region I&M to provide access to I&M project information to refuge, regional and NRPC staff. **EB, KK**

**Objective 1.2** *Use the PRIMR database and other standardized data systems to document inventory and monitoring surveys currently conducted on Region 8 refuges to understand refuge needs and determine how refuge surveys can contribute to landscape scale conservation.*

#### Key Actions

1. Populate the PRIMR database with current survey information from all refuges in Pacific Southwest Region. **OR, KK, GB**
2. Develop and implement standards for documenting species observations on refuges. **KK, KL**
3. Analyze species lists and other factors to determine what inventories should be conducted on refuges. Consider “regional” inventories with partner land owners near refuges. This process will be unique to each refuge (or set of refuges). **KK, KL**

**Objective 1.3** *Initiate a project to provide NWR staff with easy access to defensible species lists generated from existing refuge data to support refuge management and I&M inventory and monitoring plan development.*

#### Key Actions

1. Standardize taxonomy for available Pacific Southwest Region refuge species lists identified in 2012 species pilot project. **KK, CESU**
2. Using existing species data cataloged during the Service Catalog pilot projects, evaluate the potential of using existing documents to develop documented species inventories for 2 pilot refuges (Stone Lakes and Modoc NWR). **KK, McDonald, OR, CESU,**
3. Lead the national team with NRPC to develop the Species Information System. - **KK**

4. Prepare for one collaborative project with California Academy of Sciences and San Francisco State University to address the need for species inventories and/or research on one or more refuges. **OR, KK**

**Objective 1.4** *Provide GIS support to develop functional GIS libraries and methods for long-term maintenance of spatial data.*

**Key Actions**

1. Implement a team learning group with interested GIS users at refuges that have identified the need for GIS data development and organization. **KK, EB**
2. Continue Stone Lakes GIS pilot project to develop a list of priority datasets needed to meet refuge goals and objectives by the end of FY 2013. **KK, CESU**
3. Test Regional GIS program methods (DataSpace) for distributing data between I&M and the regional office. Produce a report of test results to Regional GIS Coordinator by end of FY 2013. **KK, EB**
4. Produce a draft report on methods for vegetation mapping and accuracy assessments in the Pacific Southwest Region. **KK, KL, CESU**

## **GOAL 2: Assessing and Managing Threats to Target Resources**

**Thematic Area: Invasive Species [Lead: Giselle Block]**

**Objective 2.1** *Complete the National I&M Invasive Plant Inventory Pilot Project in FY 2013 and develop a guide to planning and conducting invasive plant inventories in the National Wildlife Refuge System in FY 2014.*

\* This project is a collaborative effort between the National Invasive Species Program, National I&M Program, Region 6 Strike Team, Region 5 Invasive Species Program, and Region 8 I&M program.

**Key Actions**

1. Complete a draft of the FY 2011-12 invasive plant inventory pilot project in coordination with partners by December 31, 2013. **GB**
2. Complete review of the pilot report by March 2013. Reviewers include the National I&M Invasive Plant Working Group, Regional I&M Coordinators and other key partners. **GB**
3. Disseminate report and present findings to the National I&M Program and Pacific Southwest Region refuge staff and Programs (e.g., Aquatic Invasive Species, Planning, Science Division). **GB**
4. Work with the National I&M Invasive Species Working Group to gather information (objectives, prioritization, protocol development, etc.) from 3 additional inventories in regions 1, 2, and 3.
5. Review and summarize National Park Service and U.S. Forest Service invasive plant inventory and early detection monitoring protocols.

**Objective 2.2** *Create a desktop tool to identify, document and prioritize invasive plant threats for strategic management and at least two refuges use the tool to assess the status of priority invasive plants.*

**Key Actions**

1. Develop and obtain broad peer review of a desktop tool to assist refuges (and other conservation partners) with prioritizing invasive plant threats in Pacific Southwest Region by May 2013. **GB, Utah CESU, Biometrician, SD**  
**Key Partners:** Refuges, Utah State University (CESU agreement), California Invasive Plant Council, invasive species experts in National Park Service, California Department of Fish and Game and others.
2. Work with at least two Pacific Southwest Region refuges to test the tool during summer 2013. **GB**
3. At least two Pacific Southwest Region refuges apply the tool to develop inventory (or monitoring) protocols and conduct inventories (or monitoring) of priority invasive plants. **GB, Utah CESU, EB, SD**
4. Develop plan to identify, document, prioritize and assess the status (inventory or early detection monitoring) of priority invasive plant threats on Pacific Southwest Region refuges.

**Objective 2.3** *Develop an adapted statewide spatial tool (WHIPPET) to strategically allocate limited resources for invasive plant treatment actions at a local refuge scale (using spatial inventory data) by the summer of FY 2014. Test the tool using one to two refuge inventory datasets in FY 2013.*

**Key Actions**

1. Continue collaboration with the California Invasive Plant Council and U. S. Forest Service to adapt WHIPPET for use at a local land manager scale. The California Invasive Plant Council is the lead on adapting the tool. **GB**
2. Test the current utility of the WHIPPET tool using inventory data from 1-2 refuges during spring 2013. **GB, EB**
3. Adapt factors contained in the WHIPPET tool for use at a local land manager scale and obtain peer review of tool adaptations by refuges and other conservation land managers (National Park Service, Land Trusts, etc.) during summer of 2013. **GB**
4. Complete development of the WHIPPET tool and work with the California Invasive Plant Council to identify the platform (on-line, desktop) for tool dissemination and access by refuges and other conservation land managers. **GB**

**Objective 2.4** *Demonstrate the utility of invasive plant inventory and monitoring data to develop or refine a strategic plan for invasive plant management at one refuge, and share results with refuges throughout the Pacific Southwest Region.*

**Key Actions**

1. Publish results of the *Lepidium latifolium* invasive plant inventory study (San Pablo Bay NWR) by December 2013. **GB, Biometrician (CESU)**

2. Prioritize future invasive plant management actions at San Pablo Bay NWR using the WHIPPET Tool during spring 2013. **GB, EB, CA Invasive Plant Council**
3. Assist the San Pablo Bay NWR with updating the San Pablo Bay *Lepidium latifolium* Control Plan using the results of the inventory study (5.4.1) and WHIPPET results (5.3.1). **GB**
4. Share inventory and weed management planning results with Pacific Southwest Region refuges through webinars and other refuge communications (newsletter, field visits). **GB**

#### **Thematic Area: Refuge Water Resources [Lead: Rachel Esralew]**

**Objective 2.5 *Complete three Water Resources Inventories and Assessments (WRIA) at stations identified in FY 2012 that can be used by refuge staff to make water management decisions.***

##### **Key Actions**

1. Conduct 1-3 refuge visits at 3 refuges to collect legacy information, map water resources infrastructure, develop conceptual models of refuge flow systems, and conduct interviews to document water resources issues to support development of WRIA reports by June 2013. **RE**
2. Complete WRIA reports for the 3 WRIA refuges that summarize analysis of water measurement data and provide conceptual water flow system information (maps/tables, etc.). Information for the report is leveraged from refuge legacy data, other agencies, and universities. **RE, EB**
3. Enter geospatial water resources information for 2 WRIAs into the national WRIA database framework to support testing and further development of the WRIA database system. **RE, EB**

**Objective 2.6 *Develop a plan to improve access to water rights information for refuges in Pacific Southwest Region to help refuges meet legal requirements.***

##### **Key Actions**

1. By 1st quarter FY13, finalize report summarizing water rights information needs in California and Nevada as relevant to refuges with input from Pacific Southwest Region regional refuge management and water branch divisions. **RE**
2. Develop report and presentation for Pacific Southwest Region Refuges Chief describing critical water rights information needs for relevant refuges by 2<sup>nd</sup> quarter FY 2013. **RE**

#### **Thematic Area: Climate Change [Co-Leads: Giselle Block and Rachel Esralew]**

**Objective 2.7 *Provide refuge-scale climate modeling information to four coastal tidal marsh refuges that evaluates ecosystem response to sea level rise and provides information needed to assess vulnerability of priority natural resources and develop climate adaptation strategies.***

##### **Key Actions**

1. Assist U.S. Geological Survey (USGS) in completing sea level rise modeling reports for four coastal tidal marsh refuges. The reports will document baseline elevation, vegetation, and sediment status and identify potential changes (tidal marsh loss, vegetation type conversion) in response to various sea level rise scenarios by summer 2013. **GB**
2. Assess the vulnerability of priority natural resources to sea level rise on at least one coastal tidal marsh refuge (Seal Beach NWR). The vulnerability assessment will document potential

changes to priority refuge biotic and abiotic resources, identify priority long-term monitoring variables to detect changing resource conditions and inform alternative management strategies to meet refuge goals in response to projected climate change. **GB, Biometrician**  
\*Completion of this work is dependent upon obtaining funds from the Department of Defense Legacy Grant Program. Partners: USGS (project lead) and EcoAdapt.

**Objective 2.8** *Analyze the effects of climate change on refuge water resources (water supply and evapotranspirative demands) for a selected refuge and begin evaluating feasibility of applying this analysis to additional refuges.*

#### **Key Actions**

1. Submit draft journal article summarizing analysis of the effects of climate change on refuge water supply and managed habitat water demand at one selected refuge that dominantly uses surface water supply using USGS Basin Characterization Model (BCM) in conjunction with USGS and University of California Davis researchers (continuation of FY 2012 project) by 2<sup>nd</sup> quarter FY 2013. **RE**
2. Develop proposal to extend analysis from pilot climate change studies to additional refuges based on results from Modoc study. **RE, KL**

### **GOAL 3: Strategic Planning and Partnering To Meet Priority Refuge Needs**

**Thematic Area: Habitat Management Plans (HMPs) And Inventory & Monitoring Plans (IMPs)**  
**[Co-Leads: Sallie Hejl, Carol Damberg, Giselle Block, Orien Richmond]**

**Objective 3.1** *Develop a streamlined process for creating concise, user-friendly HMPs and IMPs that will help refuge staff improve decision-making about managing habitats for resources of concern and can be created within 9 months.*

#### **Key Actions**

1. By January 2013, develop a HMP/IMP project process for Pacific Southwest Region, including 1) recommended outline of critical components, 2) Sharepoint communication tool for regional office and refuge staff with all key documents and 3) draft guidance document for HMP process. **SH, CD, GB**
2. By December 2013, refine the HMP/IMP outline and corresponding guidance document based on the success of the pilot. **SH, GB**

**Objective 3.2** *Create a pilot HMP and IMP for at least one refuge.*

#### **Key Actions**

1. By November 2012, select a refuge to work with to test the HMP/IMP planning process. **SH, KL, GB, OR, SD**
2. Pilot-test the Pacific Southwest Region HMP/IMP planning process with the selected pilot refuge. **SH, KL, GB, OR, SD**



**Objective 3.3** *Develop a regional timeline for completing HMPs and IMPs that will lead to completed plans for each refuge by FY 2016.*

**Key Actions**

1. By November 2013, work with regional and refuge leadership to develop a regional timeline for completing HMPs and IMPs at each refuge which complements needs of the regional planning division. **SH, CD, KL**

**Thematic Area: Coordinated Bird Monitoring [Lead: Orien Richmond]**

**Objective 3.4** *Complete the second year of a pilot project to implement a national standardized marsh bird monitoring protocol with San Francisco Estuary refuges and partners to demonstrate how new standardized survey protocols can be adopted while maintaining continuity with refuge legacy data.*

**Key Actions**

1. Work with PRBO Conservation Science to complete preliminary analysis of data from first year (2012) of San Francisco Estuary pilot project, including a power analysis by the end of November 2012. **OR**
2. Coordinate with partners (Don Edwards San Francisco Bay and San Pablo Bay NWRs, PRBO Conservation Science, California Coastal Conservancy, San Francisco Bay Joint Venture, USGS, East Bay Regional Parks District, California Department of Fish and Wildlife) to carry out second year of fieldwork in San Francisco Estuary from January-April, 2013. Scope of data collection will depend on levels of partner funding and power analysis of first year's data. **OR, SD**
3. Work with PRBO to analyze San Francisco Estuary data collected in the first two years of the project, write up results in a draft report and refine pilot marsh bird monitoring protocol for refuges and conservation partners by December 2013. **OR, SD**
4. Develop a plan for expanding project to other refuges that monitor marsh birds (Humboldt, Modoc, Klamath Basin Complex, Sonny Bono, San Diego Complex, Ash Meadows). **OR**
5. Leverage impact of pilot project by developing a California Clapper Rail survey protocol for the Endangered Species regional office office to ensure consistent data collection throughout the range of the CA clapper rail. **OR, SD**

**Objective 3.5** *Complete a new GPS-based aerial survey protocol and data reporting process for San Francisco Estuary Mid-Winter Waterfowl Surveys to demonstrate how data from large-scale monitoring efforts can be used to serve refuge-specific information needs.*

**Key Actions**

1. Engage with partners (Don Edwards San Francisco Bay and San Pablo Bay NWRs, San Francisco Bay Bird Observatory, USGS) to complete final report for 2012 survey, including a write up of the new GPS-based aerial survey protocol, and train refuge staff in producing final reports for future years. **OR, SD**

2. Compare existing databases for storing Mid-Winter Waterfowl Survey data in order to make the data more accessible and to contribute to larger-scale analyses, then select one for data storage/public access and pilot it. **OR, KK**
3. Hold meetings with partners and consult with a biometrician to update the San Francisco Estuary sampling scheme. **OR**
4. Assist with 2013 Mid-Winter Waterfowl Survey training, data collection, data entry/transcription. **OR, SD**
5. Work through University of California, Davis cooperative agreement (CESU) to complete Mid-Winter Survey data correction tool. **OR, CESU**
6. Continue working with University of California, Davis biometrician, San Francisco Bay Bird Observatory and other partners to complete project comparing 1980s South Bay historical waterbird data to modern Mid-Winter Survey data. **OR, SD, CESU**

**Objective 3.6 *Complete a draft database of regional or national bird conservation and/or monitoring plans, evaluate refuge participation in these plans and identify gaps where greater support for coordinated bird monitoring is needed in the region to support HMP and IMP development.***

#### **Key Actions**

1. Work with the national I&M Bird Protocols and Databases Work Group to refine criteria for evaluating bird monitoring protocols and bird databases. **OR, KK**
2. Participate on the national Marsh Bird Working Group. **OR**
3. Identify and enter into the draft database regional, state, flyway and national bird conservation and monitoring goals/targets by analyzing bird monitoring plans (e.g., Joint Venture monitoring plans, Migratory Bird Strategic Plans, North American Waterbird Conservation Plan, Southern Pacific Shorebird Conservation Plan), attending meetings (e.g., Joint Ventures, Western Field Ornithologists, etc.) and networking in order to support coordinated bird monitoring on R8 refuges and to contribute to the Habitat Management Plan (HMP) process for refuges. **OR, SD**
4. Assist PRBO Conservation Science with data sharing agreement for the Pacific Flyway Shorebird Survey on R8 refuges. **OR, KL**

**Thematic Area: I&M Planning and Partnerships: [Lead: Karen Laing]**

**Objective 3.7 *Complete the Pacific Southwest Region Needs Assessment to understand the needs of refuges, and use the Assessment to guide I&M annual work plans and 5-year strategic plan.*** **GB**

#### **Key Actions**

1. Between January and June 2013, share draft results of the Pacific Southwest Region Refuges I&M Needs Assessment with refuges and the regional Biological Advisory Council (BAC) via reports, webinars or other media. **GB, KL**
2. Complete the Needs Assessment report by June 2013. **GB, OR, SD**
3. Use results from the Needs Assessment to set priorities for, and/or change direction of regional I&M planning documents. **KL**

4. Create a communication plan to disseminate the information gained from the Needs Assessment and PRIMR database to key partners (e.g., BAC, Planning, Migratory Bird Management, Joint Ventures, etc). **GB**

**Objective 3.8** *All Pacific Southwest Region I&M program services and products reflect the natural resource priorities of refuges and address strategic input from key partners and stakeholders.*

**Key Actions**

1. Provide draft I&M project plans, annual and 5-year work plans, and annual reports to the BAC and incorporate their feedback. **KL**
2. Attend at least one NWRS project leader meeting in FY 2013, providing the annual work plans and reports to receive feedback and share lessons learned. **KL**
3. Use the annual work plan and 5 year strategic plan tools to establish clear program priorities based on input from refuges and partners; coordinate team implementation, measure progress and adapt major I&M goals and objectives. **KL**
4. Complete a 5-year strategic plan for Pacific Southwest Region I&M based on input from refuges and partners, and begin to implement it. **All**

**Objective 3.9** *Identify strategic Service and non-Service partners to communicate and advocate for refuge needs with key decision makers.*

**Key Actions**

1. Participate in the regular meetings (e.g. biweekly conference calls and semiannual in-person meetings) of the National Coordination Team (i.e., all regional I&M Coordinators and the NRPC I&M staff) and relevant working group(s) to ensure that the national I&M initiative incorporates the Pacific Southwest Region I&M priorities, needs and lessons in their activities. **KL**
2. Contribute to the creation and implementation of a national 7 year strategic plan for the national I&M initiative. **KL (KK,GB)**
3. At least 3 staff members will participate in or lead at least one national or multiregional I&M team or project relevant to priority goal(s). **All**
4. At least one I&M staff member will participate on key committees (e.g. Science, Informatics) of the California LCC to communicate refuge inventory and monitoring needs and identify opportunities to integrate refuge conservation needs into larger landscape conservation projects. **GB, KK**

**Table 1: Pacific Southwest Region Inventory & Monitoring Team**

<b><u>Regional Natural Resources Staff</u></b>	
<b>Carol Damberg (CD)</b>	Chief, Refuge Operations
<b>Sallie Hejl (SH)</b>	Regional Refuge Biologist
<b><u>I&amp;M Staff</u></b>	
<b>Giselle Block (GB)</b>	I&M Biologist
<b>Erin Boyle (EB)</b>	GIS Specialist
<b>Sharon Dulava (SD)</b>	Biological Technician
<b>Rachel Esralew (RE)</b>	Regional Hydrologist
<b>Rita Howard (RH)</b>	Administrative Support
<b>Meghan Hughes (MH)</b>	Hydrologist
<b>Kaylene Keller (KK)</b>	Regional Data Manager, Ecologist
<b>Karen Laing (KL)</b>	Regional I&M Coordinator
<b>Kelsey McDonald (KM)</b>	Pathways Student
<b>Orien Richmond (OR)</b>	I&M Biologist

**Table 2: Projected FY 2013 Budget for the Pacific Southwest Region I&M initiative**

Permanent I&M Salaries	689,000.00
Permanent Regional Salaries	67,000.00
Term/Temporary Salaries	\$183,000.00
Fixed Costs & Assessments	\$276,000.00
Projects	\$545,000.00
Supplies & Equipment	\$65,000.00
Estimated Total	\$1,825,000.00



**Table 3: Current Partners to Pacific Southwest Region Inventory & Monitoring**

<b>Partner</b>	<b>Representative</b>
California Academy of Sciences	Jack Dumbacher, Curator and Department Chair, Department of Ornithology and Mammalogy
California Department of Fish and Wildlife	Sarah Estrella, Associate Wildlife Biologist
California Invasive Plant Council	Doug Johnson, Executive Director
Ducks Unlimited	Dotti Dean-McMaster, Project Coordinator
East Bay Regional Parks District	Doug Bell, Wildlife Program Manager
Eco Adapt	Laura Hansen, Executive Director
Point Reyes Bird Observatory Conservation Science	Julian Wood, Wildlife Biologist
Region 6 Invasive Species Strike Team	Lindy Garner, Strike Team Coordinator
San Francisco Bay Bird Observatory	Catherine Burns, Executive Director
San Francisco Bay Joint Venture	Beth Huning, Coordinator
San Francisco Estuary Invasive Spartina Project, California Coastal Conservancy	Peggy Olofson, Director
University of California, Davis	Emilio Laca, Professor , James Quinn, Professor, Joshua Viers Associate Direction Center for Watershed Science
Univeristy of Nevada, Reno	Elizabeth Ledger, Professor, Wendy Trowbridge, Researcher
U.S. Forest Service	David Bakke, Regional Coordinator (Forest Health, Pesticide Management and Coordination)
U.S. Geological Survey, Western Ecological Research Center	Dr. John Takekawa, Supervisory Research Wildlife Biologist
USFWS National I&M Invasive Plant Working Group	Regional I&M representatives, invasive species coordinators
USFWS National Invasives Program	Jenny Ericson
Utah State University	Dr Corey Ransom, Professor of Weed Science

**Table 4: Advisors and Partners Consulted in Planning Process**

Carol Damberg, Chief of Refuge Operations
Sallie Hejl, Regional Refuge Biologist
National Wildlife Refuges via Needs Assessment
National I&M Coordination Team via concurrent national planning process
Pacific Southwest Region Refuges Biological Advisory Council
Audrey Newman, Planning Facilitator

**Table 5: Acronyms**

BAC		Biological Advisory Council for the Pacific Southwest Region refuges
BCM		Basin Characterization Model
CESU		Cooperative Ecosystems Studies Unit
GIS		Geographic Information System
GPS		Global Positioning System
FY		Fiscal Year
HMP		Habitat Management Plan
IMP		Inventory and Monitoring Plan
I&M		Inventory and Monitoring initiative of the U.S. Fish and Wildlife Service
LCC		Landscape Conservation Cooperative
NWR		National Wildlife Refuge
NWRS		National Wildlife Refuge System
NRPC		Natural Resources Program Center, the national home of I&M in Ft. Collins, Colorado
PRBO		PRBO Conservation Science, a non-profit organization
PRIMR		Planning and Review of Inventory and Monitoring on Refuges (a database to catalog surveys conducted by refuges)
RLGIS		Refuge Land Geographic Information System
ServCat		Service Catalog, an online system to store and access documents
USFWS		United States Fish and Wildlife Service
USGS		United States Geological Survey
WHIPPET		a spatial tool to strategically allocate limited resources for invasive plant treatment
WRIA		Water Resources Inventories and Assessment