North Bay Watershed Association

BAIRWMP Update- June 2012

Bay Area **Integrated Regional** Water Management Plan

http://bairwmp.org/

- Schedule Update
- Project Template/Prioritization
- Governance Chapter
- Plan Objectives/ measures
- Climate Change Efforts
- Outreach/Workshops

Schedule Update

* Focus on events since January 24, 2012

  Background- NBWA web site

  http://www.nbwatershed.org/ under Watershed Council-presentations

* Overall Schedule- still finish by August 2013

* May 2012- Refined schedule for Coordinating Committee and Outreach developed- http://bairwmp.org/

  Recent events- May 21 meeting attachments

Coordinating Committee meetings 2012-

- **June 25-** Plan Objectives and measures
  - start Project prioritization process
- **July**-Finalize quantification of Objectives
  -Start Land Use
- **August** – Finalize Project prioritization process
- **September**-Review Proposed Project Prioritization
- **October-**Resource Management Strategies and Climate Change
- **November –**Impacts and Financing
- **December**- Relation to Local land use Planning

Project Template/Prioritization

- IRWMP Project Template available on line now- download

http://bairwmp.org/projects/submitting-a-project-to-the-bay-area-irwmp#section-3

1) Complete an **IRWMP Project Template** for the proposed project.
2) Submit the project template via email to Projects@bairwmp.org.
3) The Bay Area IRWMP Project Screening Subcommittee will review the submittal and make a recommendation to the Bay Area IRWMP Coordinating Committee (CC).
4) The CC will make the final determination on adding the project to the Bay Area IRWMP.

Highly Recommended

We highly recommend that those submitting or updating a project look for and review other projects in their vicinity to see if there are opportunities to team up and create a better integrated and multipurpose project.

Projects Already in the Plan

- All projects will be updated during the 2013 plan update.

Projects/Prioritization

- August- finalize prioritization process
- Project Submittal deadline- Sept.1, 2012
- Final chapter- December 2012

Governance Chapter

- Test chapter for review process
- First reviewed by Plan Update Team + (PUT)
- May 25-e-mail to IRWM Plan Update "targeted reviewers" –comments to Functional Area Leads:

Flood Protection/Stormwater – Carol Mahoney (cmahoney@zone7water.com)

Wastewater/Recycled Water – Cheryl Muñoz (cmunoz@sfwater.org)

Watershed/Habitat Protection – Matt Gerhart (mgerhart@scc.ca.gov)

Water Supply/Water Quality – Brad Sherwood (Brad.Sherwood@scwa.ca.gov

- Finalize by end of July

-Available for general public review

Plan Objectives

- 2006 plan has **6** goals and **62** objectives
- Functional Areas and PUT now reviewing and considering additions /deletions
- Also considering performance measures for Objectives- "Quantify objectives"

  K_J has proposed measurements
- Will also go to "Targeted Reviewers"
- Coordinating Committee-July
- Finalize by September, 2012

Goals and objectives measures?

- Examples follow focused on Watershed/Habitat Functional Area

Goal-Contribute to the promotion of economic, social, and environmental sustainability

- Providing trails and recreation opportunities

- *Obtain X miles of trails and/or X acres of parklands by year Y*

- Protecting cultural resources

- *Acquire acreage or conservation easements for X acres of culturally valuable area/resource*

- Increasing community outreach and education for watershed health

`-*Provide information and training opportunities to X groups/individual during the next Y years/annually; Host educational events at X schools over the next y years/annually*

- Maximizing community involvement and stewardship

-*Provide volunteer opportunities to X groups annually/over the next Y years*

Goal-Contribute to improved supply reliability

- Providing for groundwater recharge while maintaining groundwater resources

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- Increasing opportunities for recycled water use consistent with health and safety

- Conduct X recycled water feasibility studies/ market assessments by year Y; Increase recycled water production by X AFY by year Y

Goal-Contribute to the protection and improvement of hydrologic function

- Controlling excessive erosion and managing sedimentation

Reduce erosion/ soil loss by X tons per acre per year; meet established sediment TMDL requirements

- Maintaining or improving in-stream flow conditions

-Restore/rehabilitate X miles of natural streams; increase average in-stream flows

- Improving floodplain connectivity

-Purchase and preserve X acres of private property in the 100-year floodplain by year Y

Goal-Contribute to the protection and improvement of the quality of water resources

- Preserving natural stream buffers and floodplains to improve filtration of point and non-point source pollutants

-Purchase and preserve X acres of private property in the 100-year floodplain by year Y; restore/rehabilitate X miles of natural streams

- Maintaining health of whole watershed, upland vegetation and land cover to reduce runoff quantity and improve runoff quality

-Acquire and protect X acres of upstream lands; implement X low impact development projects by year Y

Goal-Contribute to the protection of public health, safety, and property

- Minimizing health impacts associated with polluted waterways

-Meet established and future TMDL requirements; Provide informational brochures/ host educational events X times per year

Goal-enhancement, and maintenance of environmental resources and habitats

- Acquiring, protecting and/or restoring wetlands, streams, and riparian areas

-Acquire acreage or conservation easements for X acres of culturally valuable area/resource; restore/protect X acres of wetlands by year Y; restore/protect X miles of streams by year Y

- Enhancing wildlife populations and biodiversity (species richness)

-Provide X acres of additional critical habitat by year Y; reduce invasive species numbers by X percent by year Y; acquire and preserve X acres of wildlife corridor lands

- Providing lifecycle support (shelter, reproduction, feeding)

-Provide X acres of additional critical habitat by year Y; restore/protect X acres of riparian habitat by year Y

- Protecting and recovering fisheries (natural habitat and harvesting)

-Restore/protect X miles of streams by year Y; restore X fish populations to sustainable levels by year Y

Goal-enhancement, and maintenance of environmental resources and habitats

- Protecting wildlife movement/wildlife corridors

-Acquire and preserve X acres of wildlife corridor lands

- Managing pests and invasive species

-Reduce invasive species cover to X percent by year Y in areas of high invasive species density and maintain at X percent or less in areas of low densities; reduce invasive species numbers by X percent by year Y

- Recovering at-risk native and special status species

-Recover X numbers of at risk native and special status species by year Y

- Improving structural complexity (riparian and channel)

-Restore/protect X miles of streams by year Y; de-channelize and/or daylight X miles of streams by year Y

Climate Change Efforts

- March- KJ Team identified information needs
- May
  - Draft outline of Chapter developed
  - KJ team suggested forming a Technical Advisory Committee (TAC)
  - Considering 3 TAC workshops
    - First focused on vulnerability assessments

Water Supply & Hydropower

- ***What parts of your region rely on water diverted from the Delta or imported from other climate-sensitive systems outside your region?***

  Some imported or transferred water supplies are sources from climate-sensitive watersheds, such as water imported from the Delta and the Sierra Nevada Mountains
- ***Are coastal aquifers important to water supply? Has salt intrusion been a problem in the past?***

  Coastal aquifers are susceptible to salt intrusion as sea levels rise, and many have already observed salt intrusion due to over-extraction, such as the West Coast Basin in southern California.
- ***Is water storage adequate to carryover supply surpluses from year to year?***

  Droughts are expected to become more severe in the future. Systems that can store more water may be more resilient to droughts.
- ***Have previous droughts in the region caused failure to meet local water demands?***

  Droughts are expected to become more severe in the future. Systems that have already come close to their supply thresholds may be especially vulnerable to droughts in the future.
- ***Does your region have invasive species management issues at your facilities, along conveyance structures, or in habitat areas?***

  As invasive species are expected to become more prevalent with climate change, existing invasive species issues may indicate an ecological vulnerability to climate change.
- ***Is hydropower a source of electricity in your region?***

  As seasonal river flows shift, hydropower is expected to become less reliable in the future.
- ***Are energy needs in your region expected to increase in the future? If so, are there future plans for hydropower generation facilities or conditions for hydropower generation in your region?***

  Energy needs are expected to increase in many locations as the climate warms. This increase in electricity demand may compound decreases in hydropower production, increasing its priority for a region.

Water Quality

- ***Are increased wildfires a threat? If so, does your region include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?***

  Some areas are expected to become more vulnerable to wildfires over time.

- ***Are there surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?***

  Warming temperatures will result in lower dissolved oxygen levels in water bodies, which are exacerbated by algal blooms and in turn enhance eutrophication. Changes in stream flows may alter pollutant concentrations in water bodies.

- ***Are seasonal low flows decreasing for some water bodies? If so, are the reduced low flows limiting the water bodies' assimilative capacity?***

  In the future, low flow conditions are expected to be more extreme and last longer. This may result in higher pollutant concentrations where loadings increase or remain constant.

- ***Are there beneficial uses designated for some water bodies that cannot always be met due to water quality issues?***

  In the future, low flows are expected decrease, and to last longer. This may result in higher pollutant concentrations where loadings increase or remain constant.

- ***Does part of the region currently observe water quality shifts during rain events that impact treatment facility operation?***

  While it is unclear how average precipitation will change with temperature, it is generally agreed that storm severity will probably increase. More intense, severe storms may lead to increased erosion, which will increase turbidity in surface waters. Areas that already observe water quality responses to rainstorm intensity may be especially vulnerable.

Sea Level Rise

- ***What coastal structures, such as levees or breakwaters, exist in your region?***
  - Coastal structures designed for a specific mean sea level may be impacted by sea level rise.
- ***What significant coastal infrastructure (such as residences, recreation, water and wastewater treatment, tourism, and transportation) is located at less than six feet above mean sea level in your region?***
  - Coastal flooding will become more common, and will impact a greater extent of property, as sea levels rise. Critical infrastructure in the coastal floodplain may be at risk.
- ***Are there climate-sensitive low-lying coastal habitats in your region?***
  - Low-lying coastal habitats that are particularly vulnerable to climate change include estuaries and coastal wetlands that rely on a delicate balance of freshwater and salt water.
- ***What areas in your region currently flood during extreme high tides or storm surges?***
  - Areas that are already experiencing flooding during storm surges and very high tides, are more likely to experience increased flooding as sea levels rise.
- ***What infrastructure is located in areas of land subsidence in the coastal areas of your region?***
  - Land subsidence may compound the impacts of sea level rise.

Flooding

- ***Does critical infrastructure in your region lie within the 200-year floodplain?***
  - While it is unclear how average precipitation will change with temperature, it is generally agreed that storm severity will probably increase. More intense, severe storms may lead to higher peak flows and more severe floods.
- ***What public safety issues could be affected by increased flooding events or intensity?***
  - For example, evacuation routes, emergency personnel access, hospitals, water treatment and wastewater treatment plants, power generation plants and fire stations should be considered.
- ***What key regional or economic functions could be impacted from more frequent and/or intense flooding?***
- ***What critical flood protection infrastructure in your region is aging, and when did/will its planned useful life end?***
  - Levees and other flood protection facilities across the state of California are aging and in need of repair. Due to their overall lowered resiliency, these facilities may be particularly vulnerable to climate change impacts.
- ***Which flood control facilities (such as impoundment structures) have been insufficient in the past?***
  - Reservoirs and other facilities with impoundment capacity may be insufficient for severe storms in the future. Facilities that have been insufficient in the past may be particularly vulnerable.
- ***Are wildfires a concern in areas near your critical infrastructure?***
  - Wildfires alter the landscape and soil conditions, increasing the risk of flooding within the burn and downstream areas. Some areas are expected to become more vulnerable to wildfires over time.

Ecosystem and Habitat Vulnerability

- ***Which inland or coastal aquatic habitats are vulnerable to erosion and sedimentation issues?***
  - Erosion is expected to increase with climate change, and sedimentation is expected to shift. Habitats sensitive to these events may be particularly vulnerable to climate change.
- ***What are the climate-sensitive fauna or flora populations that live in your region?***
  - Some specific species are more sensitive to climate variations than others.
- ***Which endangered or threatened species exist in your region? Are changes in species distribution already being observed in parts of your region?***
  - Species that are already threatened or endangered may have a lowered capacity to adapt to climate change.
- ***Which recreation or other economic activities rely on aquatic or water-dependent habitats?***
  - Economic values associated with natural habitat can influence prioritization.
- ***Where are the areas of fragmented estuarine, aquatic, or wetland wildlife habitat within your region? Are there movement corridors for species to naturally migrate? Are infrastructure projects planned that might preclude species movement?***
  - These ecosystems are particularly vulnerable to climate change.

Related Efforts

- The Bay Area Joint Policy Committee (MTC/BCDC/BAAQMD/ABAG)

-Preparing the Bay Area for a Changing Climate- Stakeholder Workshop- June 7, 2012

http://www.abag.ca.gov/jointpolicy/jpc_climate_change.htm

- Bay Area Ecosystem Climate Change Consortium BAECCC

  http://baeccc.org/

Outreach/Workshops

- North Bay efforts since January 2012
  - Marin meeting- February 9
  - Napa meeting- February 21
  - Sonoma meeting- March 1, 2012
  - Solano-no meeting

Bay Area Outreach

- January-"Lessons Learned" – By K&W
- April- stakeholder engagement planning workshop
- May 21- Options presented to CC
  1) 3-4 regional workshops -evening-Oakland or SF
  2) 12-15 sub-regional workshops

  *June 6- Call with sub-region leads

  Hybrid- Regional workshop followed by sub-regional meetings as needed

  *DAC effort in parallel- K&W actively seeking projects

Bay Area Outreach

- Topics for 1st Workshop-
  - Update Process
  - Objectives and quantification
  - Project Criteria
  - Introduction to Climate Change

*Likely mid July