



Monterey Regional Water Pollution Control Agency

*"Dedicated to meeting the wastewater and reclamation needs
of our member agencies, while protecting the environment."*

Administration Office:
5 Harris Court, Bldg. D, Monterey, CA 93940-5756
(831) 372-3367 or 422-1001, FAX: (831) 372-6178
Website: www.mrwpc.org

NOTICE AND AGENDA BUDGET/PERSONNEL COMMITTEE

Gloria De La Rosa, Chair
Lou Calcagno, Dave Pendergrass, Carmelita Garcia, and Chris Orman

DATE:	Friday, March 12, 2010
TIME:	1:30 p.m.
LOCATION:	Admin Conference Room 5 Harris Court, Building D

PUBLIC COMMENTS

Anyone wishing to address the Committee on matters not appearing on the Agenda may do so now. Comments on any other matter listed on the Agenda are welcome at the time the matter is being considered by the Committee.

- 1. REVIEW WIND ENERGY FEASIBILITY STUDY** (see attachment)
- 2. UPDATE ON CAPITAL IMPROVEMENT PROGRAM** (see attachment)
- 3. RECESS TO CLOSED SESSION**
As permitted by Government Code Section 54956 et seq. , the committee may adjourn to a Closed or Executive Session to consider specific matters dealing with litigation, certain personnel matters, property negotiations or to confer with the Agency's Meyer-Milias-Brown Act representative.
 - A. Conference with Labor Negotiator**
 - **Agency Negotiator: General Manager**
 - **Employee Organizations: General Employees Association (GEA)
Mid-Management Employees Group (MMEG)
Management Employees Group (MEG)**
- 4. POSSIBLE ACTION ON CLOSED SESSION ITEMS**
The Committee will report out on any action taken during Closed Session, and may take additional action in Open Session, as appropriate.

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Joint Powers Authority Member Entities:

Boronda County Sanitation District, Castroville Community Services Water District, County of Monterey, Del Rey Oaks, Fort Ord, Marina Coast Water District, Monterey, Moss Landing County Sanitation District, Pacific Grove, Salinas, Sand City, and Seaside.

BUDGET/PERSONNEL COMMITTEE

March 12, 2010

Page 2 of 2

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This Committee Meeting Notice and Agenda was hereby posted at the MRWPCA Administrative offices, 5 Harris Court, Building D, Monterey, California 93940.

POSTED: **Monday, March 8, 2010**

BY: */s/ Betty Nebb*
Executive Assistant



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MEMORANDUM

TO: BUDGET/PERSONNEL COMMITTEE

FROM: JENNIFER GONZALEZ, LEAD ENGINEER
(via Keith Israel, General Manager)

DATE: MARCH 5, 2010

SUBJECT: REVIEW WIND ENERGY FEASIBILITY STUDY

BACKGROUND:

The Board's 2009/2010 Strategic Planning Goals included a one-year objective to "Conduct a feasibility study for wind generation and present the results to the Board for action." This memo and the accompanying report are the result of staff's research and completion of the feasibility study.

Available data on wind energy projects in California led staff to the conclusion that a wind energy project on MRWPCA property is not feasible or desirable for the Agency for the following reasons:

- Wind speeds at the Treatment Plant are less than 13 mph average, the minimum wind speed cited by the California Energy Commission as necessary to make a project viable.
- County permitting issues including zoning, scenic easements, and noise generated by the wind turbines could become issues depending on the height of the proposed turbines.
- California Environmental Quality Act impacts to shorebirds and migratory birds could be significant.

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BUDGET/PERSONNEL COMMITTEE

March 5, 2010

Page 2 of 2

- Federal Aviation Administration airspace impacts to the Marina Airport air traffic control radar.
- Wind energy projects are quite land intensive, requiring 17 acres for 1 MW of electricity production. This, in comparison to the Agency's solar project, will require approximately 5 acres for 1 MW of generation.
- The Agency does not have the demand for this additional energy capacity. With new regulations for greenhouse gas emissions, our methane production and conversion to electricity through cogeneration will be essential to avoiding fines.

RECOMMENDATION:

Staff does not recommend pursuing further study of a wind-generated electricity project for the Agency at this time. The attached report further defines the reasons listed above.

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Wind Power Generation Feasibility

The California Energy Commission is one of the key players in the quest for maximizing renewable energy use in California. The Commission is California's primary energy policy and planning agency. One of their main responsibilities is supporting renewable energy by providing market support to existing, new, and emerging renewable technologies.

In the state of California, wind electricity production accounts for 1.5% of the state's power production on an annual basis. Three wind power generating projects in California generate 95% of the state's wind electricity. Those projects include: Altamont Pass, Tehachapi, and San Geronio. There are a total of 11 wind farms in California, the closest of which is in Hollister.

Pursuant to our 2009/10 Strategic Goals, MRWPCA staff looked into the feasibility of installing a wind power generation project at the Regional Treatment Plant (RTP) in order to: reduce dependence on outside power providers, potentially reduce electrical costs, and provide a source of "green" energy in addition to the solar Power Purchase Agreement (PPA) project currently under construction.

According to the California Energy Commission, in order for wind-driven projects to be considered viable on a medium to large scale, there are several initial factors which must be evaluated, these include:

- An average annual wind speed of > 13 mph;
- County permitting issues such as zoning- examining such factors as height of the wind-driven turbines affecting scenic easements, and noise produced by the turbines;
- California Environmental Quality Act (CEQA) evaluation and mitigation- examining the impacts to the environment including avian mortality, disturbance of wildlife habitat, and noise.

In the case of the Regional Treatment Plant, additional consideration must include Federal Aviation Administration requirements for wind turbine siting, because we are located adjacent to the City of Marina Airport.

Staff did an initial evaluation of the issues listed above to determine if wind power should be studied further for the RTP. The costs associated with preparing the necessary formal studies to get a wind project through the state, local and federal (because of our proximity to the airport) permitting processes are high, so this preliminary evaluation is crucial to saving the Agency money if wind energy does not end up being a viable option.

Average Wind Speed

The attached maps of "California Wind Resource Potential" and "Annual wind speeds at 30 m (100 ft) elevation" along the California coast (Attachments 1 and 2) were generated by the California Energy Commission and the Public Interest Energy Research Group. These maps show the area adjacent to the RTP to have average annual wind speeds of <13 mph. Though this data was generated for a large study area, it is representative of

wind power viability at our site. These maps indicate that wind power generation is not a viable option at the RTP. Further site specific wind data could be collected to further refine this information, but it is not likely to produce positive results.

County Permitting Issues

The County of Monterey defines “Wind Energy Conversion Systems” in their Zoning Ordinance. The County’s “Coastal Implementation Plan” specifies requirements for the placement and setback of wind turbines. The Wind Energy Conversion System requirements are attached to this report for information purposes. It is unclear at this time whether a wind powered system would be feasible under these requirements at the RTP because the total height of the system has not been designed.

Another issue that must be considered under the County requirements is the noise generated by wind-powered turbines. Although the RTP is currently surrounded by grazing land, noise impacts could become a problem in the future, as the City of Marina expands and develops into the Armstrong Ranch area.

CEQA Issues

In 2007, the California Energy Commission partnered with the California Department of Fish and Game to produce a document entitled “California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development”. This document outlines a stepwise process for determining the viability of permitting a wind project from a CEQA perspective.

The document lays out five steps to determine if a project will conflict with CEQA and Wildlife Protection Law requirements. These range from a Site Screening to a Pre-Permitting Assessment to Assessing Potential Issues and Identifying Mitigation Measures, all to be done prior to collecting monitoring data of the site. A particularly involved process is required for just one element of evaluation, avian and bat resources.

Staff worked through parts of the Preliminary Assessment to determine if this was another potential “fatal flaw” issue, and found that it may indeed be. Questions answered in the affirmative include: “Is the site near a wintering or staging area for shorebirds or seabirds? Is the site a migrating bird stopover point? Is the site subject to seasonal weather conditions, such as fog, which may increase the likelihood of collisions?”

Airport Considerations

The Federal Aviation Administration has oversight of any object that could have an impact on the navigable airspace or communications/navigation technology of aviation operations. The FAA requires a Notice of Proposed Construction form be filed for any object that would extend more than 200 feet above ground level or less in circumstances where the object is closer than 20,000 feet to a public-use airport with a runway more than 3,200 feet long.

The FAA considers several types of airspace impacts including: 1) imaginary surface penetration, 2) operational impacts, and 3) electromagnetic interference. The issue that would most likely impact our operation would be electromagnetic interference. Wind

turbines can degrade performance of air traffic control radar, especially when the turbine is located within 5 miles of the radar and in its line of sight.

The runway at the Marina Airport is located approximately 1.3 miles from the RTP and the airport radar is located less than three quarters of a mile from the RTP within line of sight.

Land Requirements

According to the California Energy Commission, approximately 17 acres of land is needed to produce one Megawatt of wind-generated electricity. Compared to the 5 - 6 acres of land required for a solar photovoltaic generated Megawatt, wind energy is not attractive in an area where land values are high. In addition, MRWPCA does not currently have adequate land to locate a viable system.

Recommendations

Staff does not recommend pursuing further study of a wind-generated electricity project for the Agency at this time. Our reasons include: The FAA restrictions on installation of wind turbines would most likely be the governing factor in stopping a wind project from going forward at this location. In addition, the climate at the RTP, though typically windy in the afternoon, does not have steady enough or winds with high enough sustained velocity to produce adequate wind energy. Permit considerations related to seabirds and migratory birds would likely be significant impacts to the project. Noise generated by the wind-driven turbines would have to be further evaluated to determine any required mitigation measures.

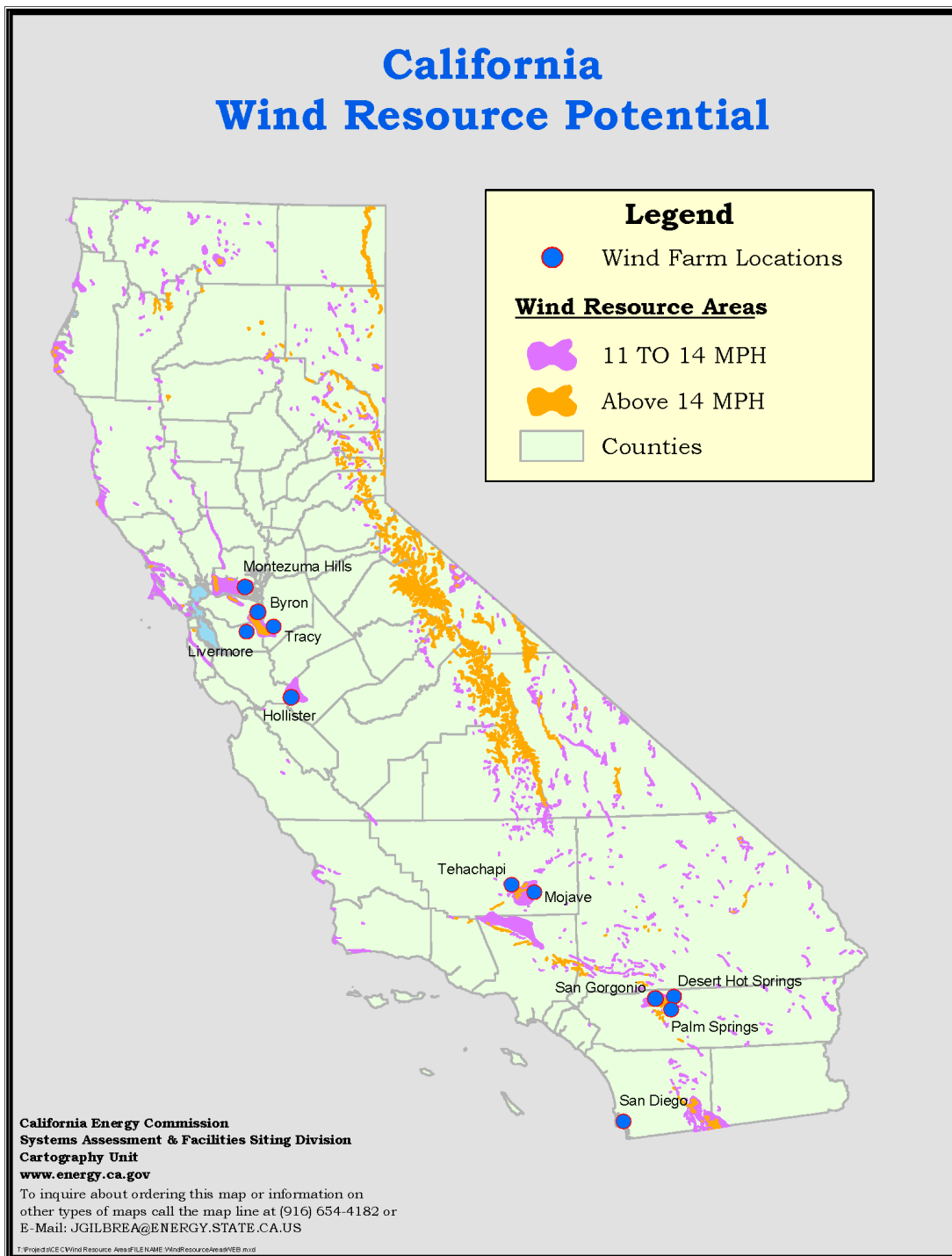
If all of the restrictions listed above were overcome, studies that would then have to be conducted in depth to further evaluate the potential for a wind project include: 1) collection and analysis of wind speed data, 2) collection of data on bird, bat and raptor habitat and use, and 3) any required studies by the FAA on potential electromagnetic interference. In addition, a full Environmental Impact Report would be necessary to explore and mitigate the numerous environmental issues associated with this project.

The Agency is currently under contract with a solar power provider to install a 5 acre solar array designed to produce approximately one megawatt of electricity to support the Salinas Valley Reclamation Project. Electricity demand to operate the primary and secondary treatment plant systems will remain fairly steady. The electricity to run that part of the plant is currently provided by our cogeneration facility.

Because of developing regulations on greenhouse gas emissions, MRPWCA will be required to continue and possibly expand cogeneration capacity at the RTP to maximize utilization of the methane gas produced by solids digestion. Future Federal and State requirements are anticipated to include fines for flaring of excess digester gas. The RTP will not have the energy demand to justify installation of a wind-generation facility at the plant, and the cost of installing such a project would far outweigh any benefit realized by selling excess energy back to the grid.

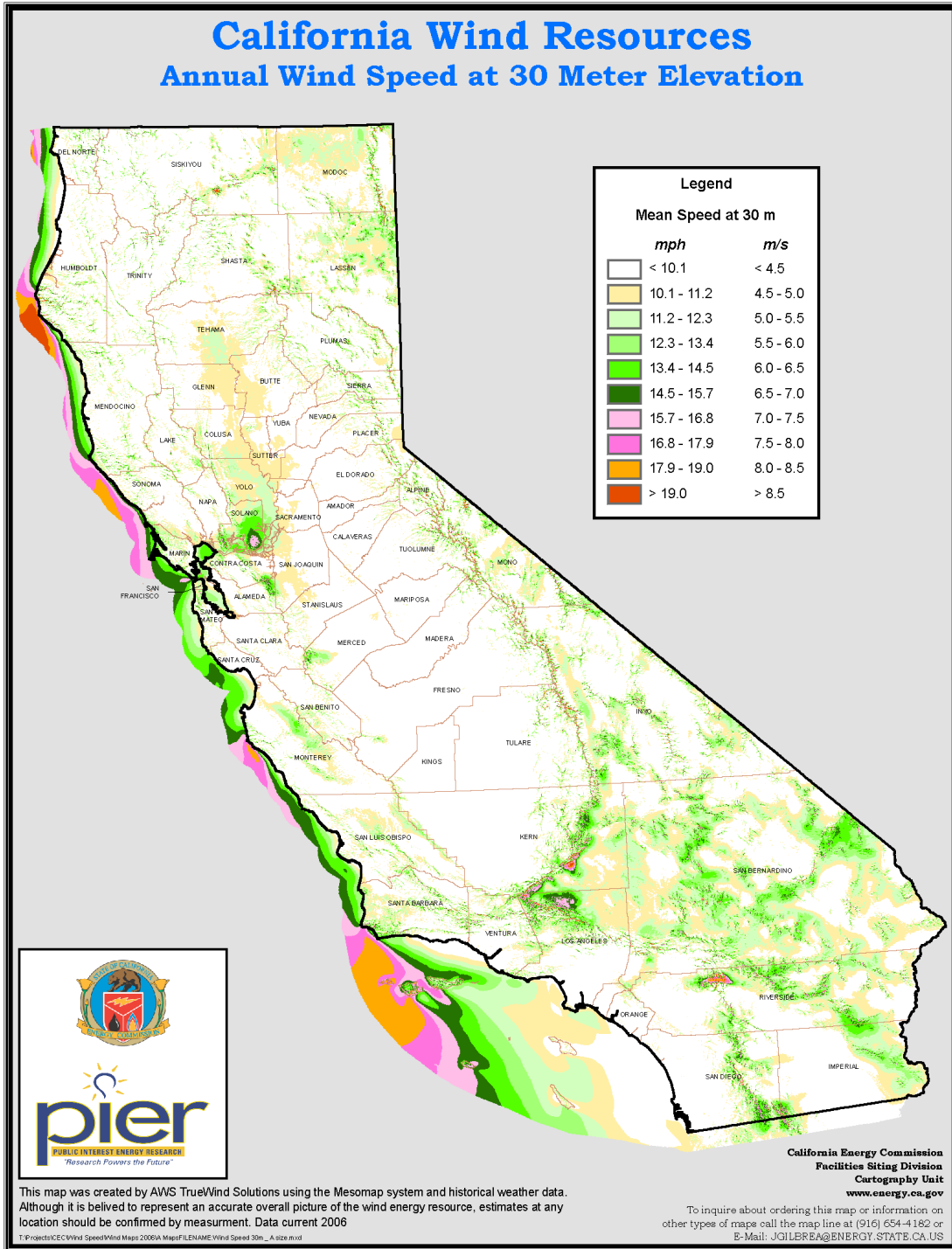
ATTACHMENT 1

CALIFORNIA WIND RESOURCE POTENTIAL MAP



ATTACHMENT 2

ANNUAL WIND SPEEDS AT 20M ELEVATION





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MEMORANDUM

TO: BUDGET/PERSONNEL COMMITTEE

FROM: JENNIFER GONZALEZ, LEAD ENGINEER
(via Keith Israel, General Manager)

DATE: MARCH 5, 2010

SUBJECT: UPDATE ON ASSET MANAGEMENT/CIP PLAN

BACKGROUND:

The Board's 2009/2010 Strategic Planning Goals included one-year objectives to "Complete and present to the Board an Asset Management Plan" and "Complete and present to the Board for action a 5-Year Capital Improvement Plan (CIP)." This memo is an update on the status of those two goals.

Carollo Engineers was hired to complete a "Pump Station Asset Management Project" for six of the Agency's largest pump stations. The preliminary report includes a short-term (1-2 years), medium-term (3-6 years) and long-term (7-15 years) CIP focused on renewal of existing assets. Assets assessed for this project were all major visible, above-ground assets at the Reeside, Monterey, Seaside, Fort Ord, Castroville and Salinas Pump Stations. The Asset Management approach includes Asset Inventory, Condition Assessment and Project Planning.

Agency staff accompanied Carollo's team of structural, mechanical, and electrical engineers on field visits to each of the six pump stations in November 2009. Prior to the field visits, an inventory of assets over \$10,000 in value was compiled. Condition Assessment included ranking each asset on a scale of 1 to 5 from "very good" condition to "unserviceable." The results of the Condition Assessment were compiled to create a list of projects to be considered at each

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MEMORANDUM
Budget/Personnel Committee
March 5, 2010
Page 2 of 2

Pump Station. Attachment 1 shows the draft list of projects compiled for the six pump stations for each of the short, medium, and long-term periods.

Agency staff is currently completing an Asset Management exercise using in-house staff to evaluate the various processes throughout the Regional Treatment Plant. A team of seven staff members from the Engineering, Operations, Maintenance, and Utilities Departments evaluated approximately 50 process areas at the treatment plant. Engineering staff is currently compiling the Condition Assessment information compiled during those walkthroughs. Once the Condition Assessments have been compiled, a list of Capital Improvement Projects will be developed for the treatment plant.

Staff will present the overall Capital Improvement Program at the March Board Meeting. Budget discussions related to the Capital Improvement Program will be discussed at future Budget/Personnel and Board meetings in April and May.

Information only – no action needed.

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ATTACHMENT 1

Table 1 R&R CIP Summary Pump Station Asset Management Project Monterey Regional Water Pollution Control Agency	
Year	Types of Projects
Short-Term CIP (2010 to 2011)	
2010	Stairs at Monterey, switchgear and MCC at Reeside
2011	Seismic evaluation
Medium-Term CIP (2012 to 2015)	
2012	DC drives and motors, generators, inlet rehabilitation, backup SCADA
2013	Seaside structural rehabilitation
2014	Channel monsters, structural rehabilitations, inlet rehabilitation, paving/grading, corrosion coating
2015	Instrumentation, roofing, SCADA and controls, ventilation, grease trap
Long-Term CIP (2016 to 2024)	
2016	Inlet rehabilitation
2018	Pumps at Seaside and Fort Ord pump stations
2019	Re-roofing at Fort Ord pump station
2020	Pumps at Reeside pump station and odor control at Monterey and Seaside pump stations
2021	Pumps and odor control at Castroville pump station
2022	Pump rehabilitation at Salinas pump station
2023	Chemical feed system at Salinas pump station, VFDs at Monterey, Seaside and Castroville pump stations
2024	VFDs at Salinas pump station