ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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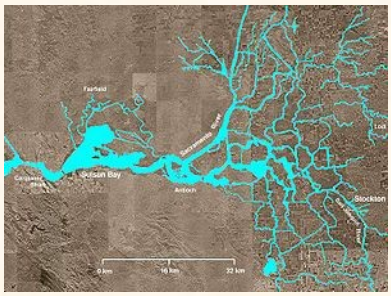
Featured Projects -ECORP evaluates the potential Impacts of the Delta Flow Criteria

The Sacramento-San Joaquin Delta (Delta) is an extremely important natural resource for California. It is at the center of California's water supply system and a valuable estuary and wetlands. The Delta is in crisis, resulting in high levels of conflict that affect the sustainability of existing water policy in California. Several species of fish have been listed as protected under the California Endangered Species Act (CESA) and under the federal Endangered Species Act (ESA). These two laws and other regulatory constraints have restricted water diversions from the Delta in an effort to prevent further harm.

The Delta Flow Criteria (DFC) was developed by the State Water Resources Control Board through a public process. It contains delta outflow and water quality criteria in an effort to improve the health of the Delta. The DFC has potential to impact operators from Northern California to Southern California and from the Sierra Nevada to the Coast Range. In an effort to evaluate potential impacts, ECORP was hired by several agencies to model the affects. Our study projects are in the Sierra Nevada above large federally owned reservoirs and could be subject to bypassing a portion of the unimpaired flow to support the DFC. Because the DFC has several components that can't be directly applied to the Sierra Nevada operations, the analysis had to be simplified. For this analysis, only the bypass flow prescriptions were applied. There are unique flow criteria for the Sacramento and San Joaquin Valley Operators. For agencies operating in the Sacramento Valley, 75% of the 14-day average unimpaired flow was bypassed from January through June. For agencies operating in the San Joaquin Valley, 60% of the 14-day average unimpaired flow was bypassed from February through June.

Each project has its own characteristics and responses vary, but in each case, there appear to be varying impacts to water supply and hydropower generation. Water supply impacts are generally due to bypassing portions of the larger storm events and spring runoff. This often results in an inability to fill the reservoirs during the wet season, leaving reduced supplies for meeting summer demands. In general, average annual generation is only slightly reduced. The real impact to generation appears to be a shift in generation patterns. The results indicate a noticeable increase in generation during the spring runoff period and a decrease in generation during the summer and fall months. This shift in generation does not coincide with the energy demand in California and significantly reduces the ability of hydropower generators to provide regulation for the electrical system.

In each of our case studies, there was a large federally owned reservoir downstream. In most years, the total annual volume of water leaving the study projects was nearly identical as the base case without DFC requirements. Although the volume of water is essentially the same, the pattern of project outflow has shifted from summer and fall to the spring runoff period. The analysis indicates that the larger downstream reservoirs generally have the ability to absorb the change in pattern, eliminating the need for placing unnecessary impacts on the upstream projects. Evaluation of the DFC is ongoing and ECORP continues to provide analysis and modeling services in support of our clients.



Inside this issue:

Timing for Biological Surveys

- Rare Plant Early Season (*starting mid March*)
- Fairy Shrimp and Tadpole Wet Season Sampling (*November-April)*
- Raptor nesting (*staring in February)*
- VELB Monitoring *(all year)*
- CTS Habitat Assessment (*all year)* and Protocol Surveys (*October-June)*
- California Red-legged Frog Habitat Assessment Surveys (*all year*) and Protocol Surveys(*January–September)*
- Bats Winter Hibernating (November–February and Maternity (*March-October)*

Laws and Regulations

Most private and public sector projects require the lead agencies to consider the effects of a proposed project on significant cultural resources, such as archaeological sites, historic buildings, and cultural landscapes. For example, projects that involve federal permitting, funding, or approval must comply with Section 106 of the National Historic Preservation Act and its implementing regulations in 36 CFR Part 800. Earlier this year, the Advisory Council on Historic Preservation (ACHP) sought public comment on the plans to review these regulations, pursuant to Executive Order 13563, "Improving Regulation and Regulatory Review." Sixty-six comments were received during the comment period, many of which resonate with project proponents in Northern California. These include:

- Review and revise the regulations frequently, to adapt to changes in economic climate
- Develop streamlining measures to expedite or eliminate the review of "No Historic Properties Affected" findings
- Develop harmonizing guidance for Section 106 and NEPA
- Develop a list of standard exemptions from Section 106 review
- Provide guidance on what constitutes a reasonable and good faith effort to identify historic properties
- Develop deadlines for federal agencies and tribes on the length of the review process to create certainty for private sector applicants
- Provide further guidance on defining and resolving indirect and cumulative effects

While the ACHP cannot affect changes in all of the above concerns, which fall to each individual federal agency, it will take the following actions in response to the public comments:

- Review the regulations once every five years, to determine if revisions are necessary
- Develop expanded training for cultural resources professionals and agency staff in compliance
- Develop guidance on the appropriate use of conditional "No Adverse Effect" Determinations as a measure for streamlining Section 106 review
- Advise federal agencies on developing and implementing review systems and programmatic approaches that promote efficient decision making
- Work with the Council on Environmental Quality and federal agencies to develop best practices guidance that promote NEPA coordination and substitution consistent with the regulations
- Develop performance measures to assess the effectiveness and efficiency of the Section 106 process

More information on the ACHP and its guidance for working with Section 106 can be found at http://www.achp.gov/work106.html.

In the News

The Third Circuit is the latest federal appeals court to attempt to decipher the U.S. Supreme Court's *Rapanos v. United States*[1] decision. *Rapanos* is the 4:1:4 decision from 2006 – famous in Clean Water Act ("CWA") circles – in which the Supreme Court announced differing standards for delineating the reach of federal jurisdiction over wetlands and other "isolated waters." In *United States v. Donovan*,[2] the Third Circuit, joining two other circuits, holds that a wetland falls within CWA jurisdiction if it satisfies *either* test announced in the fractured *Rapanos* decision. Specifically, the court held that a wetland falls within CWA jurisdiction if: (1) Justice Scalia's plurality test is met – i.e., there is a "continuous surface connection" between a wetland and a water of the United States in its own right, "so that there is no clear demarcation between 'waters' and 'wetlands'"; *or* (2) Justice Kennedy's "significant nexus" test is met – i.e., there is "a significant nexus to waters that are or were navigable in fact or that could reasonably be so made" so that, "either alone or in combination with similarly situated lands in the region," the wetlands "significantly affect the chemical, physical, and biological integrity of the covered waters more readily understood as 'navigable.

To read the full article go to

http://www.martenlaw.com/newsletter/20111206-clean-water-act-jurisdiction

Taken from the Marten Law Newsletter

Featured Department

The Mapping Department is the technical service group responsible for the maps and mapping related technology and products generated by ECORP Consulting. A map is a visual representation of an area and cartography, or map-making, is the study and practice of crafting representations of the Earth upon a flat surface. Large scale maps cover relatively small regions in great detail and small scale maps cover large regions such as counties, regions and entire states. The ECORP Mapping Department primarily creates large and small-scale maps of data collected and created by ECORP's scientific and technical staff, but it also catalogs and stores mapping data from a wide variety of agencies, public entities and academic institutions for future use and analysis.

Traditionally the world of precision cartography was divided into two main camps, those who used CAD software and those who used GIS software. CAD, or Computer Aided Design and/or Drafting, refers to the use of computer technology for the process of design and design-documentation that typically focuses on vector-based environments where objects are represented as points, lines and polygons. CAD software is typically utilized by surveyors and engineers looking to quickly create high precision, high accuracy blueprint style maps and schematics. GIS, or Geographic Information Systems, refer to a software package designed to capture, store, manipulate, analyze, manage, and present all types of geographically referenced data. This data is typically stored in a series of databases which contain both spatial data (points, lines and polygons) as well as supplementary attribute information about the data. For many years CAD systems were used to generate large scale maps (such as site survey maps) while GIS software was used to generate small scale maps (such as regional land cover maps) but as computer speeds have increased and software has gotten more powerful there has been a software convergence. Many modem CAD software packages now fit the definition of a GIS, and most traditional GIS packages are able to store and manipulate high precision measurements (and are even used by surveyors.) This means that we can typically work in any software package that will best suit our clients' needs. Currently the Mapping Department has access to the two of the most popular mapping platforms available: Esri's ArcGIS (previously known as ArcView or ArcInfo) and Autodesk's AutoCAD mapping packages, but we also use other GIS software such as Google Earth, QGIS and web mapping applications as well as spatially aware databases.

In addition to CAD and GIS software the mapping department is responsible for correcting, storing and analyzing field collected data from our GPS and survey equipment. Every point, line and area collected in the field with a mapping grade GPS unit is reviewed and quality controlled by a mapping department staff member. This is done using a piece of software called Pathfinder office that differentially corrects GPS data. To achieve the accuracies needed for quality mapping—from one to two meters up to a few centimeters—requires differential correction of the data. The underlying premise of differential GPS (DGPS) is that any two receivers that are relatively close together will experience similar atmospheric errors. DGPS requires that a GPS receiver be set up on a precisely known location. This GPS receiver is the base or reference station. The base station receiver calculates its position based on satellite signals and compares this location to the known location. The difference is applied to the GPS data recorded by the second GPS receiver. This assures that ECORP collects and stores the highest quality data possible, and is critical to the success of the mapping department.

New Employees

Chris Stabenfeldt

Senior Environmental Planner and Project Manager, Rocklin Office

ECORP Consulting is pleased to announce that Chris Stabenfeldt has joined the Rocklin office as a Senior Environmental Planner and Project Manager. Chris brings over 27 years experience to ECORP and will be integral to our expanding statewide California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) practice.

Wayne Hursey

Deltek Database Design Specialist, Rocklin Office

ECORP Consulting is pleased to announce that Wayne Hursey has joined the Rocklin office as a Deltek Database Design Specialist. Wayne Hursey comes to ECORP from Deltek Inc., the company that makes our Accounting, Client Relations Manager (CRM) and proposal software. He will be configuring our corporate database to streamline proposal generation, resume creation, project and client management as well as accounting reporting and QAQC.

Mike Preszler

Senior Water Resource Engineer, Rocklin Office

ECORP Consulting is pleased to announce that Mike Preszler has joined the Rocklin office as a Senior Water Resource Engineer. Michael is a registered civil engineer who has extensive experience in areas that include water supply and hydropower resource planning, water availability, surface water modeling, hydrology development, runoff forecasting and water rights determination.

Calendar of Events

- **The Wildlife Society Western Section**– Feb 1st– 3rd. Radisson Hotel , Sacramento, Ca
- **Northwest Hydro–** Feb 21st-23rd. Marriot Downtown Waterfront Hotel, Portland, Or.
- **ASPRS Conference-**March 19th– 23rd. Sacramento Convention Center, Sacramento , Ca.
- **AFS– CalNeva–** March 28th-31st. Marriott San Diego Mission Valley, San Diego Ca.