1. **ROLL CALL**
President LaHue called the meeting to order at 7:00 p.m. at the Capitola City Council Chambers.

**Board Members Present:**
Dr. Thomas LaHue, President
Bruce Daniels, Vice President
Dr. Don Hoernschemeyer
Dr. Bruce Jaffe
Rick Meyer

**Board Members Absent:**
None

**Staff Members Present:**
Kim Adamson, General Manager
Taj Dufour, Engineering Manager/Chief Engineer
Bob Bosso, District Counsel
Ron Duncan, Conservation & Customer Service Field (CCSF) Manager
Michelle Boisen, Financial/Business Services Manager
Melanie Schumacher, Special Projects Analyst
Christine Mead, Operations & Maintenance Manager
Shelley Flock, Staff Analyst
Leslie Strohm, Supervising Accountant
Karen Reese, Executive Assistant/Board Clerk

**Others Present:**
Russell McGlothlin - attorney with Brownstein Hyatt Farber Schreck
John Ricker - Santa Cruz County Water Resources Division Director
70 Members of the public

2. **CONSENT AGENDA**
President LaHue requested Item 2.3 be removed from the Consent Agenda for discussion.

Director Daniels requested Items 2.2 and 2.6 be removed from the Consent Agenda for discussion.

Director Hoernschemeyer requested Item 2.1 be removed from the Consent Agenda for discussion.

**MOTION:** Director Daniels; Second; Director Hoernschemeyer: To approve the consent agenda Items 2.5, 2.7 and 2.8, with Items 2.1, 2.2, 2.3 and 2.6 being pulled for discussion. Motion passed by unanimous vote.
2.1 Report of Expenditures over $25,000

Action: Removed from Consent; Discussed

Director Hoernschemeyer asked if the work by URS is completed. Mr. Dufour replied the work is ongoing.

2.2 Conditional Will Serve Letters

2.2.1 Nitin Athavale, Single Family Residence at 1569 San Andreas Rd., La Selva Beach, APN 045-132-31

Action: Removed from Consent; Discussed, Approved

Director Daniels stated that he cannot approve new water service and endanger the supply for existing customers.

President LaHue believes that declaring a moratorium would be the appropriate process rather than selectively denying individual will serve applications.

Director Daniels pointed out that, in a schedule of upcoming meetings he received from Ms. Adamson, discussion of moratorium is not listed.

Ms. Adamson replied that if an item is not on the schedule that does not mean it’s not planned for discussion. It will be scheduled pending conversations that are taking place at these Board meetings. WDO/moratorium has been moved down the schedule to accommodate items the Board has prioritized.

Director Hoernschemeyer agrees that the issue of a moratorium needs to be resolved soon.

Ms. Adamson clarified that the District can’t do anything about a moratorium until a groundwater emergency has been declared. This can’t be done until the peer review has been completed. The issue of declaring a groundwater emergency is scheduled for the meeting on April 15th.

Director Daniels disagreed, saying that the Urban Water Management Plan (UWMP) states a groundwater emergency can be declared but action on that declaration cannot be taken until certain conditions are met including the peer review results.

Ms. Adamson noted that once a groundwater emergency has been declared there are steps that need to take place before a moratorium can be put in place.

Director Hoernschemeyer stated that if the Board votes no on the two conditional will serve applications before them tonight, they will have to vote no on any subsequent applications.
Mr. Dufour remarked that these are conditional will serve applications and the wording in the letters indicates that the applicant is subject to any future changes that are made by the Board. It is not a guarantee of service.

President LaHue stated that it’s arbitrary to choose these two applicants to stop approvals when the Board has not gone through the steps to declare a moratorium based on criteria that have to be met.

Director Hoernschemeyer would like to agendize discussion of whether or not to approve conditional will serve letters in the future and would like to see this discussion come up before the moratorium discussion if possible.

2.2.2 David L. Smith, Single Family Residence at 526 La Honda Dr., Aptos, APN 044-241-29
Action: Removed from Consent; Discussed, Approved
Director Jaffe asked for clarification of the reduction request in the WDO offset for this applicant and the deed restriction stating the parcel cannot be easily irrigated in the future. Mr. Dufour replied that the property owner has deed restricted the parcel to 11,064 sf.

MOTION: President LaHue; Second; Director Jaffe: To approve conditional will serve letters Consent Agenda Items 2.2.1 and 2.2.2. Motion passed with President LaHue, Director Meyer, Director Jaffe and Director Hoernschemeyer voting in favor of the motion and Director Daniels opposed.

2.3 Approve Scope of Work for Service Area 3 Planning Study by Shaaf & Wheeler, Consulting Civil Engineers
Action: Removed from Consent; Discussed, Approved
President LaHue noted it’s important to include planning for Chromium 6 in the Scope of Work. Mr. Dufour noted this is included in the calculations.

MOTION: President LaHue; Second; Director Hoernschemeyer: To approve the scope of work for Schaaf & Wheeler to perform a planning study for Service Area 3 for a not to exceed amount of $62,740 and authorize the General Manager to sign a purchase order for Tasks 1-4 and authorize the President of the Board to Execute a Consultant Agreement for said work. Motion passed by unanimous vote.

2.4 Item pulled prior to the meeting

2.5 Approve Allocation from Operating Contingency Reserves (OCR) to Fund Office Expenses for Human Resources Manager
Action: Approved
2.6 Main Street Well Pumping Equipment Replacement Project, Approve Allocation from Operating Contingency Reserves and Bid Award, CWO 14-028
Action: Removed from Consent; Discussed, Approved
Director Daniels asked why the projected bid amount was so much lower than the actual lowest qualified bid. Mr. Dufour replied that staff underestimated the cost of working with this type of equipment.

MOTION: Director Daniels; Second; President LaHue: To approve an allocation from OCR in an amount not to exceed $85,000 to fund the Main Street Well Pumping Equipment Replacement Project and adopt Resolution No. 14-07 for award of the contract to Maggiora Bros. Drilling Inc. Motion passed by unanimous vote.

2.7 Claim of Damage – Sam Farrington, 358 Searidge Road, Unit 3, Aptos, Damage to Dishwasher Supply Line and Solenoid Valve Caused by Alleged Sand in Supply Line. Deny the subject claim and forward to JPIA for review and resolution.
Action: Approved

2.8 Approve Job Description, Pay Range, and Classification for Water System Operator/Instrumentation Technician
Action: Approved

3. PRESENTATION BY GENERAL MANAGER
3.1 Where We’ve Been, Where We’re Going
Mr. Dufour noted the presentation he is making tonight (Attached to these minutes as Exhibit A) is an update to previous presentations that can be viewed at http://www.soquelcreekwater.org/exploratory-discussions

President LaHue noted that the questions that were shown at the end of the presentation will be addressed in the form of a motion and approved by the Board under Item 6.1, Directions to Staff Regarding Groundwater Options.

4. ORAL COMMUNICATIONS (items not on the Agenda)
Katherine Sweet asked the Board for a stronger commitment to communicate with non-District private well owners.

A member of the public asked the Board to consider a stronger focus on conserving water runoff such as requiring new construction to direct runoff into ponds rather than down drains.

Director Daniels noted that the geology of the aquifer makes it difficult due to the mudstone layers. The District has discussed other methods of recharge over the years.
Don Heichel spoke about an area of 38th Avenue and Brommer Street where there is a depression that storm drains are fed into over the A layer. He would like to see retention of storm water and percolation discussed in the future.

Director Daniels reported that he forwarded information from the EPA to staff regarding hotel water conservation. He reminded those present that the Board will be discussing groundwater emergency in April. He noted an article he and President LaHue wrote for the Santa Cruz Sentinel this past weekend.

A member of the public commented that the Board is asking for conservation yet allowing new major construction – Safeway and New Leaf are two of the projects. She asked that this be on the agenda for more discussion at a future meeting.

5. INFORMATION ITEMS
5.1 Informational Only: ‘Primer on California Groundwater Law and Management’ by Russell McGlothlin, attorney with Brownstein Hyatt Farber Schreck

Ms. Schumacher introduced Russell McGlothlin who specializes in groundwater resource law.

Mr. McGlothlin gave a presentation on Water Rights and Water Management. (Attached to these minutes as Exhibit B)

Mr. McGlothlin was thanked for his presentation and answered questions.

Director Meyer asked for clarification of the two ways of forming a replenishment district and what a replenishment district can do. For example, can they pay for water conservation programs or for supplemental supply?

Mr. McGlothlin referenced the Water Replenishment District Act in the California Water Code Section 60000. This requires an election. There is also the AB3030 process which allows local agencies to exercise the powers of a replenishment district as found at California Water Code Section 10750. Mr. McGlothlin noted that the Water Replenishment District of Southern California is the only replenishment district in the State of California. The purpose of a replenishment district is to assess fees on production and use those funds to acquire water to replenish the aquifer. They also have water quality powers which were specially enacted for Water Replenishment District of Southern California. Funds can be used for supplemental supply that is used to replenish the aquifer or for in lieu replenishment. It is his opinion that funds cannot be used to deliver surface water to users.

Director Daniels asked if the Prop 218 process applies to the formation of a replenishment district.
Mr. McGlothlin indicated that a Prop 218 vote is needed to form a replenishment district. He noted he is not an expert on Prop 218 law and suggested the Board inquire of someone with that specialty. Mr. McGlothlin referred the Board to the California Water Code chapter on formation of a replenishment district for the process. A replenishment district can charge fees but cannot tell landowners how much they can physically produce. It is not a manner to limit production.

Ms. Adamson summarized the statutory process for establishing a replenishment district. It requires a petition once the proposed district boundaries have been determined. Signatures of 10% of the registered voters are needed to have formation put on the ballot.

Director Daniels asked about prescriptive rights. He understands the District would qualify for these rights and they would become paramount to the overlying rights of private pumpers.

Mr. McGlothlin discussed that typically arguments over the development of prescriptive rights center on when overdraft commenced, how long it’s been overdrafted, and was notice established. He does not agree that the District’s rights would be paramount but would obtain equal footing.

Director Meyer asked if the county ordinance that states if someone is within 200 feet of a water main they must connect to the District system and not drill a well has been tested in court.

Mr. McGlothlin is not aware of case law where that has been tested. Landowners do have the right to drill a well. Overlying rights apply.

Director Jaffe asked if a landowner drilled a well and it failed would the District be required to provide them water.

Mr. McGlothlin stated he sees no basis where the District would be required to provide water but noted these are untested area of the law.

**Public Comments/Questions:**
Don Heichel asked about rainwater harvesting in the Water Replenishment District of Southern California and if there is a specific law under which this is done.

Mr. McGlothlin said they have the power to engage in all forms of replenishment activities.

Dan Kriege commented that this district is a member of an AB3030 organization and could they not create a zone within their AB3030 area and do a groundwater replenishment district within that zone.
Mr. McGlothlin replied the law allows an AB3030 agency to exercise the powers of a replenishment district.

Jerry Paul asked if there are legal grounds for fisheries to be sued by water districts to be less restrictive or does the law need to be changed at the State legislature level.

Mr. McGlothlin replied the law would need to be changed at the Federal level.

A member of the public asked if individual wells are taken over, how single-family home pumps would be addressed.

President LaHue clarified that the goal of a replenishment district is to have all of the involved stakeholders, which would including private well owners, contribute financially to replenishment activities. No wells would be taken.

Katherine Sweet asked who would determine the boundaries of a replenishment district. Does a benefit have to be proven before you include a private well owner in a replenishment district?

Mr. McGlothlin replied there is no requirement in creating a replenishment district that there be a physical determination. There is a provision that assessments must be uniform on all pumpers.

President LaHue noted that it makes sense to have a hydrologist involved in drawing the boundaries. The idea is to include all those who use the aquifer to have a part in solving the problem.

Ms. Adamson spoke to the two ways to form a replenishment district. If it’s done by petition, SqCWD has no jurisdiction over the boundaries because it’s a citizen driven process. The District is looking at a course where all the stakeholders are included in a collaborative process. The science, through a groundwater model, would be the basis for the wells that contribute to the overdraft issue and are also at risk themselves. That would be used to establish the boundaries for a replenishment district.

5.2 Informational Only: ‘Santa Cruz County’s Role and Responsibilities in Addressing Mid-County Groundwater Issues’ by John Ricker, Santa Cruz County Water Resources Division Director

Ms. Schumacher introduced John Ricker, County Water Resources Division Director.

Mr. Ricker gave a presentation on Management of Non-Municipal Groundwater Pumping in Santa Cruz County. (Attached to these minutes as Exhibit C)

Mr. Ricker was thanked for his presentation and answered questions.
Director Hoernschemeyer asked about a comment by Mr. Ricker that a groundwater model is needed. Would this be in addition to the groundwater model that District hydrologists have already been using?

Mr. Ricker referenced a previous Board meeting where a presentation was given by the USGS on creating a groundwater model that would provide better information on how the basin works and what the outcomes of different management scenarios would be. This would help to define the geographic boundary of a replenishment district.

Director Meyer asked about the results of the County’s well monitoring.

Mr. Ricker noted that the water tables are the lowest they’ve seen since they started monitoring four years ago. He has not heard of any wells going dry in the mid-county area. He has heard of some wells going dry in the Bonny Doon area. The county is seeing a substantial increase in the number of permit applications to drill wells.

Director Jaffe asked about the criteria for declaring a groundwater emergency specifically that adequate measures are not being taken to alleviate overdraft.

Mr. Ricker replied that if the District recognizes the problem and is committed to finding a solution to address the overdraft they have met the criteria for taking adequate measures.

Ms. Adamson noted there has been discussion tonight about wells that are impacting the overdraft and she wanted to note that impacted wells are also threatened wells.

Public Comments/Questions:
Don Heichel asked if the County were to join the Joint Powers Authority/Basin Implementation Group would that require a majority vote by the Board of Supervisors.

Mr. Ricker replied that any official act requires approval of the Board of Supervisors.

5.3 Informational Only: ‘Past, Present, and Future Groundwater Management Activities’

Ms. Schumacher gave a presentation about what the District has done in the past and their plans for future actions. (Attached to these minutes as Exhibit D)

Ms. Schumacher was thanked for her presentation and answered questions.
Director Daniels wanted to clarify the issue of peer review and restated that it is not required to declare a groundwater emergency but is required to take Urban Water Management Plan (UWMP) Stage 3 or greater action based on the declaration. He stated a groundwater emergency can be declared and no action taken.

Ms. Adamson stated she will review this but pointed out that declaring a groundwater emergency does not trigger any action. It will have no effect until a peer review is completed. At that time specific actions can be implemented if the Board chooses.

Director Daniels feels declaring a Groundwater Emergency would give public notice that things are serious.

6. **ADMINISTRATIVE BUSINESS**

6.1 Direction to Staff Regarding Groundwater Options

President LaHue addressed the questions as presented by staff in their report (Item 3.1) for Prioritization of Groundwater Management Activities.

- Consider Developing a Groundwater Model
  This is scheduled to be discussion at the 3/18/14 meeting.

- Determination of freshwater-seawater interface
  President LaHue asked for clarification of what staff is asking. What Stanford is doing will not determine where the interface is offshore; they are limited to the shoreline. USGS says they have technology to help determine the offshore interface and Ms. Adamson is waiting for more information. HydroMetrics has been tasked with talking with USGS at this point.

  **MOTION:** Director Jaffe; Second; Director Daniels: To request a presentation of determining where the seawater interface is. Motion passed by unanimous vote.

- When to consider declaring a groundwater emergency

  **MOTION:** Director Daniels; Second; Director Jaffe: To consider declaring a groundwater emergency on April 15, 2014. Motion passed by unanimous vote.

- Implementing replenishment powers through AB3030 (if and when)
  Ms. Adamson noted that as a District we can’t decide whether to create a replenishment district. That is a citizen led initiative. Staff is asking if they should move forward with the outreach process. That process will guide staff if and when to decide to use AB3030 powers.
Director Daniels expressed concern about the Prop 218 process. If one stakeholder gets one vote, then the District would have one vote and all the private well owners would have one vote. The replenishment district could be formed but there could never be an allocation of funds. He would like to know what the Prop 218 process would be, if any.

Director Meyer thinks we need a replenishment district because it’s the only fair way to share the costs. It’s not fair for the District to pay for maintaining the basin for everyone when half of the pumping is from others. Once private pumpers share in maintaining the basin, the price could reduce their usage. Instead of having potential mandatory rationing where district customers cut back and private well owners don’t, there might be more equitable rationing. By spreading the costs fairly it will also help maintain rates at an affordable level. Director Meyer thinks that there should be a parallel track for forming a replenishment district connected to the stakeholder group but not dependent on it.

Director Hoernschemeyer asked for clarification between a stakeholders group and a replenishment district.

Ms. Adamson said the stakeholders would potentially, not necessarily, be members of whatever boundaries are drawn for the AB3030 efforts.

Ms. Adamson feels the conversation needs to change from fairness of who is paying to recover the basin to a conversation of a shared problem. District wells are threatened and private wells are threatened. A cooperative solution needs to be found. The process of moving forward with a stakeholder group is to explore the shared problem and work together to find the solution.

Director Jaffe agreed with Ms. Adamson noting that private pumpers may be threatening District wells but not affecting their own well. He feels there needs to be a defensible rationale for who is a part of the replenishment district and the monetary contribution.

Ms. Adamson noted that as District wells move inland they will impact private wells.

President LaHue asked for clarification of the goals to be accomplished with the stakeholders group. He feels the county should be involved in the Basin Implementation Group (BIG).

Ms. Adamson noted that the BIG voted to invite both the county and the city to join. The invitation needs to be approved by the Board and then can be sent to the respective agencies.
MOTION: President LaHue; Second; Director Jaffe: To invite the City of Santa Cruz and the County of Santa Cruz to join the Basin Implementation Group. Motion passed by unanimous vote.

Director Hoernschemeyer asked about an enlarged Joint Powers Authority (JPA) as shown in the presentation. Could private pumpers join the existing JPA between SqCWD and Central Water District?

Ms. Adamson replied there is representation from private pumpers on the BIG. The JPA is the body that allows the districts to do basin studies. The AB3030 boundaries of the JPA would currently be restricted to the service areas of SqCWD and Central Water District. By having the county as part of the BIG, the entire county boundary becomes the possible jurisdiction of replenishment powers.

Director Jaffe asked staff to bring back recommendations on whether there should be one replenishment district after the process of involving the private well stakeholders or whether replenishment powers through AB3030 should be considered.

Ms. Adamson asked for clarification from Director Jaffe. Is he asking to possibly enact our powers within jurisdictional boundaries right now while investigating a stakeholders group? Ms. Adamson noted that Central Water District would need to approve this.

Director Jaffe replied that he does not want to rush the stakeholder group process but would like to explore whether or not it makes sense to enact replenishment powers within District boundaries.

MOTION: Director Jaffe; Second President LaHue: To ask staff to come back with information about having a replenishment district under the current AB3030 membership. Motion passed with President LaHue, Director Meyer, Director Jaffe and Director Hoernschemeyer voting in favor of the motion and Director Daniels opposed.

Ms. Adamson requested a workshop at 5:30 p.m. prior to the March 18, 2014 Board meeting for discussion of Phase 1 Mandatory Rationing prior to the Regular Board Meeting at 7:00 p.m.

MOTION: President LaHue; Second Director Jaffe: To schedule a workshop at 5:30 p.m. prior to the March 18, 2014 Board meeting for discussion of Phase 1 Mandatory Rationing prior to the Regular Board Meeting at 7:00 p.m. Motion passed by unanimous vote.
7. WRITTEN COMMUNICATIONS AND CORRESPONDENCE

7.1 Correspondence from Jenny Hawkins regarding approval of Aptos Village will serve application

8. ADJOURNMENT

There being no further business, President LaHue adjourned the meeting at 9:55 p.m. to the next scheduled meeting on March 18, 2014.

SUBMITTED BY: 

APPROVED BY:

____________________________  ________________________
Karen Reese, Board Clerk  Thomas R. LaHue, President
WHERE WE’VE BEEN,

WHERE WE’RE GOING...
Seawater Intrusion: Our Community
Soquel Creek Water District’s service area
Groundwater Levels are Below Sea-Level
Soquel Creek Water District’s service area

Figure 3-3 (2012): Groundwater Elevation Contours, Purisima A-Unit, Fall 2012
Public Process for Long-Term Water Planning

1999
Developed with a Public Advisory Committee of more than 20 individuals

2006
Updated with newer information on supply & demands

2012
- Updated with newer information on supply and demand and re-evaluated 10 different alternatives
RE-EVALUATING ALTERNATIVES:

2012 Integrated Resources Plan Approach:

1. Continue water conservation
2. Continue to evaluate recycled water (as feasible)
3. Proactive groundwater management
4. Continue to evaluate scwd² desalination
5. Continue to evaluate surface water exchange
6. Consider District-only desalination and long term mandatory water rationing if scwd² desalination is no longer pursued.
SUPPLY - DEMAND = SHORTAGE

Where we thought water use would be*

Re-evaluated Water Demands **

Conservation Savings

Water Shortage

Groundwater Supply Yield

Not to exceed 2,900 acre-feet per year for at least 20 years for Basin Recovery

* Based on District’s 2005 Urban Water Management Plan

**Based on District’s 2010 Urban Water Management Plan
Supply and Demand for Soquel Creek Water District

- Limit groundwater pumping to no more than 2,900 afy
  - Based on groundwater modeling
  - 70th percentile goal of achieving groundwater levels and outflows to protect against seawater intrusion
  - Recovery time estimated to be at least 20 years
- Continue to maximize and increase water conservation savings
  - Set goal to reduce overall use by 15% (720 afy) by 2030

Projected Community Water Demand: 4790 afy

- Groundwater Supply: 2,900 afy (~60%)
- Conservation: 530 afy (~10%)
- Water Shortage: 1,360 afy (~30%)
Addressing Water Shortage Issues: Shared Groundwater Basin

- Groundwater Basin is used by many: District, City of SC, Central WD, small mutuals, and private pumpers.

- Property owners have priority right to the water under their property.

- Municipal water suppliers only have a right to any surplus water in the basin.
Addressing Water Shortage Issues:

Development

- Goal is for new development to offset water use by 200% through retrofitting existing homes with conservation fixtures
- District increased the water demand offset (WDO) factor from 1.2 to 1.6 in July 2013.
Addressing Water Shortage Issues:
Ongoing Conservation

- Already within the lowest 6% of water use within the State
- Maximizing and prioritizing water conservation in our community.
- Original goal was to achieve an additional 10% by 2025.
- Accelerated Water Reduction Program to be launched this year.
Addressing Water Shortage Issues: Securing a Supplemental Supply

- District is actively pursuing a supplemental water supply.
- Public Advisory Committee recommended both regional desalination and recycled water as recommended options for supplemental supply.
Looking Closer at Back-up Options

- Exploring Desalination (October 15)
  - Deep Water Desal
  - District only Desal

- Exploring Surface Water (November 5)
  - SC County Water Transfer Study Update
  - Surface Water Rights
  - Presentations by Public Individuals (Bill Smallman and Jerry Paul)
Looking Closer at Back-up Options

- **Recycled Water Options (February 4)**
  - Irrigation Water Only
  - Seawater Intrusion Barrier and Irrigation Water
  - Groundwater Replenishment and Irrigation Water
Looking Closer at Water Reduction Program (Next Month)

- Implementing Long-Term Water Reduction Program (April 1)
  - Water Budgets
    - Residential
    - Commercial/Institutional
    - Certain Landscapes
  - Actions and Customer Support
    - Indoor and outdoor rebate-based approach
    - Commercial audits and BMP’s
  - Communications and Customer Relations
Tonight: Groundwater Law and Management

- Primer on California Groundwater Law and Management by Russell McGlothlin, Attorney with Brownstein Hyatt Farber Schreck

- Santa Cruz County’s Role and Responsibilities in Addressing Mid-County Groundwater Issues by John Ricker, SC County Water Resources Division Director

- Past Present and Future Groundwater Management Activities, Melanie Schumacher/Kim Adamson, SqCWD

Presentations (including this evening) are video recorded. Can be viewed at: http://www.soquelcreekwater.org/exploratory-discussions
Questions for the Board

- Prioritization of Groundwater Management Activities is needed
  - Consider Developing a Groundwater Model (3/18)
  - Determination of freshwater-seawater interface
  - After peer review, when to consider declaring a groundwater emergency
  - Forming a groundwater replenishment district (if and when)
  - Other ?’s
Water is a Unique Resource Because it is Shared and Transient
Tragedy of the Commons
Too Many Cows = Sad Cows
Solution: Internalize All Costs on Each User
Are Water Rights Property?
Public v. Private

- Right to Use = **PROPERTY RIGHT** Subject to **SUBSTANTIAL** Regulatory Regime

- Duality of **Public Control** Combined With **Private Rights to Use**

- State’s Right is **Not** Proprietary, But Rather Regulatory

- Debate Over Where to Draw the Line? Regulatory Takings, etc.
Complex and Countervailing Objectives

- Reasonable Public Interests v. Private Interests
- Consumptive Demands v. Instream Water Demands
- Appropriate Degree of Legal Certainty and Adaptable Management
Beneficial and Reasonable Use Limitation

Virtually All States Apply Some Form of Beneficial and Reasonable Use Limitation
What is Unreasonable/Non-Beneficial?

• Speculation? Non-Use = Unreasonable?

• Reasonable Efficiency or Optimal Use? (Alfalfa, Golf Courses, Artificial Lakes in the Desert?)

• Harm to Environmental and Other Public Interest Considerations?
Examples of Unreasonable Methods of Use and Non-Beneficial Purposes of Use

- Use of Full Flow of Stream to Maintain Accretion (Sediment Buildup) to Downstream Riparian Land
- Flooding of Fields to Kill Gophers
Three Approaches to Water Law: the Old, the New, and the Ugly

• Riparianism (The Old)
• Prior Appropriation (The New)
• Hybrid (The Ugly): Riparianism and Prior Appropriation
Riparianism
Origins in English Common Law

• Riparian Right - the Right to Divert Water from a Water Body Adjoining Land for Use on Adjoining Land

• Incident of the Rights to the Land (i.e., Part of the “Bundle” of Rights)
Riparian Rights (Overlying Rights)

- Appurtenant to Land; Right to Use Water from Adjoining Water Body
- Traditionally Must be on Riparian Land (Exceptions Apply)
- Reasonable Use
- Rights May be Correlative (i.e., Riparians Share the Supply)
- Right May be Inchoate (i.e., Dormant) - Not Dependent on Historical Use
Criticism of Riparian Rights - The Need for Certainty

- Unrecorded, Unknown Quantity – Can Preempt Vested, Long-Standing Uses
- Uncertainty Deters Long-Term Planning and Investments
- Dormant Rights Impair Administration of Water Rights Because of Uncertainty
- Not Well Suited for Water-Scarce Environments
Prior Appropriation

- Developed in Western Mining Camps Because Riparianism Was Not Well-Suited for Miners (Miners Were Largely Trespassers on Public Lands)

- Perfection of Right Through Posting Notice at Place of Diversion and Commencing Diversion

- Water Disputes Rapidly Escalate
Appropriative Rights

- May Apply to Use Off of Riparian Tract
- Defined by Historical Quantity of Use
- Land Ownership is Irrelevant
- Priority Based Upon First-In-Time, First-in-Right
- May be Forfeited (i.e., Lost) by Non-Use
- May Require State Permit
Riparianism v. Prior Appropriation in CA

- Conflict Between Miners (Appropriators) and Landowners Who Possessed Land Under Mexican Land Grants (Riparians)

- California Supreme Court Addresses the Conflict in *Lux v. Haggin* (1886)
And the Winner Is ... We Choose Both!!

• Court Reasons that California’s Adoption of the English Common Law Included Adoption of the Riparian Doctrine

• However, Court also Acknowledges Prior Appropriation, but Renders Appropriative Rights “Junior” in Priority to Riparian Rights
California Water Law

- Riparian Rights are First Priority Rights
- Appropriative Rights are Second Priority Rights
- Surface Water Regulated by the State
- Percolating Groundwater Regulated by Local/Judicial Management, if Regulated
• Eastern US – Riparianism (Reasonable Use/Permitting)

• Western US – Largely Prior Appropriation/Permitting (With Notable Exceptions – E.g. CA)
What About Groundwater?

Similar but Separate Law Applies
What is “Groundwater”? 

- **What’s the Issue?** The Demarcating Line Between “Independent” Groundwater and Groundwater That is Surface Water “Dependent” (Feeds or is Fed by Surface Watercourse)

- **Other Terms** - Percolating Groundwater vs. Subterranean Stream; Surface Water Underflow; Groundwater Flowing within Relatively Impermeable Beds and Banks (Known and Defined Channel)

- **What is at Stake?** Who Regulates? Can I Get a Permit? Can I Be Sued or Sue? Other Legal Implications
Difficult Issue Because it Pits Countervailing Interests Against One Another

- Want Certainty to Support Planning and Investment in Water Resources

- Want “Rational” System that Appreciates the Hydrologic Connection Between Surface Water and Groundwater
Percolating Groundwater v. Subterranean Stream

• Percolating Groundwater: Vagrant, Wandering Drops Moving By Gravity in Any and Every Direction Along the Path of Least Resistance

• Subterranean Stream ("Groundwater Flowing in Known and Definite Channel")
  • Subsurface Channel Present;
  • Channel Possess Relatively Impermeable Beds and Banks
  • Course of Channel Capable of Being Known with Reasonable Inference; and
  • Groundwater is Flowing in the Channel
Overlying **Groundwater** Rights: Similar to Riparian Rights

- Overlying Rights to a Groundwater Aquifer Are Analogous to Riparian Rights to a Surface Water Body
- Same Legal Characteristics Apply to Both Forms of Right
Riparian/Overlying Rights

- Appurtenant to Land; Right to Use Water from Adjoining Surface Water Body/Underlying Aquifer
- Use Must be on Riparian/Overlying Land
- First Class Right (Senior to Appropriative Rights)
- Rights are Correlative (i.e., Equal Legal Footing) with Other Riparians/Overlying Owners; Conflicts Between Riparians/Overlying Land Owners Settled Pursuant to Reasonable Use Considerations
- Right May be Inchoate (i.e., Dormant), and Thus is Not Dependent on Historical Use; Only Limited in Quantity by Reasonable and Beneficial Use Criteria
Appropriative Rights to Groundwater

• Like Appropriative Rights to Surface Water
  • Defined by Historical Quantity of Use
  • Priority Based Upon First-In-Time, First-in-Right
  • Can Use Off of Overlying Land
Overdraft...

• The Rules Change . . . Maybe

• Adverse Basin Impacts (e.g., Seawater Intrusion/Subsidence)

• Ramp-Down

• Prescriptive Rights
What is Overdraft?

- Groundwater extractions in excess of safe yield

- Safe Yield is generally calculated as net inflows less subsurface and surface outflows.

- Safe yield defined as “the maximum quantity of water which can be withdrawn annually from a groundwater supply under a given set of conditions without causing an undesirable result.”

- “Undesirable results” – e.g., water quality degradation, seawater intrusion, land subsidence, or uneconomic use of groundwater
“Undesirable Results”

- Substantial Depletion of Supply
- Subsidence
- Seawater Intrusion
- Uneconomic Pump Lifts
- etc.
versus
Court of Appeal - North Gualala

“California’s surface water groundwater classifications “take on an Alice-in-Wonderland quality because the legal categories . . . are drawn from antiquated case law and bear little or no relationship to hydrological realities.”
What is the Effect of Overdraft on Groundwater Rights?

- Overlying Owners Entitled to Enjoin Appropriators (Junior Appropriators Reduced/Eliminated First)

- Adversity Commenced for Purposes of Prescriptive Rights

- Prescriptive Rights
  - Four Elements (Actual, Open and Notorious, Adverse, Exclusive and Continuous for Five Years)
Figure 6-3
Rights to Groundwater in a Basin That is Not in Overdraft

Surplus groundwater not needed for beneficial uses of overlying landowners can be extracted by appropriators on first-in-time, first-in-right basis.

Overlying landowners share coequally or correlativey for beneficial uses on overlying lands without regard to history or frequency of use.

Figure courtesy of DWR, 2003; modified in 2004.

Figure 6-4
Rights to Groundwater in an Overdrafted Basin

Appropriative rights extinguished; most junior rights extinguished first.

Overlying landowners' correlative rights are apportioned if no surplus remains after all appropriative rights are extinguished.

Prescriptive rights may develop to allow the former appropriator to continue producing some groundwater if overlying landowners do not bring a lawsuit to diminish/extinguish appropriative extractions within five years of the commencement of overdraft. If prescriptive rights develop, the overlying landowners may be forced to reduce some production to accommodate extractions by prescriptive right holders.

Figure courtesy of DWR, 2003; modified in 2004.
Who Manages?

- State (State Water Resources Control Board)
- Courts, Adjudications, and Watermasters
- Local Public Agency (County or City)
- Special Water District
- Joint Powers Agency
- Groundwater Management Evolving – Often Starts with Reporting and Monitoring
AB 3030

- Allows local agencies to develop groundwater management plan
- Notice and protest opportunity
- Mandatory and permissive plan components
- Powers include (among others):
  - monitor water levels
  - wellhead and recharge protection
  - abandonment and well destruction program
  - mitigate contamination, seawater intrusion, and overdraft
  - assess production assessments
  - replenishment
- May be “usurped” by water right claims
Adjudication

- Declare How Much Total Withdrawals
- Declare and Define Individual Rights
- Establish Basin Management Rules and Regulations
- Establish Governance Structure
Post Adjudication

- Typically Well-Structured Rules
- Watermaster – Often Composed of Stakeholders Board
- Subject to Court’s Retained Jurisdiction
- Clearly Defined Water Rights
- Rights Typically Transferable
Adjudication Challenges

- Can be 100’s or even 1000’s of Parties
- Can take decades
- Can cost $$ millions
Regulatory Restrictions

- What Constitutes Reasonableness/Beneficial Use?
- In-Stream Flow Requirements
- Public Trust Doctrine
- Amendment of State-Issued Permit
- Groundwater regulation
Local Regulation of Groundwater: Permissible and “Too Far”

- Water rights are a form of “property right”
- Special districts (e.g., Soquel Creek Water District) may exercise powers in enabling legislation (e.g., CA Water Code § 31020 et. seq.)
- Greater powers over water served than groundwater use by others
- Cities and Counties may exercise broader “police powers”
- CA Supreme Court has held that management plan must respect water right priorities (Mojave Decision – 2000)
- Management programs that adhere to water right priorities will fare better against legal challenges
Management of Non-Municipal Groundwater Pumping in Santa Cruz County

John Ricker
County of Santa Cruz
Environmental Health Division
March 4, 2014
Overview

- Significance of non-municipal pumping
  - Private wells, small public water systems
- County Role in Groundwater Management
  - Well Ordinance
  - Small Water Systems Oversight
  - Water Conservation Measures
  - Groundwater Emergency
- Additional actions
Significance of Non-Municipal Pumping

- 85% of pumping in Pajaro Valley
- 30% of water use in rest of County
- 38% of pumping from Soquel-Aptos Purisima basin (1000 wells), 30% from Aromas
- 15% of coastal/urban Purisima Basin (200 wells)
- Local impacts and impacts on streamflow
- In rural areas, impact is mitigated by:
  - Septic System recharge
  - Shallow wells and complex geology
  - Low density
- Probably need a groundwater model
How do we know how much water is pumped?

- Numbers of developed parcels
- Average water use of rural residential properties:
  - 0.6 af/yr in Central Water Dist.
  - 0.2 af/yr for mountain wooded parcels
  - 1.1 af/yr Soquel horse property
  - Average of 0.44 af/yr in Purisima
- Typical water use factors for other uses
- Aerial photo analysis of agricultural usage
- Meters?
County Oversight

- Small Public Water Systems (5-199 connections, 130 in County)
- Permitting of new wells
- Water level monitoring
- Water supply requirements for new development, adequate service
- CEQA review of larger uses
- Prohibition of new non-ag wells in SqCWD service area (7.70.120)
- Enforcement of Soquel Creek Adjudication
- Water conservation requirements
Water Conservation Requirements

- Prohibition of Wasteful Water use (7.69.030)
- Fixture retrofit (7.69.040)
- Water Efficient Landscape (13.13)
- Runoff and Pollution Control (7.79)
- Water use efficiency for new wells serving more than 4 units or more than 2 af/yr (7.70.110 (D))
- CEQA mitigation for new projects
- Calgreen building code requirements for new building projects/remodels
Conditions for Declaring Groundwater Emergency

• Public Hearing by County Board of Supervisors to consider all relevant information, based on the following findings (7.70.130):
  1. Area experiencing overdraft
  2. New wells will significantly increase overdraft
  3. Continuing overdraft will lead to aquifer degradation
  4. Adequate measures are not being taken to alleviate overdraft

• County consideration would likely be in conjunction with a declaration by SqCWD
Possible Provisions of Groundwater Emergency

- Implement water conservation measures
- Limit construction of new wells
- Regulate pumping or expansion of existing wells
- Require metering and monitoring of all wells
- Restrict agricultural water use

- Actions would be limited by legality, practicality and effectiveness
- A GW emergency does not provide a solution
- How much demand comes from new growth?
  - Small increment of existing water use: 2-5% by 2030.
Other Potential County Actions

• Outreach, education, assistance
• Stakeholder Group
• Increased water level monitoring
• Additional water use restrictions
• Additional requirements for small water systems
• Joint Powers Authority
• Replenishment District
• Moratorium or impact fee
• Metering
• Some measures may be legally untested and/or lead to adjudication
Impact of Private Well Usage in the Soquel-Aptos Groundwater Basin
(Updated by John Ricker, August, 2013)

In order to develop a more comprehensive management approach to the Soquel-Aptos groundwater Basin, it makes sense to consider all the entities pumping from the Basin. County staff have reviewed information related to private pumping from the basin in both the coastal, urban areas and in the inland rural areas. This distinction is based on the belief by hydrologists that coastal pumping has a disproportionately greater impact on groundwater levels along the coast. The objective is to manage groundwater pumping to allow groundwater levels along the coast to recover to higher levels that would minimize the threat of seawater intrusion.

In 1999, County staff used well records, land use information, and aerial photo analysis to estimate pumping on properties with private wells pumping from the Purisima formation. This information was reviewed and updated to reflect changes in land use for larger agricultural wells, and is compared to 2011 pumping records of the water agencies. Since 1999, several of the larger agricultural operations have been phased out entirely and some have been expanded slightly. The urban areas are defined as those areas within the boundaries of the Soquel Water District. This extends inland considerably beyond the County’s urban services line in a number of locations, including up the east side of Soquel creek into the Cherryvale area.

The following table presents a summary of information for the urban area and the entire basin:

<table>
<thead>
<tr>
<th></th>
<th>Agricultural Wells</th>
<th>Seascape Golf Course</th>
<th>Other Individual Private Wells: Residential &amp; Commercial</th>
<th>Cabrillo College</th>
<th>Other Small Water Systems:</th>
<th>TOTAL Non-Municipal Pumping</th>
<th>CITY OF SANTA CRUZ</th>
<th>SOQUEL CREEK WATER DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Pumpage (Acre-Feet/Year)</td>
<td>88</td>
<td>232</td>
<td>124</td>
<td>95</td>
<td>30</td>
<td>569</td>
<td>531</td>
<td>2,634</td>
</tr>
<tr>
<td>Percent of Total Urban Pumpage</td>
<td>2%</td>
<td>6%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>10%</td>
<td>14%</td>
<td>71%</td>
</tr>
<tr>
<td># of Wells</td>
<td>5</td>
<td>2</td>
<td>184</td>
<td>4</td>
<td>68</td>
<td>198</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td># of Developed Parcels</td>
<td>8</td>
<td></td>
<td>221</td>
<td>68</td>
<td>68</td>
<td>297</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Annual Pumpage (Acre-Feet/Year)</td>
<td>78</td>
<td>1,110</td>
<td>1,110</td>
<td>211</td>
<td>22</td>
<td>1,399</td>
<td>795</td>
<td>325</td>
</tr>
<tr>
<td># of Wells</td>
<td>12</td>
<td>761</td>
<td>2,222</td>
<td>22</td>
<td>325</td>
<td>2,569</td>
<td>795</td>
<td>325</td>
</tr>
<tr>
<td># of Developed Parcels</td>
<td>22</td>
<td>2,222</td>
<td>2,222</td>
<td>325</td>
<td>325</td>
<td>2,569</td>
<td>795</td>
<td>325</td>
</tr>
<tr>
<td>Annual Pumpage (Acre-Feet/Year)</td>
<td>166</td>
<td>1,466</td>
<td>1,466</td>
<td>1,466</td>
<td>1,466</td>
<td>1,968</td>
<td>1,968</td>
<td>1,968</td>
</tr>
<tr>
<td>Percent of Total Basin Pumpage</td>
<td>3%</td>
<td>29%</td>
<td>29%</td>
<td>1%</td>
<td>7%</td>
<td>38%</td>
<td>38%</td>
<td>38%</td>
</tr>
</tbody>
</table>

The very large majority of private wells serve individual homes, with estimated water use of 0.44 acre-foot per parcel per year. The notable exceptions are Seascape golf course, Cabrillo College, 5 urban area nurseries (4-45 af/yr), a trailer park (20 af/yr), 10 rural agricultural uses (3-16 af/yr). Estimated water usage is based on an analysis of parcel size, numbers of units and typical water use factors for the type of use. Further analysis of specific parcels could provide more precise information, but it is believed that this analysis presents a good picture of the situation for general planning purposes.
Current and Future Groundwater Management Activities

Soquel Creek Water District
March 4, 2014
Current and Future District Activities

- **Moving pumping inland away from the coast**
  - Construction of O’Neill Well has begun
  - New wells do not add volume capacity of District’s overall total pumping, instead they relocate pumping away from coast.

- **Maintain and Analyze Monitoring Well Data**
  - Maintain over 75 monitoring wells throughout District
  - Expanded monitoring near District’s newer wells to detect and measure interference
  - Next Quarterly Monitoring Report to be received March 18

**Peer Review of Hydrology Data and Analysis**
- Work to be completed in April/May 2014

- **Rehab. Existing Facilities to maintain/improve efficiency and water quality**
  - Work on Main Street and Aptos Jr. High wells in 2014
Current and Future District Activities

- **Update Groundwater Management Plan**
  - Waiting for Peer Review to be completed.
  - Update and revision to be completed in 2014

- **Preparing Annual Report of the Soquel-Aptos Area Basin**
  - To be presented to the Board in June/July 2014

- **Addressing Chromium-6**
  - This is naturally occurring and affects one-third of our District wells.
  - Stopped operations of one well in the La Selva Beach area
  - State’s Draft Maximum Contaminant Level for Cr6 is 10 parts per billion (ppb). District is currently testing a treatment process with the goal of achieving 7 ppb, blended.
Current and Future District Activities

- **Developing a Groundwater Model**
  - Scope of work and presentation on March 18
  - Model can be used to better understand the ability to transfer/use water between agencies, feasibility of groundwater replenishment projects

- **Determining the location of the freshwater/seawater interface**
  - Initiated discussions with USGS
  - Coordinating with Stanford University’s Geophysical Imaging Project
Current and Future District Activities

- **Mid-County Groundwater Stakeholder Committee**
  - Broaden engagement with all groundwater basin users
  - Work regionally with County of Santa Cruz, Central Water District, and other public and private pumpers
  - Anticipate a yearlong process to have exploratory discussions on groundwater basin conditions and develop a set of recommendations

- **Consider Development of a Groundwater Replenishment District**
  - Could be formed through the existing Joint Exercise of Powers Agreement (JPA)
  - Primary function of the Replenishment District is to directly or indirectly replenish an overdrafted groundwater basin.
Current and Future District Activities

- **Discuss Declaration of a Groundwater Emergency** (outlined in District’s 2010 Urban Water Management Plan, section 5)
  - Needs to have peer review of hydrological analysis completed
  - May be declared when it is demonstrated that a groundwater overdraft exceeding the sustainable yield threatens the public health, safety, and welfare of the community.
  - Prior to declaring, District shall consult with neighboring agencies (Central Water District, Pajaro Valley WMA, City of SC, and County of SC) to explore joint options and programs that could be undertaken or adopted in lieu of a declaration.
  - An emergency shall be declared by resolution of the Board after a public hearing
  - Board shall also request County to perform actions to non-District pumpers within our basin management area.