Advancing Water Reuse in the Bay Area:

Exploring Opportunities and Challenges for Interagency Collaboration

Meeting Summary

The goal of this meeting held on September 20, 2023 was to bring together water agencies, wastewater agencies, consultants, regulators, and non-profits to discuss the different challenges and drivers for recycled water. Through discussion, we hope to recognize opportunities for partnerships to address current and future challenges. This meeting was hopefully the first of many similar efforts to increase collaboration and advance recycled water.

Slides from the meeting are posted to https://bacwa.org/wp-content/uploads/2024/01/Slides-from-BACWA-Water-Reuse-Interagency-Collaboration-Workshop-2023-09-20.pdf

Welcome - Melody LaBella, Central Contra Costa Sanitary District (Central San)

- Attendees included representatives from water agencies, wastewater agencies, regulatory agencies, and consultant firms.
- Big picture: the Bay Area wastewater community is facing up to $15 billion in investment costs for nutrient treatment upgrades to protect SF Bay, and we will all bear that cost
- Water recycling can help address many challenges, including:
    - Droughts and water shortages
    - Population/demand growth
    - Ensuring adequate environmental flows
- We will review findings from the *Multi-Agency Water Reuse Programs: Lessons for Successful Collaboration* report to understand what factors help make complex, multi-partner water reuse projects happen
- Desired outcomes for the meeting include:
    - Identify similarities and differences in issues and drivers
    - Recognize opportunities for partnerships to address current and future reuse challenges
    - Evaluate the right scale(s) for collaboration

Drivers and Opportunities

Wastewater Agency Perspective – Lorien Fono, BACWA

- The POTW community's mission has evolved over time
    - At its core, the mission is to **reduce public health risk** from wastewater
    - The Clean Water Act expanded the mission include **protecting water** in the environment
    - Climate change is forcing them to become **resource recovery** agencies
    - Now **nutrient management** is becoming a key directive
        - Next year wastewater agencies will be required to reduce nutrient concentration in discharge
- **Recycled water is just one tool to meet this mission**
    - Recycled water is not the cheapest way to reduce nutrient concentrations, and traditional upgrades may be cheaper

    - However, recycled water has **multiple benefits** that must be considered, which makes it a worthwhile investment in many cases

Water Agency Perspective – Manisha Kothari, SFPUC and Hossein Ashktorab, Valley Water

- The primary drivers for reuse among water agencies are:
    - Regulatory changes that limit availability
        - E.g., environmental flows, curtailments, etc.
    - Climate change and the increasing frequency and severity of droughts
    - Demographic changes including population growth, changing employment patterns, housing needs, and more
- The three tenants of integrated water resources management are (water reuse is part of all three):
    - Optimize use of all available resources,
    - Diversify water supply sources,
    - Demand management and conservation
- Considerations that determine water reuse feasibility are:
    - Nature, location, and timing of end-use demand
    - Infrastructure needs
    - Regulator requirements
    - Costs and ratepayer impacts
    - Community acceptance
- Most easy opportunities to provide non-potable reuse are gone. Further opportunities require new/updated infrastructure. The emphasis is now on potable reuse
- Lesson learned from existing multi-jurisdictional projects include:
    - Communication is important
    - Bring in your elected officials as early as you can (bipartisan)

Regional Board Perspective – Alexis Strauss Hacker, CA State Water Resources Control Board

- The Regional Water Board can bring greater emphasis through their regulations
- They are creating a draft permit and have had great engagement on that project
- They will provide the path forward for brine residuals (what to do with RO concentrate)
- Historically, the Water Board has had regular engagement with wastewater agencies, but they are not as connected with water supply agencies
- The board wants to be part of accelerating water recycling efforts

Importance of Collaboration – Felicia Marcus, Stanford University

- Encourages empathy amongst collaborators
- This field is growing rapidly across the U.S.
- Goals in other states center around nutrient reductions and less on water scarcity
- Encourages even more communication and listening

"Lessons Learned" in WRAP 2.16

Wrap 2.16 selected five multi-agency case studies to assess the characteristics that made projects successful. Those findings were then grouped according to five factors: governance, regulatory, economics, management, and leadership.

Governance Lessons – Dave Smith

- Existing utilities have narrow missions, and problems evolve faster than the governance structures. We should view structures as connection points (not boundaries)
- To reuse water, utilities must reach beyond their institutional borders to develop collaborative relationships
    - Collaboration involves reassessing organizational purpose, structure, and goals
    - Collaboration can occur at different scales (regional and subregional)
    - There are existing effective collaboration structures (ex: Bay Area Regional Reliability Process, Bay Area One Water Network, etc.)
    - Formal arrangements have also been successful
        - MOUs, JPAs, and Consolidation (not always an option)

Regulatory Lessons – Felicia Marcus

- Successful project proponents will:
    - Know the applicable regulations at the outset of the project
    - Engage regulators early and often
        - Not just to sell the project when it is designed, but to enlist them in helping solve a community problem
        - Not to argue about the rules, but to see how they can help give regulators what they need to get to yes
        - Remember that regulators are people, approach from a place of desired connection
- Regulators can help advance the project through early advice, project acceleration, and funding

Economics Lessons – Bob Raucher

- Utilities can combine responsibilities to capture, treat, and reuse water more efficiently
- Recycled water is expensive due to new infrastructure, but it helps the triple bottom line:
    - Quality of life improvements, ecological benefits, avoided costs (of water supply shortfalls and others)
- Wastewater and suppliers want the other entity to pay. Consider the following:
    - Have beneficiaries pay accordingly. Identify and quantify the benefits and who receives them, they should pay in proportion
    - Prices are always passed to the customer, so we must pay attention to social equity and affordability
- Path Forward
    - Identify and quantify all the benefits (thinking across jurisdictions)
    - Communicate the benefits to all
    - Consider who benefits (allocate costs accordingly)

Management Lessons – Eric Rosenblum

- Mutual recognition of individual agency benefits and constraints is important
- Collaborating managers build trust to promote shared responsibility. Building trust takes time
- Pilot projects provide engineers, operators, laboratory technicians and others the opportunity to work together
- Improve formal communication with informal relationships, i.e., "get lunch"

Leadership Lessons – Shannon Spurlock

- Balance short-term and long-term interests
- Successful leaders:
    - Meet the immediate needs of their ratepayers
    - Provide services whose long-term value extends beyond their boundaries
    - Communicate the benefits of long-term, regional planning to their constituents
- The future is uncertain, so we must plan for change and be adaptable
- Relationships are core, trust needs to be established prior to legal agreements (and legal agreements rarely result without trust)
    - Get to know people out of the office (interpersonal relationships are closely tied with successful implementation)

See Attachments for Breakout Session Takeaways, Next Steps, and Commitments

Attachment1: Breakout Session Takeaways

Attachment 2: Next Steps and Commitments

Attachment 1: Breakout Session Takeaways

Breakout #1

Questions

During the first breakout session, groups were asked to consider the following questions:

1. **What are your agency's top two priorities?**
    a. What are the greatest water challenges you face?
    b. What solutions are you considering?
2. **What are your thoughts about how water reuse fits into your future plans?**
    a. If you are not considering water reuse, why not?
3. **If you had a magic wand, what would you do today to move water reuse forward?**
    a. What obstacles would you remove to allow action?
    b. What support do you need to allow action?

1. Priorities:

Governance

- Collaborate to work across jurisdiction boundaries (boundary busting)
- Create enduring institutions that will outlast senior leaders/elected officials

Regulations and Policy

- Address uncertainty around future regulations/standards for nutrients etc.
- Consider banning coastal discharge

Economics and Financing

- Avoid to stranding assets/aging infrastructure
- Identify additional forms of funding; lock-in funding for multiple years
- Assign a monetary value to in-stream flows to allow them to compete with other priorities

Management

- Create capacity for staff to look beyond day-to-day, allow for future focus
- Ensure equitable use/address bias towards affluent communities
- Create centralized outreach resources with a single set of messages for the entire region
    - Potable reuse will likely require additional outreach
    - Have an individual with public respect/attention help drive outreach
    - Water color is an issue with dual plumb facilities and public acceptance

Leadership

- Create storage to ensure supply during droughts
- Create leadership alignment and move fast when there is alignment

Technical Capacity

- Move beyond studies and scale up for larger projects
- Produce master plans as a tool for implementation (challenging to do)

Water supply

- Provide a reliable and affordable water supply

2. Magic wand desires (not incorporated in priorities):

Infrastructure and technical challenges

- Get rid of I&I
- Solve the issue of RO concentrate, PFAS and other CECs (could tie those to regulations on discharge, which would create even more challenges)

Outreach

- Instantaneous public understanding (especially of the costs of inaction)
- Reduced NIMBY sentiment for facilities

Governance

- More JPAs
- Consolidate agencies (or increase communication),
- Give wastewater agencies the right to distribute recycled water in their jurisdiction

Management

- Improve collaboration and negotiation skills for staff

Economics

- An industry standard on how to divide costs

Regulations and policy

- Creative and pragmatic thinking from the Regional Board to create opportunities for agencies to advance these projects
- Legislation giving impacted communities a seat at the table for decision making (ex: 1383)
- Enshrine progress in regulation
- Reduce water contracts to incentivize providers to diversify their portfolios (i.e., water cuts)

Breakout #2 Report Outs

Questions

1. How is your **ability to form partnerships** impacted by governance, regulation, economics, management, and leadership?
2. Which **external partnerships** do you need to establish to enhance the effectiveness of your organization now and in the future for considering and advancing water reuse?
3. What **individuals or groups** at your agency and in the broader Bay Area community need to be brought to the table to successfully implement water reuse?

Examples of collaborations

- North Bay Water Reuse Authority had success getting funds through lobbying and as a planning entity
- Bay Area Regional Desal project was a great research collaboration, but implementation requires further alignment
- Having BACWA as a single entity is highly valuable to centralizing discussions. ACWA Region 5 overlaps with BACWA, so a meeting between the two could be valuable

General comments

Governance challenges

- Involving elected officials can benefit projects due to their profile, but individual agendas may lead to conflict
- Organizations can be strengthened by regular goal setting/mission adaptation
- Agencies must work out on the edge of their mission (grow/flex)
- What form of governance fits best? Who is on the hook for compliance? Who receives the permit? Who pays?
    - JPAs are great but they have funding issues and require approval by multiple boards (droughts can accelerate approval). Renewing JPAs is complicated

Regulatory and policy challenges

- An internal team needed to be built at the regional board to permit the first IPR project
- Facilitate innovation by increasing technologist communication with the utilities
- These projects often result in a clash of environmental values (locating near the Bay is touchy)

Economic challenges

- How do we bring in other aspects of resiliency, fires, flooding, etc. to broaden our support base?
- Lots of entities want recycled water, but their expectations for timing and quantity are often unrealistic/cost prohibitive

Management challenges

- Smaller communities have a hard time participating in these organizations. We need to find ways to make their involvement easier
- Staffing issues in cities limit capacity, not just funding. How to compete with other issues?
- Take advantage of formal and informal networks of association to convene people on the topic
- Building capacity: increase retention, increase mentoring/training capacity, create succession plans, designate interagency backups
- Water quality varies. Emphasis on Hetch-Hetchy water quality decreases demand for alternative water sources
- Recycling water also requires energy, so be cognizant of energy issues and bring those people to the table

Leadership challenges

- Personalities matter (changes entire organization when there are shifts)
- Bring underrepresented groups, NGOs, Tribes, upstream users, and research organizations to have a seat at the table from the outset. They can be advocates if they are invested
- How do we keep the public engaged? During the drought, many customers were engaged, but that attention has dropped off
    - Different kinds of ad campaigns and outreach may be helpful
    - Unified messaging across agencies is helpful, but tailored messaging is also necessary
- Water reuse is going to have to be tailored to each region/agency

Attachment 2: Next Steps and Commitments

1. **What would you like to see as next steps for recycled water?**
2. **What actions will you commit to?**

Collaborate with other organizations

Next Steps	*Commitments*
• Reach out to ACWA • Joint meetings between ACWA and CASA, and ACWA Regs and BACWA	• Continued participation in BACWA and supporting better integration of water supply agencies into this discussion through ACWA to support regional project development

Hold future meetings

Hold future regional meetings

• Similar meetings – I would like to hear what other agencies are doing in terms of projects and studies • I would love for another meeting/workshop to be convened to continue this discussion in the future • Continued reuse community events such as today • Reconvene 2-3 times per year • Furthering the discussion on the barriers and how to overcome them for recycled water projects This workshop was fantastic and good to be with folks facing similar issues. Another workshop!	• Facilitate or help to facilitate a meeting between water agency leadership and wastewater agency leadership • Continue efforts to bridge wastewater agencies with reuse potential with water agencies that would benefit from portfolio diversification enhancing resiliency (e.g. Marin County). Efforts include bringing in Regional or State entities to facilitate dialogue • Continue developing and expanding partnerships to promote/build reuse facilities • Continue to engage at meetings

Hold future subregional meetings

• Urge RB2 or BACWA to convene a subregional, focused meeting Pilot efforts to build collaboration within one region (subarea) in the Bay Area	• Connecting San Leandro and EBMUD • I would like to talk to my wastewater agencies more often and hear what their issues are and how I can help them to come to the table for collaboration • Follow up with at least three participants • Continue to look for recycled water opportunities and continue the dialogue • Coordinated meeting with vision-statement between local water and wastewater boards • I will commit to help facilitate partnerships to accelerate recycled water projects

Enhance technical ability

Increase technical knowledge of reuse

Next Steps	*Commitments*
• Identification of main industrial water uses and ways to supply them with recycled water • Continue research in the subject area • Continued development of both non-potable and potable reuse • See indirect potable reuse and direct potable reuse more utilized throughout California and use of indirect potable reuse to replenish groundwater supplies • Implement more recycled water projects in the Bay Area	• Review our long-term plans in light of what was discussed today • Work with the city to move the recycled water master plan forward • Stay engaged at a high and impactful level • Intentionally monitor staff and create lasting organizational culture with respect to collaborations Sharing/researching more best practices for getting talent hired (Committed actions, individual actions)

Increase internal capacity for collaboration

• Do some case studies of current projects and develop the critical path steps with the major agencies to ensure success and also as a training for future projects • Take 2-3 priorities and create a framework to address each • Training at staff level • Break down some regional reuse projects that have real barriers and brainstorm real solutions to move forward • Role reversal	• I commit to building new relationships at the staff level of the agencies mine needs to partner with. All levels matter. • Follow up to see how we can contribute to supporting collaboration that supports reuse • Read the Plan 2.16 report • Read the Lessons for Successful Collaboration document • Engage my GM on establishing other collaborating groups • Alameda LAFCO to consider contract at November meeting to do a collaborative test study • Educate my elected officials more about recycled water

Identify subregional partnerships

• Create a regional map showing all the projects in concept and planning in the Bay Area • The areas outlined where there are shared areas of interest and focus, a la, natural areas of collaboration • Some group to maintain and make public a list of high probability of proceeding recycled water projects • Explore more about potential regional partnerships • Short list of potential indirect potable reuse projects linked to ground water basins and/or surface water reservoirs • Work with local potential users	• Help develop collaboration relationship map of the Bay Area (Dave Smith) • Continue the collaborative efforts and agreements to increase recycled water usage • Participate on potable reuse project partnerships • Pursue the current water reuse projects and foster the partner relationships • Pursue recycled water or alternative water supply in areas where available Continue pursuing regional partnerships to implement reuse projects and grant funding • Movement toward agreements • Having regular lunch with partners • More outreach to water agencies

Enhance technical ability (con'td)

Increase economic intelligence

Next Steps	*Commitments*
• A template for valuing projects/benefits that can be applied regionally • A cost allocation template • Standardized cost structures for wastewater • Economic success stories of water and wastewater agencies around recycled water projects • Forum on funding opportunities	• Ensure that multi-benefit projects are brought to the forefront during planning exercises. The focus is too easily siloed into nutrients, aging infrastructure, etc. • Research the avoided cost of curtailment and how that could help fund recycled water

Engage regulators

• Potable Reuse – ROC discharge to Bay and nutrient reduction seem to contradict. Need more alternatives for managing ROC • Regional effort in regulatory issues • Compilation of California reuse rules for each use type in one place • I would like to see more leadership, guidance, and regulation from the State Water Board to facilitate and encourage or require more water recycling	• Gather lessons from indirect potable reuse projects to apply within the SF Bay Region (in particular around the permitting process

Increase funding

• More federal and/or grant funding • More federal funding for recycled water projects • More funding • More funding and less jurisdictional constraints (use across cities, counties, and agencies)	• Investigate opportunities for funding and cost sharing, in view of broader social and environmental values • Follow up with Dave Richardson on WRF funding for direct potable reuse study

Improve outreach

• Find universal driver for recycled water • Better messaging and education to agricultural users and the public • A more regional approach to messaging around purified water or reuse in general. What about a website on the BARR webpage Wastewater viewed as a resource	• Become a bigger champion of recycled water \ • Continue educating people about recycled water • I will commit to look into the social acceptance of recycled water and work with experts (Data Instincts) on this subject • Continue to promote/discuss importance and value of recycled water with the community • Continue to provide information by publishing reports/studies or meeting/Zoom discussion groups