

OC San's Risk Register

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OC SAN
ORANGE COUNTY SANITATION DISTRICT

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Risk Register

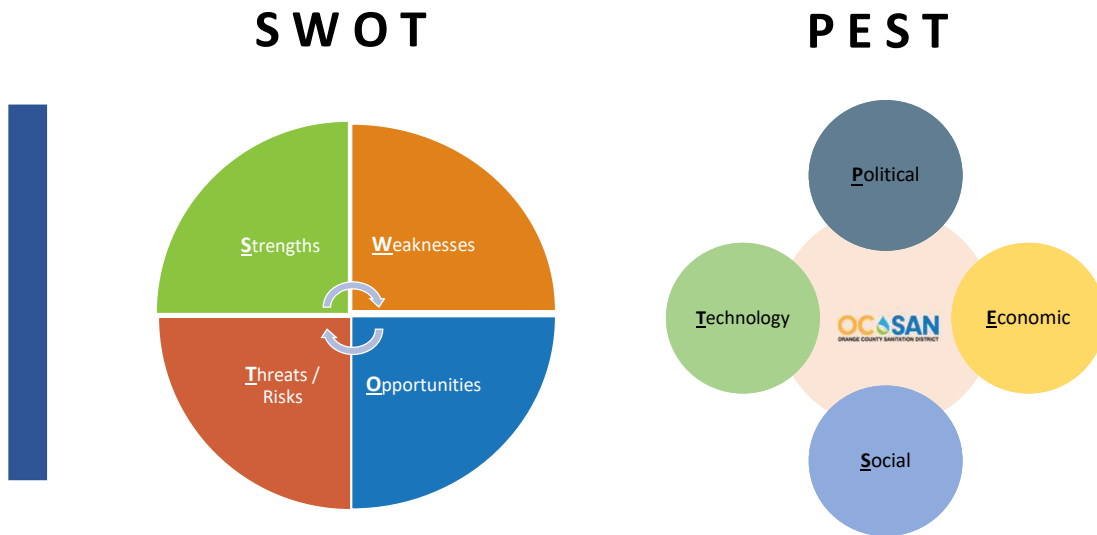
- Overview of OC San's current opportunities and risks
- Part of Strategic Planning Process
- Input from Staff
- Focus on Ten Operational Impact Areas



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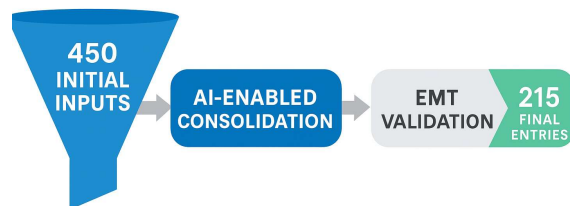
Risk Register - Composition



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By the Numbers



- **S**trengths – 67 Entries
- **W**eaknesses – 51 Entries
- **O**pportunities – 19 Entries
- **T**hreats – 16 Entries
- **PEST**
 - 33 Opportunities
 - 29 Threats

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Threats

These are **strategically significant risks**, each with **action plans**.

Total: 16 ranked entries

Rank Range	Example Topics
1-5	Cybersecurity, Cross Connection Program, IT Continuity, Procurement, Regulatory Barriers
6-10	Workforce, Infrastructure Gaps, Security, Delivery Risks
11-16	Biosolids, Public Trust, Political Delay, Easements, EV Gaps, Economic Volatility

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Opportunities

These are **forward-looking prospects** for improvement or growth, **all associated with action plans**.

Total: 19 ranked entries

Rank Range	Focus Areas
1-6	Deep Well Injection, AI & Automation, LOTO, Capital Project Lifecycle, Workforce Readiness, Digital Finance
7-13	Cybersecurity, Safety Modernization, Lab Modernization, Metering, Cloud IT, Composting, Potable Reuse
14-19	Shutdown Standardization, Digital Comms, Forms, Advanced Treatment, Community Engagement, EV Charging

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Talent Acquisition and Succession

• Risks

- Managers noted Talent Acquisition & Succession as a priority
 - Sustained communication, investment & action to support continuity and capacity
- Clear, Actionable Vulnerabilities
 - Limited cross-training, single-incumbents, retirement risk
- Real Strengths to Build On
 - Dedicated personnel and strong inter-team collaboration

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Talent Acquisition and Succession

• Strategies

- **Workforce Vulnerability Assessment**
 - An annual exercise identifying critical positions, talent readiness/gaps and staffing needs
- **Individual Development Plans**
- **Employee Training and Development**
 - Technical and Soft Skills Training
 - Leadership Development Programs
 - Job Shadowing and Mentoring
 - Tuition reimbursement and certification reimbursement programs
 - Development Pay Program
- **Skills Broadening**
 - Rotation Assignments
 - Broader classifications
 - Reduced number of single incumbent classifications
- **Standard Operating Procedures (SOP), Desk Procedures, Internal Knowledge Repositories (Wikis)**

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Project Delivery and Execution

• Risks

- Project delays can compound across the program, leading to increased costs and execution impacts between projects
- Construction projects increase over the next 3 to 5 years, requiring additional resources and increased coordination
- Small projects are essential to maintaining plant operations but compete with CIP resources and require disproportionate effort

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Project Delivery and Execution

Strategies

- **Strong Execution**
 - Through collaboration, use of data tools, and design-build innovation
 - Maintaining strong delivery through continuous optimization
- **Manage additional or redirected resources to align with the project workload**
- **Maintain strong coordination with O&M**
 - Use Shutdown Coordination Committee to coordinate project timing
 - Well-defined project work restrictions and sequencing
 - Coordination meetings with O&M
 - Plan and coordinate small project timing and urgency with O&M
- **Proactively monitor and mitigate delays through timely decision-making and risk monitoring**

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Cybersecurity

Cybersecurity: OC San's Top-Ranked, Cross-Cutting Risk

- Tops the threat list due to its reach across IT, SCADA, remote access, staffing and physical infrastructure
- Multiple stressors converge across operational and digital domains
 - Aging infrastructure that is harder to secure
 - Remote access points that expand the attack surface
- **Ongoing mitigation efforts** — including risk assessments, VPN controls, training and RED Team testing — require sustained executive attention and cross-department coordination

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Cybersecurity

Mitigation Efforts

- Network – Air gapped from Enterprise/Office networks – no internet access
- Segmented network use
- Protected by NextGen firewalls
- Account and Access Control Management
- Audit Log Management
- Security awareness and skills training
- Service Provider Management
- Incident Response Management
- Continuous Vulnerability Management
- Email and Web Browser Protections
- Malware Defenses
- Data backup and recovery

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Regulatory Pressures

Regulatory Pressure – From Compliance Risk to Strategic Alignment

- Evolving mandates, permitting complexity, infrastructure needs, and workforce strain are increasing compliance demands across the organization
- OC San's credibility, agency partnerships, and early technology adoption support proactive alignment with emerging standards
- **OC San works proactively with regulators, influencing policy, and embedding compliance into innovation and capital planning**

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Asset Reliability

Asset Reliability – Aging Infrastructure Impacts System Resilience

- OC San's asset management program is well-established, actively evolving, and aligned with long-term improvement goals
- Leverage maintenance data and risk-based decision making through digital asset management to guide project and asset replacement timing
- **Develop a comprehensive condition assessment program for all critical assets to support proactive maintenance and replacement**

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Strategic Reflection

- Themes from the 2023 Risk Register — cybersecurity, staffing, digital modernization and regulatory readiness — persist in 2025
- This consistency suggests alignment across the organization but also reveals areas where more visible progress may be needed
- Action plans are strong but better tracking is required
- Need to incorporate workforce readiness into Key Performance Measures/Critical Success Factors in Business Accountability Charters

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Next Steps – Strategic Planning

- Budget Update Adopted ✓
- Strategic Planning Review
 - Strategic Plan ✓
 - Levels of Service ✓
 - Core Values ✓
 - Risk Register ✓
- Internal Policy Papers Update – August
- Draft Strategic Plan – September
- Final Strategic Plan for Adoption - November

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