



Instructor Background And Information Form

Thank you for filling out this form.

Presentation Title: Math for Operators - Grade I & II

Presenter: James V. Baird Title: General Manager

Employer: Roseburg Urban Sanitary Authority Address: PO Box 1185, 1297 NE Grandview Drive

City: Roseburg State: OR Zip: 97470 Phone: 541-672-1551

Summary of Lesson content: This class will provide operators with the basic math skills to use the formulas required to complete the operator grade I & II exams. The topics will include volume, conversions, pounds, velocity, flow and other equations operators need to know.

Professional Background: (Note a brief - 2 page maximum - resume may be submitted in lieu of the following data. Please be sure the resume includes all requested information. Qualifications should be related to your presentation.) Use the reverse side of this form if more room is needed to fully answer the following questions.

Primary Knowledge/Skills/Abilities related to presentation: 29+ years in the water and wastewater field as a technician, project manager, design technician and Engineering and Operations Manager.

Education (High School, Upgrades, Colleges and Degrees): Roseburg High School - High School Diploma
Umpqua Community College - A.S. Civil Engineering Technology

Professional Registration/Certification: Oregon Grade III Wastewater System Operation, Oregon Grade II Treatment System Operations.

Related papers/instruction you have presented:

Title: _____ Date: _____ Event: _____

Title _____ Date: _____ Event: _____

Professional Organizations/Activities:
President/PNCWA _____ Date: 2019

Past President _____ Date: 2020

Course sponsor: Umpqua Community College

Signature of Instructor: James V. Baird Date: 1/23/23

Digitally signed by James V. Baird
DN: cn=James V. Baird, ou=RUSA, ou=General Manager,
email=jbaird@rusa-or.org, c=US
Date: 2023.01.23 11:04:30 -0800

DO NOT WRITE BELOW THIS LINE

Date Evaluated: _____ By: _____ Approved: Yes _____ No _____

Return Completed Form To: OESAC CEU COMMITTEE Email: info@oesac.org
P.O. Box 577 Phone: 503-698-6486
Canby, OR 97013-0577

James V. Baird
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Umpqua, OR 97486
Home: 541.673.5003 Cell: 541.580.6202
jnbaird6@gmail.com

SELF MOTIVATED LEADER

*~ Current General Manager ~
Roseburg Urban Sanitary Authority*

- **Diverse Experienced Manager** with a 29-year career in management of personnel and projects for both public and private institutions.
- **Currently General Manager** leading the professional of Roseburg Urban Sanitary Authority in the operations of the wastewater system and business of the Authority.
- **Experienced Manager** integrating all the division of the Authority.

KEY SKILLS AND KNOWLEDGE AREAS

- | | |
|---|---|
| • RUSA'S Ordinances | • RUSA'S Resolutions |
| • RUSA'S Budget & Process | • Public Meeting Laws, Procedures |
| • Department of Environmental Quality Regulations | • Oregon Public Contracting Law |
| • RUSA's Policies & Procedures | • Coordinate 1.4 Million contract with Jacobs |
| • Team Building | • Integrity |
| • Dependable | • Optimistic |
- Project Management
 - Project Administration
 - Project Accounting
 - Project Pay Estimates
 - Customer Outreach
 - Community Involvement

EXPERIENCE

General Manager, Roseburg Urban Sanitary Authority,

Roseburg, OR. 2017 to present

General statement of duties; responsible for ensuring implementation of the policy direction provided by the Board of Directors and for the overall management and administration of the Roseburg Urban Sanitary Authority.

Engineering and Operations Manager, Roseburg Urban Sanitary Authority,

Roseburg OR. 2009 to 2017

General statement of duties; plans, organizes coordinates and administers a consolidated program for the Engineering and Collections Department of the Roseburg Urban Sanitary Authority. Coordinates the effective and efficient use of the program personnel, funds, equipment and time. Oversee the contract operator of the wastewater treatment plant. Functions as the second-in-command in the absence of the General Manager.

Technical Sales Manager and Senior Applications Engineer, Romtec Utilities,

Roseburg OR. 2000 to 2009

First employee hired by Romtec Utilities to start a new company that would design, manufacture, deliver and commission pumping systems. Tasked with developing all the designs for the new complete systems used to pump fluids in sanitary, storm and industrial applications. Worked with several engineering firms, directing their work on various facets of the designs. The designs included several disciplines; civil, structural, electrical and mechanical. The senior applications engineer leading a team of application engineers and production staff to develop and manufacture this complete system approach to pump station construction. Also the lead manager for Romtec Utilities in project identification, scope and specifications for all projects. Lead project manager coordinating Districts, Municipalities, Government Agencies, Engineers and Owners in the infrastructure improvements for pumping systems. Company's representative providing technical papers to professionals in seminars and continuing education classes.

Engineering Technician, i.e. Engineering, Roseburg, OR. 1999 to 2000

Project design and inspection of public and private improvement projects including: sewer, water and streets. Worked with the firms' professional engineers to complete projects in the Roseburg and Douglas County area. Coordinated the development process with various government agencies and utility providers involved with the projects. Develop plans and specifications for public and private improvements. Inspect, record and provide payments documents for these projects. Ensure all as-built information was recorded on the final construction documents,

Engineering Technician II, City of Roseburg, OR. 1989 to 1999

Engineering technician for the Public Works Department and the Water Department. Worked with the utility location, public improvement design and inspection for projects

for the City of Roseburg. Worked with engineering firms contracted with the City on project scoping, designs and construction of projects built for the municipality. Coordinated various utilities and government agencies for projects within the City service area. Reviewed plans and specifications submitted to the City for projects designed by engineering firms for projects to be constructed in the City of Roseburg and associated service area.

Survey Technician, A.A. Surveying, Roseburg, OR. 1986 (summers) to 1988. 1988 to 1989 (full time)

Worked as an instrument man and rod man on surveys and construction projects in Washington, Oregon and California. Provided calculation for property surveys, boundary lien surveys and construction staking. Conducted construction staking and grade checking of various construction projects including water, sewer and street improvements.

Municipal Government Experience

Roberts Creek Water District Commissioner, Board of Commissioners, Roseburg, OR. 1994 to 2006

Held an elected position as a commissioner for Roberts Creek Water District, the second largest water district in Douglas County. Elected President of the board from 1997 to 2006. During my term with the district, the board completed many projects to improve the infrastructure of the water system. Some of the major projects were a 3.2 million dollar water treatment plant upgrade, a new 250,000 water reservoir, converting from gas chlorine to no site generation of hypochlorite, major district office addition and remodel, and numerous water main construction projects. As President I lead the monthly meetings and special meeting including the budget process. During my terms of office I was involved in the creation of the system development charges methodology and supporting documentation. I was also involved with the establishment of a continuing five year plan and associated rate structure to fund the improvements identified in the five year capital improvement plan. As the President I led a committee to develop a District Personnel Policy.

Professional Organizations

Oregon Association of Clean Water Agencies

- Professional Member, Member Energy Committee

Pacific Northwest Clean Water Association

- Professional Member, Past Subsection President (UBOS)
2017 Vice President PNCWA
2018 President Elect PNCWA
2019 President PNCWA
2020 Past President PNCWA

- 2016 Individual Achievement Award recipient
American Public Works Association
- Professional Member

Special Districts Association of Oregon

- Agency Member

Professional References

Nikki Messenger
City Manager
City of Roseburg
541.492.6866

Alex Palm
Registered Professional Engineer
Owner, Partner
i.e. Engineering
541.673.0166
541.784.8695 (cell)

Alan Chang, PE
Senior Project Manger
Jacobs
541.602.4532 (cell)

Christine Morris
Accounting Manager
Roseburg Urban Sanitary Authority

Steve Lusch
Collections Superintendent
Roseburg Urban Sanitary Authority

Level I and II: Operator Math

I.	Units a. Addition and Subtraction b. Multiplication and Division	8:00 am
II.	Equations a. Re-arranging Formulas	8:30 am
III.	Fractions – Decimal Equivalent Fractions	9:30 am
IV.	Percent	9:45 am
V.	Significant Figures	10:15 am
VI.	Proportions	10:30 am
BREAK	15 Minutes	10:45 am
VII.	Ratios	11:00 am
VIII.	Conversions	11:45 am
LUNCH BREAK	60 Minutes	12 Noon
IX.	Areas and Volume	1:00 pm
X.	Flow	2:00 pm
XI.	Pressure	2:30 pm
XII.	Pounds Formula	3:00 pm
XIII.	Detention Time	3:30 pm
XIV.	ABC Formulas	3:45 pm
XV.	Q & A	4:00 pm
XVI.	End of Session	5:00 pm

Umpqua Community College
Community & Workforce Training
Course Outline – Math for Operators Level I and II

Course Description: This class will provide operators with the basic math skills to use the formulas required to complete the operator grade I & II exams.

Course Prerequisites:

Level 1 – no prerequisite

Level II – Level I must be completed prior to taking Level II

Course Objectives/Outcomes:

1. Students will demonstrate understanding of basic math and algebra skills including fractions, decimals, percentages, order of operations
2. Students will demonstrate understanding of volumes, conversions, pounds, velocity, flow and other necessary equations needed for operators.
3. Students will be prepared for the Math Section of the Level I and II Wastewater System Operator Certification exam.

Training Objective: This class will focus on preparing students for the math sections of the Water and Wastewater Certification Exams.

**Umpqua Community College
Community & Workforce Training
Level I & II Math for Operators
Student Tracking**

Method of Tracking for In-Person: *Sign In/Out*

Method of Tracking for Online: *Online assistant will monitor class via Zoom and will take attendance throughout the day*