About Me

Frank.Loethen@gwinnettcounty.com | 678-376-6750
What is the problem?

• Utilities are facing common workforce challenges:
  • Aging workforce
  • Knowledge transfer
  • Technological advances
  • Rate of change
• Rapid change is creating gaps in competency
• Better skilled workers are needed faster to keep up

Gwinnett County Challenge

2017 Global Human Capital Trends - Deloitte©
Training in the “Good Old Days”

- State Requirements:
  - HS/GED
  - Coursework
  - Experience
  - Testing

- Plant Specific:
  - Osmosis - a usually effortless, often unconscious assimilation

Operator Ability Needed (Old Days)

What is a competent operator? When is an operator competent?

14.5 MGD Oxidation Ditch

Specific to Gwinnett County

State Requirements for all Georgia plants
2012 Capital Project
- Conversion of 14.5 MGD oxidation ditch to 22 MGD membrane bioreactor
- New plant and processes
- Same operator and training

Operator Ability Needed (Now)

Warning signs:
- Never enough time
- Never enough resources
- Never enough people
- Lack of confidence
- Errors in / near misses
Knowledge Tools – EOMs and SOPs

Qualification (Qual) Cards

Student Version - Signoffs

Instructor Version – Answer Key
Computer Based Training

Putting it together:

- Knowledge & Skill Resources
  - Electronic Operations Manual (EOM)
  - Standard Operating Procedures (SOP)
  - Qualification (Qual) Card
- Reinforcement training
- Assessment of acquired ability (knowledge + skill)
Qual card process:
- Structured, verified, and documented training from influent to effluent
- Training performed by Supervisor
- Effectiveness checked by Manager assessment
Big Take-Aways:
• Water Operations are of increasing complexity
• Licensing provides an important baseline, but is insufficient by itself to be considered qualified at advanced plants
• We must get ahead of the progress curve by increasing ability, while reducing Time-to-Train (TTT)

Recommendations
• Assess and utilize your available resources
  • Don’t reinvent the wheel if you don’t have to
• Identify your knowledge base
• Define what it means to be trained or qualified
  • Knowledge + Skill = Ability
• Develop a reinforcement method of training (repetition sticks)
• Demonstrate the required knowledge and skill assessments
• System for Feedback / Change management
• Measure and improve your Time-to-Train (TTT)
  • Stay ahead of the curve
Purpose of the ESD

• Hire, train, and retain the best quality people to operate and maintain state-of-the-art plants and processes
• Build the bench for career succession
• Address skills gap created from rapidly changing technology
• Mitigate lost knowledge and skill due to retirement and attrition
ESD Program Components

Requirements of the Employee Skills Development (ESD) Program

- Progression Paths
- Qualification “Qual” Cards
- Safety Matrix

ESD management & Tracking Tools

- Skills Assessment sheets
- Individual Development Plans (IDPs)
- Paper Records
- Learning Management System (LMS)

Current ESD Program Status

As of November 2018:

<table>
<thead>
<tr>
<th></th>
<th>Documentation Status</th>
<th>Kickoff Preparation</th>
<th>Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Progression Path</td>
<td>Qual Cards</td>
<td>Class Spec</td>
</tr>
<tr>
<td>Warehouse Tech</td>
<td>100%</td>
<td>100%</td>
<td>Existing</td>
</tr>
<tr>
<td>Trade Assoc</td>
<td>100%</td>
<td>100%</td>
<td>Existing</td>
</tr>
<tr>
<td>Const Mgr, Insp</td>
<td>75%</td>
<td>75%</td>
<td>Existing</td>
</tr>
<tr>
<td>Engineer</td>
<td>50%</td>
<td>25%</td>
<td>Existing</td>
</tr>
<tr>
<td>W/WW Techs</td>
<td>50%</td>
<td>60%</td>
<td>Existing</td>
</tr>
<tr>
<td>Trades Techs</td>
<td>25%</td>
<td>25%</td>
<td>Existing</td>
</tr>
<tr>
<td>Instrument Tech</td>
<td>0%</td>
<td>0%</td>
<td>New</td>
</tr>
</tbody>
</table>
Progression Path:
- Defined competencies for a career path
- Career levels in columns
- Competencies in rows
  - Licenses
  - Certifications
  - Trainings
  - Qualifications

Education and Experience
- Must go from 1 to 2
- Proma = Promotion Automatic based on gaining all required competencies
  * indicates preferred
## Licenses and Certifications

"●" indicates when it is required

<table>
<thead>
<tr>
<th>Level</th>
<th>Title</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valid Georgia Driver’s License</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GA Wastewater Plant Certification Class II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>GA Wastewater Plant Certification Class III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>GA Wastewater Plant Certification Class I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>License renewalQDs (as applicable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Confined Space Competent Person</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

## Training and Qualifications

“● 6 mos” = 6 months to obtain

<table>
<thead>
<tr>
<th>Level</th>
<th>Title</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BWR Onboarding / Plant Tour - One time</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety Training for General Industry - Continuous</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Qual Card 1 - Basic Operator (one-time per plant)</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Qual Card 2 - Laboratory (one-time)</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Qual Card 3 - Advanced Operator (one-time per plant)</td>
<td></td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GCC Code of Ethics - Every 2 Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>GCC Supervision (Blind) Training - All even 2 Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>GCC Leadership Training (CIS, Driving, MBT) - One every 5 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Management 101 - Every 2 years</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Management 201 - Every 2 years</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Leadership 101 - Every 2 years</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Leadership 201 - Every 2 years</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>GCCLEAD Class (Must apply - as available)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>Carl Vinson Institute (CBI), Class (Must apply - as available)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Safety Matrix

- Recurring safety training
- 3 Categories:
  - Office
  - General Industry
  - Construction
Qual Cards:
- Level 1 – Apprentice
  • Breadth of skill
- Level 2 – Journeyman
  • Depth of skill
- Level 3 – Subject Matter Expert
  • Advanced skills or multiple areas

Program Management Tools
- SAP Training Records
- Skills Assessment Worksheets
- Individual Development Plans
Official Record – SAP

Employee Qualification Report

- Qual attained – Yes or No
- Expired date only if it expires
  - One time Quals don’t expire

Employee Training History

- Completion date
- CEU’s if awarded

Skill Assessment Worksheet

- Review with individual
- Compare Requirements to SAP records
  - No record in SAP = No credit
- Update if documented proof can be provided
Skills Assessment Example

- What you need for your level

<table>
<thead>
<tr>
<th>Employee:</th>
<th>BLUETT GWINNETT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Position:</td>
<td>WAREHOUSE TECH III</td>
</tr>
<tr>
<td>ESD Placement:</td>
<td>WRF Warehouse Tech III</td>
</tr>
<tr>
<td>Personnel #:</td>
<td>52345</td>
</tr>
<tr>
<td>Work Center:</td>
<td>Field Ops/Warehouse</td>
</tr>
<tr>
<td>Date of Hire:</td>
<td>1/1/2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience</th>
<th>ESD Requirement</th>
<th>Actual</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min Yrs in Level:</td>
<td>0</td>
<td>N/A</td>
<td>From hire date</td>
</tr>
<tr>
<td>Max Yrs in Level:</td>
<td>0</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Min Yrs Experience:</td>
<td>2</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Min Yrs Supervisor:</td>
<td>0</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certifications:</th>
<th>Forklift</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education:</td>
<td>High School Diploma or GED</td>
</tr>
<tr>
<td>Licensing:</td>
<td>Driver's License</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Qualifications:</th>
<th>2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1. Leadership Development</td>
<td>Yes</td>
</tr>
<tr>
<td>G2. GW Training</td>
<td>Yes</td>
</tr>
<tr>
<td>G3. Purchasing Training</td>
<td>Yes</td>
</tr>
<tr>
<td>G4. G5 Warehouse Adult Card 1</td>
<td>Yes</td>
</tr>
<tr>
<td>G6. G7 Warehouse Adult Card 2</td>
<td>Yes</td>
</tr>
<tr>
<td>G8. G9 Warehouse Adult Card 3</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The No’s are what you need to do.

Individual Development Plan (IDP)

- Action plan using S.M.A.R.T. goals to ensure individual meets requirements
- Break up longer completion deadlines into shorter achievable periods (Goals)


Employee Signature: Date: Manager Signature: Date:
Individual Development Plan Example

For this example, assume ESD starts on 1/1/18 and 2 years to complete.

ESD Transition Timeline

- Period in which skills needed must be completed
- Maximum Timeframe guidelines:
  - 2 years for internal qualifications
  - 3 years for external certification
  - 4 years for multiple certifications
Support Team Tracking

- **Individual:**
  - Complete the items in the IDP

- **Training Team:**
  - Monthly progress reports to Management / Admins
  - Training and follow up with Management / Admins

- **Admin(s):**
  - Maintain employee records
  - Update records using progress reports
  - Schedule progress meetings as needed

- **HR**
  - Process Promas when approved by Chain of Command

- **Section Manager:**
  - At least Quarterly progress review via individual email to each employee
  - Determine on/off track, conduct meetings as needed

Tracking:

- Progress tracking
  - Monthly

- Progress email
  - Individualized email progress update
  - Every 3 months

- Progress meetings
  - On track: 6 months max
  - Off track: 3 months max
  - Address obstacles
  - Adjust plan as needed
Performance Appraisal Tracking

- Documented in non-graded section of Non-exempt Performance Appraisal
- Attach progress sheets to PA

Section II: Additional Applicable Skills/Competencies Acquired
- List specific accomplishment and date related to IDP for previous 12 months

Section III: Performance Planning
- List planned IDP goals for the next 12 months
- List specific actions and date to reach goals

Specific IDP accomplishment and date

What are my IDP goals in next 12 months?
What steps and by what date to accomplish?

Learning Management System
- Personalized to your position and level
  - Alerts on top
  - Summary next
  - Current level on left side
  - “What if” tool on right side
Qualification Status Icons

- What the icons mean...
  - Assigned to my Current position
    - Good, I have this qualification and I’m current
    - Good for now, but due in <60 days
    - Don’t have qualification or overdue
  - Not assigned to my Current position
    - Have qualification, maybe for future position

Alerts

- Requirements coming due within 60 days
- May send email reminder

- Typically has yellow or red warning icon below for the associated item
Alerts Example

• Code of Ethics example:
  • Alert Window on top:

  ![Alerts and Notifications]

  Code of Ethics will expire on 02/24/2018

• Expiring Qual on bottom:

  ![Expanding Images]

  ![Expanding Images]

  ![Expanding Images]

  Code of Ethics 02/24/2018

Summary Information

• Employee information

  ![Employee Information]

  Job: 10902459 - Section Mgr. MG17  Position: 209908629 - SECTION MGR - MG17  Position Entry Date: 10/12/2015  Next Evaluation Date: 10/12/2018

  Actual Months in Level: 31  Min Months Required in Level: 31  Max Months Allowed in Level: 60

• Print your own Training & Qualification record
• Employee review
  • Within 60 days of Performance Appraisal
Print ESD Profile
• Access to qualification and training record

Print Qualification Profile

Gwinnett County
Employee Development Profile

Name: JOSEPH LOETHEN
Position: SECTION MGR - MS17 (090628)

Qualifications Required for Position
Exp. Date
Attained by Employee

Active Shooter Awareness
01-26-2020
Yes

Back Injury Awareness
02-26-2020
Yes

Code of Ethics
06-08-2019
Yes

Emergency Response Awareness
06-26-2020
Yes

Office Safety & Ergonomics Awareness
10-18-2019
Yes

Office Safety & Ergonomics Awareness
05-06-2019
Yes

Qualifications attained but not required for position

Employee Review

• Annual review 60 days prior to work anniversary

Employee Skills Development

I have reviewed my employee training record and affirm that my information is complete and correct.

I have found the following discrepancies in my training record:

Submit Discrepancy
ESS - Status Bars

- Green and 100% means all items in that category below are good:

<table>
<thead>
<tr>
<th>Licenses</th>
<th>100%</th>
<th>Certificates</th>
<th>100%</th>
<th>Safety</th>
<th>100%</th>
</tr>
</thead>
</table>

- Red and less than 100% means something is expired or missing below

- Find the red stop light in the associated category below

Current Level (left side)
- Applies my earned qualifications to the selected career level
- Only shows top 3
  - Use fly-away panel to expand view
  - Expired Quals have viewing priority
- If all green, no need to open fly-away
Current Level (left side)
- This view shows Quals that either have expired or not obtained
- If Qual turns yellow, it is still good now but will expire < 60 days
- If you see something wrong, contact Admin and Training to fix

Fly-away Panel
- Pop-up window that shows all items under that category
  - Reds move to top
  - Greens move to bottom
No Requirements

• Indicates no requirements in that section

<table>
<thead>
<tr>
<th>Status</th>
<th>Certificate Description</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Certificates Required for the Job/Position Selected.</td>
<td></td>
</tr>
</tbody>
</table>

Training History

• 3 years of training history
• Shows date completed in past or schedules in future
• Individual responsible for tracking CEU's

<table>
<thead>
<tr>
<th>Training Description</th>
<th>CEUs</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negotiate with Vendors and Suppliers</td>
<td></td>
<td>09/22/2017</td>
</tr>
<tr>
<td>ESD Program Introduction</td>
<td></td>
<td>09/15/2017</td>
</tr>
<tr>
<td>Hazardous Communication / Right to Know</td>
<td></td>
<td>09/15/2017</td>
</tr>
</tbody>
</table>
“What if” tool
• Right-hand side
• Allows you to overlay your qualifications with a different level or career

“What if” Tool – Right Side
Levels or Progressions within a career

Not limited to your specific career

Click on Warehouse Mgr
“What if” Tool – Right Side

- Applies your accomplishments to the job selected
  - Green is what you have that applies to that job
  - Red is what you need for that level
  - Some maybe interview position

Training Center

- Tailored to individual needs
- Shopping cart type system
Big Take-Aways

- **Long-term** campaign level effort
  - Where you start may not be where you finish
  - May lose some battles to win the war
- Bottom-up approach that takes *top-down commitment* and support (likely multi-year)
- The organization must be *ready for change*
  - Employees, Management, HR
- **Communication** and stakeholder *involvement* is key
- **Internal champion** to lead the effort
  - External help if needed

Questions?