

Virginia Optimization Program Annual Report CY 2020


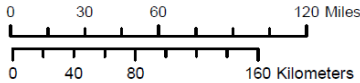
September 22, 2020

Dixon Tucker



ODW Field Offices

- AFO
- CFO
- DFO
- RFO
- LFO
- SEVFO

Office of Drinking Water

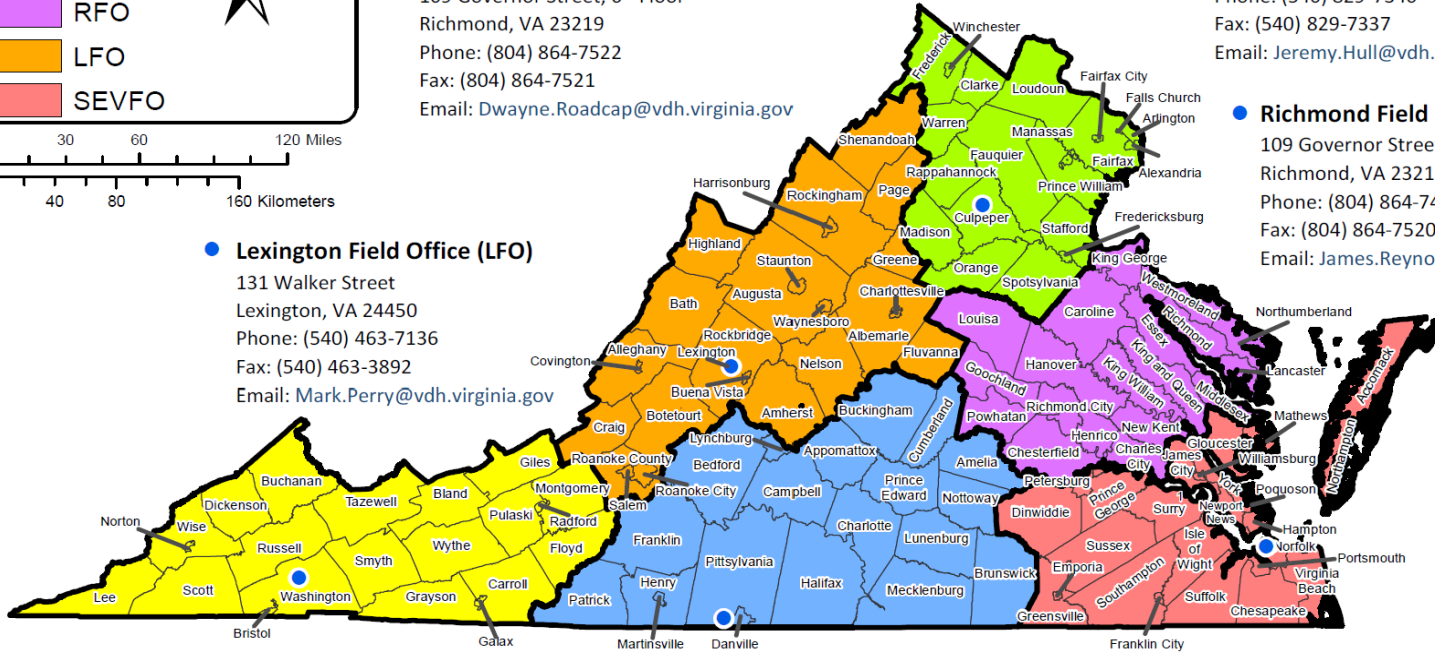
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The mission of the Office of Drinking Water is to protect public health by ensuring that all people in Virginia have access to an adequate supply of affordable, safe drinking water that meets federal and state drinking water standards.



MAINTAINING THE PROGRAM

- VOP Committee composed of representatives from six field offices and the Central Office
 - David Dawson, PE - Abingdon Field Office
 - Thomas Thompson, PE - Lexington Field Office
 - Dixon Tucker, PE - Southeast Virginia Field Office
 - Nyibe Smith - Richmond Field Office
 - Bernard Proctor, PE - Danville Field Office
 - Akshay Jain - Culpeper Field Office
 - Susan Miner, CapDev - Central Office
 - Aaron Moses, PE, Central Office
 - Robert Edelman, PE, Central Office

MAINTAINING THE PROGRAM

Relationships with other functions

- VOPC is doing Waterworks Recognition
- VOPC working cooperatively with Capacity Development
- VOPC does not attempt to work with Operator Certification

MAINTAINING THE PROGRAM

- One VOPC team member from each of six offices.
- Three CO representatives.
- Team turnover usually by attrition - five offices have changed team members, some multiple times.
- Team is responsible for implementation at each of six offices.

MAINTAINING THE PROGRAM

- Prepared Annual Report/Status Component
- Identified Performance Award Recipients

VOP Goals

Effective January 1, 2013

Proposed Changes

Clarification (Individual unit preferred, or other combinations as currently monitored)

Monthly evaluation period

- Effluent turbidity ≤ 1.0 NTU 95 % of time when average raw water turbidity for month ≤ 10.0 NTU
- Effluent turbidity ≤ 2.0 NTU 95 % of time when average raw water turbidity for month > 10.0 NTU



VOP Goals

Effective January 1, 2013

Proposed Changes

Filtration (Individual Filters)

monthly evaluation period

- Filtered water turbidity ≤ 0.10 NTU 95 % of time
- Filtered water turbidity ≤ 0.30 NTU 100% of time



VOP Goals

Effective January 1, 2013

Proposed Changes

Filter Backwash

Annual evaluation period

- Backwash recovery period ≤ 15 min. (return to ≤ 0.10 NTU) in 95% of backwashes
- Peak turbidity ≤ 0.3 NTU during backwash recovery period in 95 % of backwashes
- Filtered water turbidity ≤ 0.10 NTU 95% of time a filter is placed into service following a backwash

PWS Status

121 Treatment Facilities

39 Met Clarification, Filtration and Backwash Goals -
Gold Award (32%)

24 Met Filtration; and Clarification or Backwash Goals -
Silver Award (20%)

21 Met Filtration Goals -
Bronze Award (17%)

Virginia Weighted WTP Ranking Criteria

ITEM	UNIT	MEASUREMENT	Revised Factor Eff. 2013
Clarification goals	Clarifier months	Fraction of total clarifier-months goal was met	3 4
Filtered turbidity \leq 0.1 NTU, 95% of readings	Filter months	Fraction of total filter-months goal was met	5 7
Filtered turbidity \leq 0.3 NTU, 100% of readings	Filter months	Fraction of total filter-months goal was met	5 5
Placed in service after backwash with filtered turbidity \leq 0.1 NTU, 100% of backwashes	Filter months	Fraction of total filter-months goal was met	3 4
Backwash recovery period peak turbidity \leq 0.3 NTU, 100% of backwashes	Filter months	Fraction of total filter-months goal was met	1 0
Backwash recovery period \leq 15 minutes, 100% of backwashes	Filter months	Fraction of total filter-months goal was met	1 0

Waterworks Recognition Program

Traditionally, awards are presented to recipients at a lunch ceremony hosted by Southeast Rural Community Assistance Project in Roanoke, and are presented in person or mailed to waterworks unable to attend. Due to COVID-19, this year's ceremony was canceled and 2019 VOP Awards were mailed, with a few instances where Awards were presented in person, observing recommended health precautions.

Waterworks Recognition Program

- Bronze - meets criteria for filtration
- SILVER - meets criteria for BRONZE award and meets clarification goals, OR
- SILVER - meets criteria for BRONZE award and meets all 3 backwash goals
- GOLD - meets all criteria

Waterworks Recognition Program

AWARD	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GOLD	3	2	10	12	15	13	17	22	28	37	31	34	37	35	39
SILVER – clarifier	15	24	20	23	19	16	18	17	9	9	13	10	13	10	10
SILVER – backwash	1	7	4	4	7	9	10	10	16	11	19	20	19	17	14
BRONZE	32	37	40	38	36	35	34	35	32	25	19	24	21	22	38
TOTAL AWARDS	51	70	74	77	77	73	79	84	86	82	82	88	90	84	84
ELIGIBLE WTPS	138	136	134	132	131	131	130	130	131	132	129	131	131	130	121

WTP INSPECTIONS

- Annual
- Major vehicle for VOP technical assistance
- Encourage discussion of VOP R+R results for previous 12 months
- Encourage discussion of TURBOP results for previous 12 months (when available)

AWOP IMPACT

- Progress towards achieving each AWOP goal for WTPs is observed in each Field Office
- State-wide progress for individual goals noted in following slides.

Status Component: Looking Forward

- Targeted technical assistance via Sanitary Surveys and other meetings with WTPs.
- Annual VOP data review letter to WTPs, OR
- Notify WTPs of rank in sanitary surveys.
- Targeted technical assistance or intervention at low-performing WTPs.

VOP: Looking Forward

- Interest in DBP PBT, DS Optimization...
- Continue quarterly (?) AWOP meetings with EPA Region 3
- Continue sharing lessons learned

VOP: Looking Forward

- Maintaining the existing VOP
 - Turbidity Goals for SWTPs
- Waterworks Awards Program
- Outreach
- Look into ramping up Distribution System Optimization