

NOVEMBER

2017

AGENDA



Yakima Regional Clean Air Agency
MEETING LOCATION: Yakima City Hall
City Council Chambers
129 N. 2nd Street, Yakima

November 9, 2017
Study Session
1:30 p.m.
Regular Board Meeting
2:00 p.m.

AGENDA

Study Session

CY 2018 Fee Review

Regular Meeting

- 1. Call to Order**
- 2. Roll Call**
- 3. Public Comments**

If you wish to address the Board you may do so now

Please approach the podium, state your name and the Agenda item you are addressing

Please limit your comments to three (3) minutes

4. Consent Agenda

Consider approving the Consent Agenda items 4.1 through 4.3

- 4.1 Approve Study Session Minutes – October 12, 2017
- 4.2 Approve Board Meeting Minutes – October 12, 2017
- 4.3 Accept YRCAA October 2017 Monthly Activity Report

5. Petition Denial Letter Review

6. Regular Agenda

- 6.1 Receive YRCAA Director's Report
- 6.2 Public Comment Period Announcement for New Fee Schedule
- 6.3 2017 Second Quarter ADQAR



Yakima Regional Clean Air Agency
MEETING LOCATION: Yakima City Hall
City Council Chambers
129 N. 2nd Street, Yakima

7. Action Items

Fiscal Reports for Approval

7.1 Fiscal Vouchers for October 2017 and Payroll Authorization Transfers for October 2017

8. Other business

9. Adjournment

The next Board of Directors Meeting is scheduled for Thursday, December 14, 2017 in the City Council Chambers, Yakima City Hall, Located at 129 North 2nd Street, Yakima

STUDY

SESSION

YRCAA Permit Program Cost and Revenue Analysis for 2018 Permit Fees

Purpose

The purpose of this analysis is to determine the appropriate Air Pollution Source Registration, Asbestos / Demolition Notification, Dust Plan, and Burn Permit fee amounts for Calendar Year (CY) 2018. For this analysis, “appropriate fee amount” is defined as that amount, when multiplied by the number of expected permits for 2018, which will equal that permit type’s share of total Base Operations projected costs for FY2018. “Permit share” is further defined as the cost of receiving and reviewing a permit application and any accompanying plans, drafting and issuing an agency permit and approvals, and assuring compliance with such permits and approvals.

Permit Program Costs

Costs were projected in the FY2018 Budget. Cost categories include salaries and benefits, supplies, services and capital outlay.

Permit Program Revenue

Permit Program Revenue sources include source registration fees, asbestos / demolition notification fees, dust plan filing and review fees, and burn permit fees (*excluding agricultural burning). Revenue from penalties, Title V Permits, New Source Review, Regulatory Orders, General Permits, Agricultural Burning Permits and SEPA are not considered in this analysis.

Rationale

The permit program’s share of total Base Operations costs should be equivalent to its share of Base Operations revenue and a specific permit type’s share of total permit program costs should be equivalent to its share of the total permit program revenue. This analysis examined the costs and revenues for the permit program and determined the recommended appropriate fees for CY 2018.

The following procedure was used to arrive at the appropriate permit fee amounts:

1. Calculate the permit program’s share of the total base operations costs:
2. Calculate each permit type’s share of the permit program costs:
3. Calculate the needed increase for each permit type:
4. Calculate the appropriate permit fee:

Findings

Fees for Title V Permits, New Source Review, Regulatory Orders, and General Permits are structured to recover actual costs per permit and require no adjustments. Additionally, fees for source registration, asbestos / demolition, dust plans and all burning (except *agricultural burning) require no increase to cover projected FY 2018 costs.

Recommendations

This Office recommends the Board of Directors adopt the proposed fee schedule for Calendar Year 2018.

***NOTE:** Agricultural Burning permit fees are determined by the state Agricultural Burning Practices and Research Task Force (ABPRTF) and are set in accordance with procedures contained within WAC 173-430. Current burning rates were established by the ABPRTF on July 1, 2012 and are reflected on the proposed Agency fee schedule.

YAKIMA REGIONAL CLEAN AIR AGENCY CY2018 FEE SCHEDULE

Permit Type	Permit Fee	Fee Basis
Registration		
Minor Source	\$ 453	Annual
Complex Minor Source	\$ 1,285	Annual
Synthetic Minor Source	\$ 2,660	Annual
Air Operating Permit	Varies	Basic Fee + actual annual cost
New Source Review	\$ 400 +	Application Fee + actual cost
Temporary Source Relocation	\$ 125	One-time Inspection Fee
Regulatory Order	\$ 400 +	Application + actual cost
General Permit	\$ 400 +	Application + actual cost
SEPA	\$ 400 +	Application + actual cost
Dust Control		
Project & Master Plans	\$ 327	One-time Fee
Site Notification	\$ 155	One-time Fee Each Site
Burn Permits		
Residential	\$ 48	Annual from March 15 th to October 15 th
Agricultural Piles	\$ 1.00	Per Ton, \$80 minimum
Agricultural Acres	\$ 3.75	Per Acre, \$37.50 minimum
Land Clearing Piles	\$ 2.18	Per Ton, \$218 minimum
Land Clearing Acres	\$ 8.13	Per Acre, \$218 minimum
Structure Fire Training	\$ 218	Per Event
Conditional Use	\$ 2.18	Per Ton, \$218 minimum
Demolition / Renovation / Asbestos		Amount of Asbestos
Asbestos Removal Notification	\$ 867	Over 10K LF or over 50K SF
	\$ 425	1001-10K LF or 5001-50K SF
	\$ 164	261 - 1K LF or 161 - 5K SF
	\$ 86	11-260 LF or 49-160 SF
	\$ 44	Demolition only 0-10 LF or 0-48 SF
	\$ 77	Any Amount by Owner Occupant
	\$ 167	Any Amount Commercial Flat Built-Up Roofs
	\$ 338	Annual Notice (Up to 260 LF or 160 SF)
	\$ 87	Emergency Notice
	\$ 39	Revision to Existing Notice

FEE SCHEDULE FOR OBTAINING PUBLIC RECORDS

<u>SERVICE/DELIVERY METHOD</u>	<u>UNIT</u>	<u>COST</u>
Paper Copy – Black and White or Color	Per Page	\$.15
Scans (A per-page charge for converting a record from a paper copy to an electric format)	Per Page	\$.10
Records uploaded to email or cloud based storage device or other means of electronic delivery	Per four (4) files/attachments	\$.05 per four (4) electronic files or attachments
Records transmitted in electronic format or for use of agency equipment to send records electronically	Per Gigabyte	\$.10
Postage or Delivery Charges		Actual Cost
Mailing Materials	Any Container or Envelope used to mail	Actual Cost
Flash Drives and other Portable Digital Storage Devices*	Per Device	Actual Cost
Customized Service Charge	When customized access services are not normally used by the agency for other business purposes.	Actual Cost

*Customers are able to request records be delivered on a flash, thumb, USB, or other portable storage device.

NOTE: The Agency does not charge for inspecting public records. For large requests, the Agency may;

- Require a deposit of up to 10 percent of the estimated cost before making copies
- Provide copies in installments
- Require payment before providing further installments
- Charges above can be combined if more than one type of charge applies

YRCAA EIGHT YEAR FEE COMPARISON

Fee Type	2011	2012	2013	2014	2015	2016	2017	2018
Source Registration								
Minor	395	439	439	453	453	453	453	453
Complex Minor	1,128	1,245	1,245	1,285	1,285	1,285	1,285	1,285
Synthetic Minor	2,315	2,578	2,578	2,660	2,660	2,660	2,660	2,660
Air Operating Permit	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost	Actual Cost
New Source Review	346+	400 +	400 +	400 +	400 +	400 +	400 +	400 +
Regulatory Order	346+	400 +	400 +	400 +	400 +	400 +	400 +	400 +
General Permit	346+	400 +	400 +	400 +	400 +	400 +	400 +	400 +
SEPA	110+	400 +	400 +	400 +	400 +	400 +	400 +	400 +
Dust Control								
Mater Plan	290	314	314	327	327	327	327	327
Site Notification	117	149	149	155	155	155	155	155
Demolition, Renovation, Asbestos Removal	41+qty	43+qty	43+qty	44+qty	44+qty	44+qty	44+qty	44+qty
Burn Permits								
Agricultural	Per acre	.80/ton	1.00/ton	1.00/ton	1.00/ton	1.00/ton	1.00/ton	1.00/ton
		3.00/acre	3.75/acre	3.75/acre	3.75/acre	3.75/acre	3.75/acre	3.75/acre
Residential	46	47	47	48	48	48	48	48
Land Clearing	184	2.11/ton	2.11/ton	2.18/ton	2.18/ton	2.18/ton	2.18/ton	2.18/ton
		7.87/acre	7.87/acre	8.13/acre	8.13/acre	8.13/acre	8.13/acre	8.13/acre
Fire Training	184	211	211	218	218	218	218	218

CONSENT AGENDA ITEMS



SUMMARY OF THE GOVERNING BOARD OF DIRECTORS STUDY SESSION

October 12, 2017

Location, Date and Time:

Yakima City Hall Council Chambers

October 12, 2017, Time: 1:30 pm

STUDY SESSION

Called to Order at: 1:32 pm by Chairman Jon DeVaney

Topic: Petition to Ban all Dispersal and Land Application of Manure and Effluent during Burn Bans

Executive Director Hurley read the memorandum regarding the issue of the petition submitted to the Board on September 14, 2017. The petition was submitted by the Community Association for the Restoration of the Environment (CARE) and Friends of Toppenish Creek (FOTC). They requested that the agency “adopt a regulation, pursuant to its authority under the Washington Clean Air Act to prohibit all dispersal and land application of manure and effluent during any burn ban.” His recommendations were:

1. Promulgating a new rule would be redundant and as such is unnecessary, because dairy nutrient application is clearly governed under RCW 90.64, the Dairy Nutrient Management Act.

2. Having a rule banning manure application during a burn ban would place YRCAA in direct opposition to Dairy Nutrient Management Plans and National Pollution discharge Elimination System Permits. And that both permits have emergency application clauses.

3. According to Yakima County Code, Title 6, chapter 6.22, Section 6.22.020 states “A farm operation shall not be found to be a public or private nuisance if the farm or farm operation conforms to generally accepted agricultural and management practices.” RCW 70.94.640 “clearly provides an exemption for fugitive dust and odors caused by agricultural activities that are consistent with good agricultural practices.” Also, there are no epidemiologic studies that support a finding of increase health risk of cancer, asthma, or any other respiratory ailment contributed to this specific management practice.

4. The rule would have wide-ranging impacts on all dairies, growers and farms that rely on dairy nutrient for crops. This would also impose a significant economic burden to replace it with chemical fertilizer during any burn ban.

5. The data from the 2011 Emissions Inventory for Yakima County showed chemical fertilizer emits approximately 2.4 tons per day of ammonia and only .39 tons of ammonia emissions per day from dairy nutrient. RCW 70.94.645 prohibits the regulation of emissions resulting from ammonia used as agricultural fertilizer.

Director Hurley reviewed a petition that was submitted in April 2013 on the same topic. During the period of June 2013 through September 2013 the Board members voted in support of submitting a Pre-proposal Statement of Inquire to the Code Reviser and held two public meetings to try and find a consensus on the terms of a proposed rule. In August 2013 the agency director, Gary Pruitt, stated that “the



Agency should not proceed with the rulemaking process, based on comments against and the lack of comments for, proceeding with the rulemaking process.”

Based on these past actions Director Hurley recommended that the Board deny the September 14, 2017 petition. The Board had no questions.

Jean Mendoza: 12:40

Jean Mendoza rebutted the five points in Director Hurley’s recommendation: 12:40

1. The Dairy Nutrient Management Act (DNMA) does not address the problem of air pollution but of only water pollution.
2. Most dairies are not covered by the National Pollution Discharge Elimination System Permits (NPDES) and again NPDES Permits covers water pollution only. She felt that applying manure, during a burn ban, should be done only in cases of emergency, e.g. and to work not to let it happen again.
3. She stated that local regulations cannot be less stringent than state regulations.
4. This is speculation. And this would be an inconvenience to producers the same as a burn ban is to an orchardists. But the inconvenience is worth the cost if it saves a few lives.
5. How many pounds are applied every day? We were not told how many pounds of ammonia in synthetic fertilizer and manure is applied each day. Without this the statement is meaningless.

Study Session was concluded at 1:53 pm

Jon DeVaney
Board Chairman

Mary Wurtz
Clerk of the Board



**SUMMARY OF THE GOVERNING
BOARD OF DIRECTORS
REGULAR BOARD MEETING**

October 12, 2017

Location, Date and Time:

Yakima City Hall Council Chambers

October 12, 2017,

Time: 2:00 pm

REGULAR MEETING 31:00

1. **Chairman DeVaney** called the Meeting to order at 2:00 p.m.
2. **Mary Wurtz, Clerk of the Board**, conducted roll call. There was a quorum.

PRESENT WERE:

BOARD MEMBERS:

Jon DeVaney, Representative at Large
Norm Childress, Small City Representative
Bill Lover, Large City Representative

ABSENT:

Steven Jones, Ph.D., County Representative
Ron Anderson, Yakima County Commissioner
Gary Cuillier, Legal Counsel

STAFF:

Keith Hurley, Executive Director
Mary Wurtz, Clerk of the Board
Christa Owen, Fiscal Manager

3. **Additions or Deletions to Agenda:** None
4. **YRCAA Administrative Code Part A Review and New Agenda Format Discussions:** Executive Director Hurley refreshed the Board members knowledge on YRCAA Administrative Code Part A regarding adding items to the agenda and public comments: 32:00

Agenda Items:

- **Proposed agenda will be subject to change up to 24-hours prior to the regularly scheduled meeting.**
- **Public members wishing to add an agenda item should submit a written request to the Executive Director no later than the Friday preceding the next scheduled meeting.**
- **Executive Director will notify Board members of public requested topics. Board members will provide Executive Director with list of approved subjects for the agenda.**

Public Comments:

- **Speaker shall state their name and identify the specific agenda item they wish to address**
- **Each person shall be limited to three minutes**
- **Comments shall address items identified on the agenda**

Director Childress commented that he does not care for the way the Public Comment time is set up. He feels we need some way for people to be able to walk in off the street and be able to make a public comment about agency business without having to jump through hoops for getting something on the agenda. He also stated that the public needs to practice decorum and civility while at the podium and should not attack others. 37:30

Chairman DeVaney replied that he has a concern about back and forth discussion on an issue raised



by a member of the public. He felt that we would essentially be conducting an unnoticed new business discussion which would exclude others from the process. He would like to have an expedited process of adding things on the Agenda. How can we accept public comment and the board passively listen and deal with it later?

Action Item: Director Childress to give suggestions to staff to share with the rest of the Board how we can accept public comment and listen passively.

Executive Director Hurley presented a new format for the Board Agenda and the Public Notice. The new format for the agenda is clean and efficiently conveys what we are doing. The agenda and the public notice are no longer on the same page and the public notice will be posted separately.

5. Public Comment Period 44:26

Jim Dyjak, Moxee: Needs to move the comment period to the end of the meeting since people do not have the opportunity to comment on what is being discussed at the present meeting. Said the Board has a responsibility to inform the petitioner, Jean Mendoza, that her petition has been denied. Mr. Dyjak made a comment against staff. He raised an issue that the Board was not getting information from the public. 44:25

Chairman DeVaney stated that there was a mix-up in his emails and how they were received. But he did receive the information that was sent by Jean Mendoza. Director Childress said that he has received the information also. Executive Director Hurley stated that any problems that occur are taken care of immediately.

Director Lover stated the comment about staff was unwarranted and Chairman DeVaney voiced that he is fairly permissive but the public must not use abusive or slanderous comments towards board members, staff or public and a person can be banned and any future comments would be in written form.

Larry Fendell, Zillah: The comment period should be moved to the end of the meeting. It gives the public time to comment or correct what was discussed during the meeting. If the air is unhealthy during a burn ban the dairies should not be spreading manure.

Steve George, Dairy Federation: Noted some discussions made it sound like most dairies are not regulated. Dairies and operations are the most regulated segment of agriculture in the state. All dairies are inspected under the Dairy Air Emission Reduction Program. During an inversion, all that has been talked about is spreading the dairy nutrients, but vehicle traffic is never mentioned. He feels that air pollution has gotten worse due to the population growth and not the dairies. 55:50

Sandy Braden, FOTC: When dairy producers choose to spread liquid manure during a burn ban it is detrimental to the air quality. 1:01:19



CONSENT AGENDA 1:02:32

6. Consider approving the Consent Agenda items 6.1 and 6.2.

6.1 By consent, approve September 14, 2017 Board Meeting Summary; and

6.2 By consent accept and file YRCAA September 2017 Monthly Activity Report.

Action Requested: Approve Consent Agenda Items 6.1 through 6.2.

Motion to Accept: Director Childress,

Second: Director Lover

REGULAR AGENDA 1:03:17

7. Receive YRCAA Director's Report.

Exec. Dir.

The annual fee review has begun and will be brought back in for recommendation in November.

The air quality standards were reviewed. There are no woodstove change-out monies yet. Have 52 on the list - 19 on the change-out list and 33 on the rebate list.

Action Requested: Accept and file Director's Report

Motion to Accept: Director Childress,

Second: Director Lover

ACTION ITEMS 1:06:15

8. Fiscal Reports

Exec. Dir.

8.1 Fiscal Vouchers for September 2017

8.2 Payroll Authorization Transfers for September 2017

Action Requested:

- Approve Fiscal Vouchers
- Approve Payroll Authorization Transfers

Motion to Accept: Director Lover

Second: Director Childress

9. Vote on Petition to Ban Manure Applications: 1:06:57

Chairman DeVaney asked for comments or discussions from staff. The question was asked if this was time sensitive. Executive Director Hurley replied that it was and a decision must be made within 60 days of the receipt of the petition. Another question was asked if there is an appeal process if the petition is denied. Executive Director Hurley stated that there is no appeal based on what he has read; but he will ask counsel if this is correct.

Motion to Deny the Petition - Director Lover

Second: Director Childress

Action Item: A written response will be prepared by staff, be reviewed by agency legal Counsel, and presented to the Board at the November 9, 2017 meeting. Executive Director Hurley will check with counsel to make sure of the facts of the appeal. Director Lover would like to be briefed on this.



Executive Director Hurley stated there is a non-regulatory guidebook from the USDA- NRSC, in association with the EPA, regarding poultry and livestock animal feeding operations and our policies are referenced in the guidebook. Dr. Tahat is looking at the resource guide and will let us know what resources we will have to pull from. Chairman DeVaney requested that Dr. Tahat give a briefing on the guidebook when suitable.

OTHER BUSINESS

10. Other Business

None

11. Adjourned:

Motion to Adjourn: Director Childress

Second: Director Lover

Meeting Adjourned 2:43

Jon DeVaney, Board Chairman

Mary Wurtz, Clerk of the Board

Audio CD of this meeting is available at YRCAA.
Meeting Summary submitted to Board for approval

The next Board of Directors Meeting is scheduled for Thursday, November 9, 2017 in the City Council Chambers, Yakima City Hall, located at 129 North 2nd Street, Yakima.

Date of Release: November 2, 2017
Date of Consideration: November 9, 2017
To: Board of Directors
From: Office of the Executive Director
Subject: Monthly Activity Report

Activity	FY17	Aug.17	Sept. 17	Oct.17	FY17	FY18
					thru Oct.	thru Oct.
Minor Source Inspections	140	8	14	0	70	31
Complaints Received	222	18	17	10	67	57
NOVs Issued	96	1	5	2	18	10
AODs Issued	16	2	0	0	3	0
Warning Notices Issued	16	2	0	0	3	1
NOPs Issued	54	1	2	1	15	7
SEPA Reviews	181	26	28	14	84	82
AOP Applications Received	1	0	0	0	0	0
AOPs Issued or Renewed	4	0	0	0	2	0
Deviations/Upsets Reported	11	1	1	1	4	4
AOP Inspections	5	0	0	0	1	1
Public Workshops	0	0	0	0	0	0
Media Events	0	0	0	0	0	0
Media Contacts	10	6	3	0	2	10
Education Outreach Events	5	0	1	1	2	5
Sources Registered	364	0	0	0	8	0
NSR Applications Received	22	6	2	4	8	12
NSR Approvals Issued-Temporary	0	0	0	0	0	0
NSR Approvals Issued-Permanent	23	4	1	0	6	7
NODRs Received	200	19	24	14	55	83
Agricultural Burn Permits Issued	182	3	4	3	31	12
Conditional Use Permits Issued	4	0	0	0	0	0
Residential Burn Permits Issued	1162	12	8	0	234	60
Burn Ban Days	63	15	18	0	0	33
Public Records Requests Fulfilled	47	1	4	3	21	10

Acronyms:

AOP - Air Operating Permit; **NODR** - Notification of Demolition and Renovation; **NOP** - Notice of Penalty;
NOV - Notice of Violation; **NSR** - New Source Review; **SEPA** - State Environmental Policy Act

AGENDA ITEM 4.3



November 9, 2017

Community Association for the
Restoration of the Environment (CARE)
Attn: Helen Reddout
2241 Hudson Road
Outlook, WA 98938

Friends of Toppenish Creek (FOTC)
Attn: Jean Mendoza
3142 Signal Peak Road
White Swan, WA 98952

Re: Denial of the CARE and FOTC petition to prohibit all dispersal and land application of manure.

Ms. Reddout & Ms. Mendoza,

This letter is to inform you of the decision by the YRCAA Board of Directors to deny the petition your organizations submitted to the Board for possible rule making on September 14, 2017.

The petition was denied for the following reasons:

- Promulgating a new rule would be redundant, and as such is unnecessary because dairy nutrient application is clearly governed under RCW 90.64, the Dairy Nutrient Management Act.
- Promulgating such a rule would place the YRCAA in direct opposition to Dairy Nutrient Management Plans issued under RCW 90.64, and National Pollution Discharge Elimination System Permits issued in accordance with RCW 90.48, the Water Pollution Control Act.
- RCW 70.94.640, the Washington Clean Air Act, clearly provides an exemption for fugitive dust and odors caused by agricultural activities that are consistent with good agricultural practices unless there is substantial adverse effect on public health.
- Such a rule could impose a significant economic burden by requiring every user of dairy nutrient in the Yakima Valley to replace it with chemical fertilizer during any burn ban.
- Replacing organic dairy nutrient with man-made fertilizer during a burn ban would, in all likelihood, be more detrimental to the air shed during the very time of year in which the county faces the greatest threat from particulate matter.

Alternatively, the YRCAA will continue to address air pollutant emissions from dairy nutrient application through the Board approved Air Quality Management Policy and Best Management Practices for Dairy Operations policy. This policy was recently included as a resource in the first ever Agricultural Air Quality Conservation Measures- Reference Guide for Poultry and Livestock Production Systems, co-authored by the United States Department of Agriculture's Natural Resources Conservation Service and the United States Environmental Protection Agency.

Respectfully,

Keith Hurley
Executive Director
Yakima Regional Clean Air Agency

REGULAR

AGENDA



Executive Memorandum

Date of Release: November 2, 2017
Date of Consideration: November 9, 2017
To: The YRCAA Board of Directors
From: Office of the Executive Director
Subject: Executive Director's Report

Keith M. Hurley

1. WASHINGTON STATE DEPARTMENT OF AGRICULTURE (WSDA) DIARY NUTRIENT THIRD PART APPLICATOR STUDY

In the October 13th, 2017 edition of the Capital Press it was reported that the WSDA has submitted a request within their 2018 Supplemental Operating Budget to conduct a Dairy Nutrient Management Program Third Part Applicator Study.

The proposal requests \$200,000 General Fund-State funding in the 2017-2019 Biennium. The funding will allow the WSDA to commission a study to analyze the level of risk associated with the activities of third party manure applicators and to determine whether it is appropriate to develop a program for off-site dairy nutrient manure management.

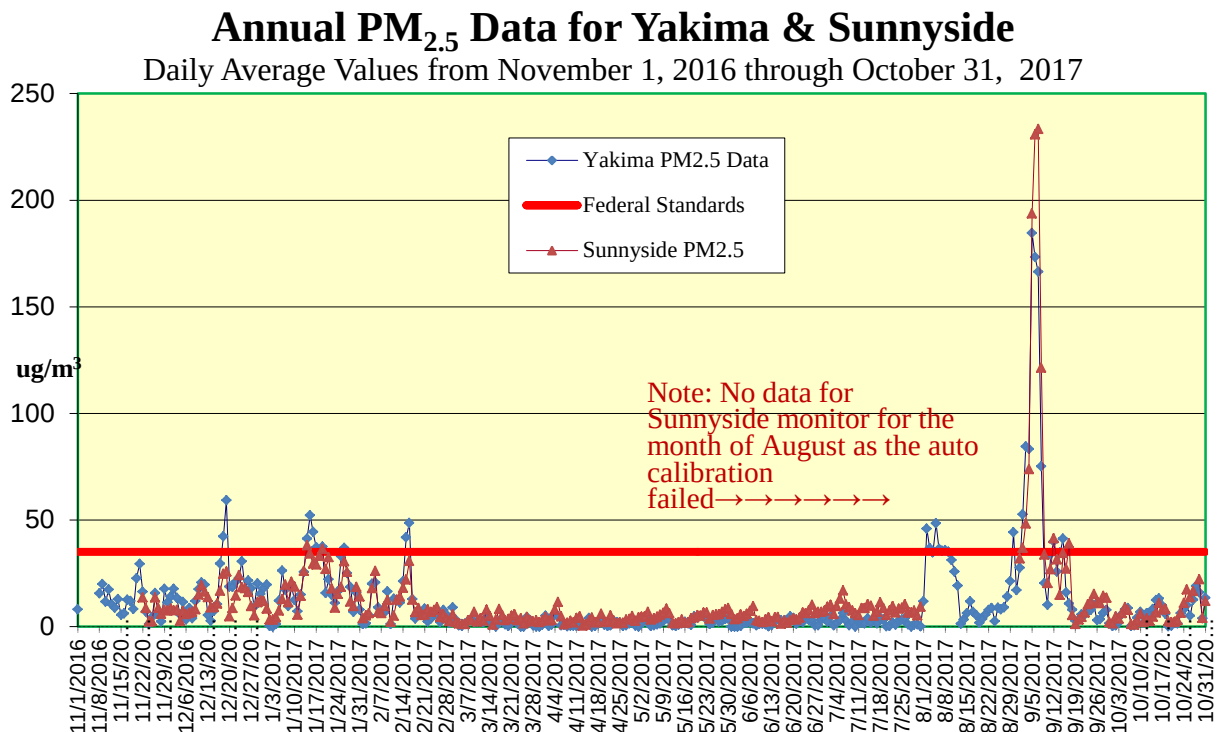
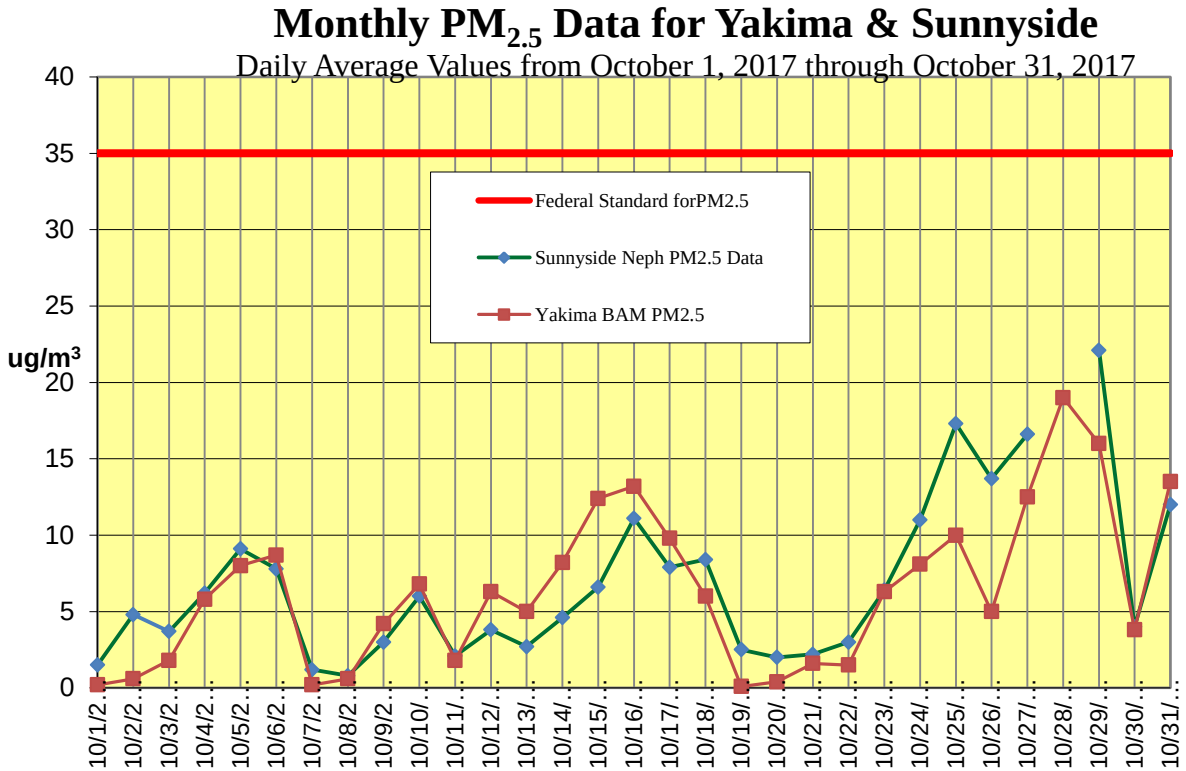
No further details are available at this time.

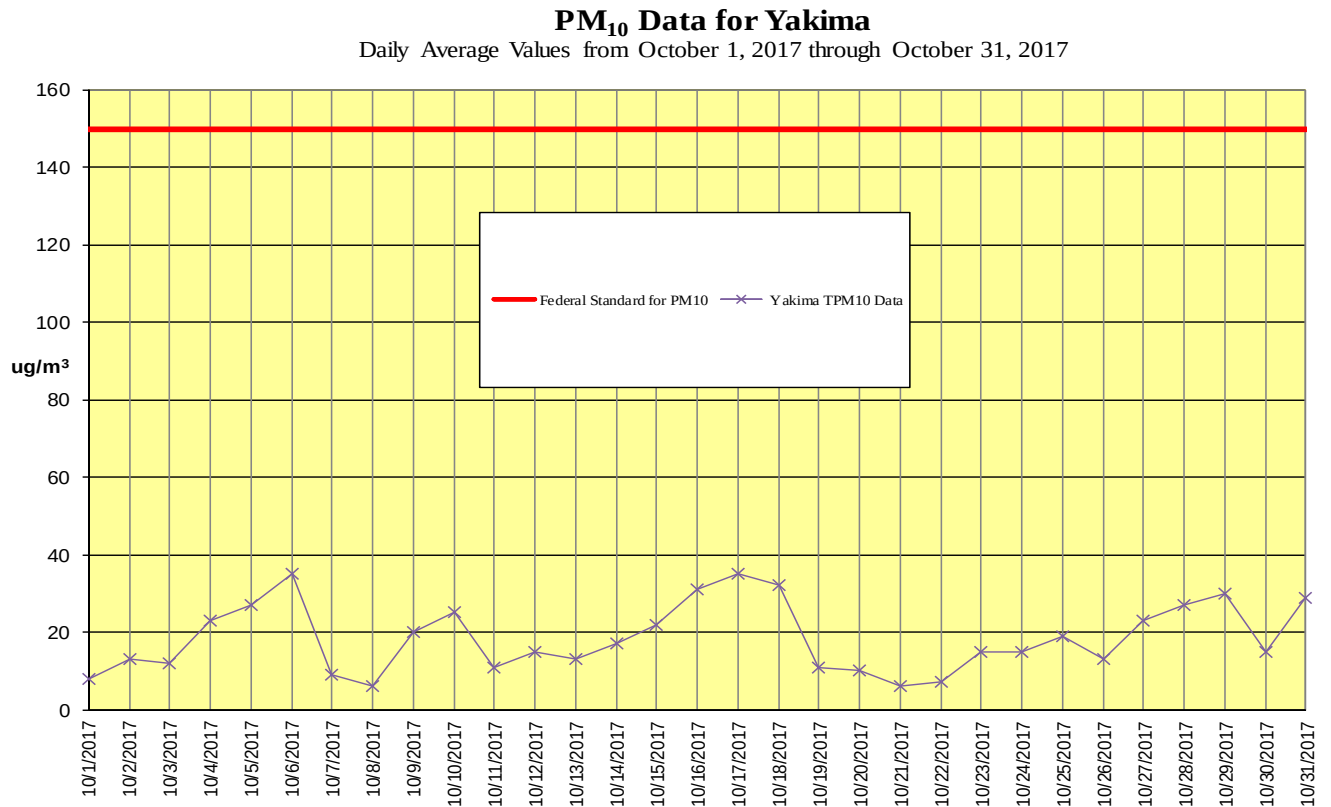
2. COMPLIANCE & ENGINEERING

The following table itemizes, by type, the complaints received and the number of NOVs issued for the month of September 2017:

<u>Type of Complaint</u>	<u># of Complaints</u>	<u># of NOVs</u>	<u># of AODs</u>
Residential Burning	6	2	0
Agricultural Burning	0	0	0
Other Burning	1	0	0
Fugitive Dust	3	0	0
Agricultural Dust	0	0	0
Agricultural Odor	0	0	0
Surface Coating	0	0	0
Odor	0	0	0
Asbestos	0	0	0
Others	0	0	0
<u>TOTALS</u>	<u>10</u>	<u>2</u>	<u>0</u>

Air Monitoring Data:





3. WOODSTOVE CHANGE OUT

The agency continues to place low-income families on the woodstove change out waiting list. Currently there are 23 customers on the change out list and an additional 26 on the rebate list, for a total of 49 potential change outs. Four (4) customers requested to be removed from the rebate program due to the waiting time.



**NOTICE OF THE PROPOSED 2018 FEE SCHEDULE PUBLIC
HEARING AND PUBLIC COMMENT PERIOD OF THE YAKIMA
REGIONAL CLEAN AIR AGENCY (YRCAA)**

The public comment period for the proposed YRCAA 2018 Fee Schedule begins Friday, October 27, 2017 and ends Thursday, November 30, 2017. The proposed fee schedule will be available for viewing on the agency website, yakimacleanair.org, from Friday, October 27, through Friday, December 1, 2017.

The agency will also conduct a Public Hearing on December 14, 2017 during the regularly scheduled Board meeting to receive Public Testimony on the proposed fees as well.

All written comments should be submitted to Keith M. Hurley, Executive Director, Yakima Regional Clean Air Agency, 329 N 1st. St., Yakima, WA 98901, or via email to keith@yrcaa.org



DEPARTMENT OF
ECOLOGY
State of Washington

Air Monitoring Data Quality Assessment Report 2nd Quarter 2017

October 2017

AGENDA ITEM 6.3

Air Monitoring Data Quality Assessment Report 2nd Quarter 2017

by
Anna Ya-Chun Tai

Air Quality Program
Washington Department of Ecology
Olympia, Washington

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Acronyms and Abbreviations

AQP	Air Quality Program
AQS	Air Quality System
CO	carbon monoxide
CV	Coefficient of Variation
DQI	Data Quality Indicator
DQO	Data Quality Objective
EPA	United States Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
MQO	Measurement Quality Objective
NAAQS	National Ambient Air Quality Standards
NCore	National Core Monitoring Network
NIST	National Institute of Standards and Technology
NO	nitric oxide
NO ₂	nitrogen dioxide
PE	Performance Evaluation
PQAO	Primary Quality Assurance Organization
PM ₁₀	particulate matter with diameter less than 10 microns
PM _{10-2.5}	particulate matter with diameter between 10 and 2.5 microns
PM _{2.5}	particulate matter with diameter less than 2.5 microns
ppb	parts per billion
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
SASS	Speciation Air Sampling System
SO ₂	sulfur dioxide
WAQA	Washington Air Quality Advisory

1. Introduction

The Washington State Ambient Air Monitoring Network (Washington Network) is designed to collect vital air quality information for use by federal, state, and local air agencies as well as tribes, the research community, and the public. These entities use the data collected within the Washington Network to make decisions that will have public health, economic, and political impacts. Air monitoring data are never error free and always contain some level of uncertainty. Therefore, it is critical that ambient air monitoring data collected within the Washington Network are of known, acceptable, and comparable quality. A firm understanding of the amount of inherent error associated with air monitoring data helps reduce the likelihood of decision errors by data users.

In order to provide decision makers with data of known and acceptable quality, the Washington State Department of Ecology (Ecology) implements a quality system that governs the Washington Network ambient air monitoring activities. This quality system, and Ecology's role as the Primary Quality Assurance Organization (PQAO) for the Washington Network, is described in Ecology's Quality Assurance Plan (QAP). Ecology's goal as the PQAO is to implement practices, such as consistency across measurement methods, which will help to reduce the amount of uncertainty associated with data collection. EPA's Quality Assurance Handbook, Volume II, provides principles that help PQAO's achieve this goal:

- Operation by a common team of field operators according to a common set of procedures.
- Use of common standard operating procedures.
- Common calibration facilities.
- Oversight by a common quality assurance organization.
- Support by a common management, laboratory, or headquarters.

The quality assurance regulations set forth in 40 CFR Part 58 Appendix A have been developed to ensure that monitoring programs are planned such that decision makers understand the data quality requirements in order to determine compliance with the National Ambient Air Quality Standards (NAAQS). Washington Network operations are carried out in accordance with these regulations for its Federal Reference Method (FRM) and Federal Equivalent Method (FEM), NAAQS-compliance monitoring. In addition, Ecology has a goal to implement guidance, whenever practical, from the United States Environmental Protection Agency (EPA), Office of Air Quality Planning and Standards for these and other monitoring efforts within the Washington Network.

The Air Monitoring Data Quality Assessment Report for the 2nd Quarter 2017 describes the quality of the data collected from April 1 through June 30, 2017.

2. Data Quality

To provide decision makers with data of acceptable quality, EPA implemented the Data Quality Objective (DQO) process and established acceptance criteria for precision and bias. DQOs are a set of performance measures used in data collection that specifies the level of uncertainty (error) that the decision maker is willing to accept in the data. By knowing how much uncertainty is in the data, especially data collected at locations that are at risk of being declared “nonattainment” or are already in nonattainment, decision makers are provided additional confidence to make informed policy decisions regarding the protection of public health and the environment. DQOs are assessed using data quality indicators (DQIs), which are the quantitative statistics and the qualitative descriptors used to interpret the degree of acceptability or utility of data to the user. The DQIs are used to establish the Measurement Quality Objectives (MQOs). Data quality is assessed quarterly using the EPA’s AMP256 QA Data Quality Indicator Report, downloaded from EPA’s Air Quality System (AQS).

MQOs are based on confidence intervals. A confidence interval is a measurement of how accurate the measurement is. There is a difference between the biases being 5 percent $\pm$ 10 percent as compared to the bias being 5 percent $\pm$ 1 percent. Close attention to these intervals can be helpful in preventing data loss and providing decision makers greater confidence in the data and their decisions.

The assessment is divided into four categories: **Automated Data**, **Manual Data**, **Meteorological Data**, and **Washington Air Quality Advisory (WAQA) Data**, and subdivided into monitoring methods specifying allowable uncertainty levels required to meet the DQOs.

Automated, manual, and meteorological data are collected using EPA-tested and approved instruments that directly support rulemaking, enforcement, regulatory, or policy decisions. The data also support research projects of significant national interest requiring the most formal DQOs, including detailed and rigorous quality control (QC) and quality assurance (QA) for legal and scientific defensibility. Most instruments used in the collection of automated and manual data are listed as FEM or FRM.

Data used for the National Air Monitoring Strategy require, at a minimum, routine QC and QA checks as required in the CFR. Results from these checks are entered into the EPA AQS database and aggregated on quarterly, annual, and three-year intervals to assess precision and bias on a state and national level.

WAQA and Air Quality Index (AQI) data are collected with a mix of non-FRM/FEM instruments to report air quality to the public in near-real-time. However, one should use non-FRM/FEM data with caution when making decisions as there can be a greater degree of error inherent in the data.

2.1. Automated Data

Data collected by instruments that continuously measure the ambient air are referred to as Automated Data. Automated instruments are designed to measure specific pollutants, including ozone (O₃), carbon monoxide (CO), nitric oxide (NO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and fine and coarse particulate matter (PM_{2.5} and PM₁₀, respectively). Instrument calibrations are checked on a routine basis and the results are used to determine the quality of the data.

Data Quality Indicators for Gaseous Pollutants

- One-Point QC Precision Estimate for Gaseous Pollutants (CV%)

On a routine basis, QC checks are performed on the station analyzer to determine the calibration drift of the instrument. The analyzer is challenged with gases traceable to National Institute of Standards and Technology (NIST) standards and the difference between the two is recorded by a data acquisition system and submitted to AQS.

To determine the measure of mutual agreement among the QC checks, the coefficient of variation CV% (precision estimate) is calculated every quarter as described in the Monitoring Rule to assess the precision of the instrument. Slight variations in the precision are acceptable provided the data is not biased too high or low. Large variations in precision are unacceptable and must be corrected.

- Bias Estimate (Bias)

The bias estimate is the systematic difference (or noticeable jump) of the expected concentrations and the measured concentrations over time, in percentage. As described in the Monitoring Rule, bias estimates are calculated to determine if there is a systematic or persistent distortion of the data, which causes error in one direction. A positive (+) bias indicates that the instrument is measuring above the actual (true) value. A negative (-) bias indicates that the instrument is measuring below the actual value. A “±” symbol represents the instrument “straddles the line” and is neither biased positive nor negative.

A continued bias in an instrument close to either side of “true value” is acceptable. However, a continued bias approaching the limits on the MQOs should be corrected before variations in the precision result in the instrument failing to meet the MQOs.

The one-point QC checks are submitted to AQS and aggregated by quarter, annual, and three-year periods to determine if the DQOs are being met on a national level.

- Completeness (% Valid Data)

Completeness is a term used to describe, in percentage, the actual amount of data (averaged in hours) collected compared to what was expected. The percentage of valid data is a critical measure of representativeness of the data obtained from a monitoring instrument in the calendar quarter or year to determine if the DQOs were met. Loss of data occurs on occasion and may be

a result of a calibration error, malfunction, power loss, telemetry communications, or operator error. The AQP data completeness goal is that at least 80 percent of the expected data be collected each calendar quarter.

- Annual Performance Evaluations

Performance evaluations are independent evaluations of the monitoring site operations conducted by AQP QA personnel. Site evaluations are performed at all automated, manual, and meteorological monitoring sites and concerns noted. The primary purpose of the evaluation is to provide an independent check to determine if the checks made by QA personnel agree with previous QC checks made at the site by automated or manual checks. A large difference between the two may indicate an instrument or systematic problem.

2.1.1.1. Ozone (O₃)

The MQO for the measurement of ozone is the precision estimate (CV%) and bias be within ± 7 percent.

Location	AQS Number	CV%	Bias	% Valid Data
Anacortes	530570011	1.09	- 1.45	91
Cheeka Peak	530090013	1.42	- 1.75	94
Cheney	530630001	1.00	± 0.79	95
Custer	530730005	1.16	± 0.87	97
Enumclaw	530330023	1.23	± 1.02	96
Greenbluff	530630046	1.65	± 1.43	96
Issaquah	530330010	1.02	2.19	96
Kennewick, S. Clodfelter	530050003	1.80	3.03	88
Mt. Rainier, JVC	530530012	1.96	± 1.94	96
North Bend	530330017	0.84	- 0.95	91
Seattle, Beacon Hill (BH)	530330080	0.43	- 0.56	86
Vancouver	530110011	2.91	- 3.03	96
Yelm	530670005	1.07	± 0.85	96

Annual Performance Evaluations for Ozone

An evaluation involves an independent assessment by AQP QA personnel who use independent equipment to challenge the station analyzer with gas concentrations at levels that best reflect ambient concentrations observed at the monitoring site. The difference is compared between the actual ozone concentrations (generated by the QA personnel equipment) against the station analyzer response. Two independent assessments are performed each year and the observations at each test level are averaged by year.

The analyzers are challenged with independent gas concentrations (Levels 2–6) to best reflect ambient concentrations observed at the monitoring site. The MQO for audit results is that the difference be within ± 7 percent for Levels 3–6 and within ± 1.5 ppb or ± 15 percent for Levels 1–2.

Location	Level 1 4–6 ppb	Level 2 6–20 ppb	Level 3 20–40 ppb	Level 4 40–70 ppb	Level 5 70–90 ppb	Level 6 90–120 ppb
Anacortes	*	- 4.00	*	*	- 1.39	- 1.20
Cheeka Peak	*	- 2.99	*	*	- 4.85	- 7.00
Cheney	*	- 2.67	*	*	1.07	1.65
Custer	*	3.33	*	*	- 0.28	- 3.00
Enumclaw	*	13.33	*	*	4.17	3.00
Greenbluff	*	8.57	*	*	2.53	1.83
Issaquah	*	0.63	*	*	0.97	1.35
Kennewick, S. Clodfelter	*	0.67	*	*	2.36	3.00
Mt. Rainier, JVC	*	- 3.33	*	*	- 1.67	1.10
North Bend	*	- 4.12	*	*	0.00	- 0.55
Seattle, BH	*	4.00	*	*	2.78	2.00
Vancouver	*	- 14.63	*	*	- 2.67	- 3.54
Yelm	*	13.16	*	*	2.33	2.18
* No evaluation performed at this level.						

2.1.2. Carbon monoxide (CO)

The MQO for the measurement of CO at the NCore (NC) sites is that the relative precision (CV%) and bias be within ± 15 percent. For instruments measuring CO for NAAQS attainment (Seattle, 10th & Weller), the relative precision (CV%) and bias must be within ± 10 percent. The table below represents the average precision and bias of the CO instruments in the Washington Network.

Table 3. DQI Results for CO Analyzers in Percentage

Location	AQS Number	CV%	Bias	% Valid Data
Cheeka Peak (NC)	530090013	4.90	± 4.24	80
Seattle, BH (NC)	530330080	2.37	- 2.82	93
Seattle, 10th & Weller (near-road)	530330030	4.58	± 3.77	95

Annual Performance Evaluations for CO

An evaluation involves an independent assessment by AQP QA personnel who use independent equipment to challenge the station analyzer with gas concentrations at levels that best reflect ambient concentrations observed at the monitoring site. The difference is compared between the actual CO concentrations (generated by the QA personnel equipment) against the station analyzer response.

The NCore and near-road instruments are challenged with independent gas concentrations (Levels 1–5) to best reflect ambient concentrations observed at the monitoring sites. The MQO for performance evaluation results is that the difference be within ± 10 percent for Levels 3–8 and within ± 30 ppb or ± 15 percent for Levels 1–2.

Table 4. Performance Evaluation Results for CO Analyzers in Percentage

Location	Level 1 20–59 ppb	Level 2 60–199 ppb	Level 3 200–899 ppb	Level 4 900–2999 ppb	Level 5 3000– 7999 ppb	Level 6 8000– 15999 ppb	Level 7 16000– 30999 ppb	Level 8 31000– 39999 ppb
Cheeka Peak (NC)	†	-1.87	- 7.17	0.46	†	†	†	†
Seattle, BH (NC)	*	*	*	*	*	*	*	*
Seattle, 10th & Weller	*	*	*	*	*	*	*	*
† No evaluation performed at this level.								
* No evaluation performed during this quarter.								

2.1.3. Sulfur dioxide (SO₂)

The MQO for the measurement of SO₂ is the relative precision (CV%) and bias be within ± 10 percent.

Table 5. DQI Results for SO₂ Analyzers in Percentage

Location	AQS Number	CV%	Bias	% Valid Data
Anacortes	530570011	0.58	1.60	94
Cheeka Peak	530090013	5.94	± 5.06	78*
Ferndale, Kickerville	530730013	2.04	± 1.59	94
Ferndale, Mountain View Rd	530730017	0.75	2.16	97
Malaga	530070012	1.24	- 5.47	97
Seattle, BH	530330080	1.95	± 1.61	86
* QC check failures. The analyzer has been recalibrated.				

Annual Performance Evaluations for SO₂

An evaluation involves an independent assessment by AQP QA personnel who use independent equipment to challenge the station analyzer with gas concentrations at levels that best reflect ambient concentrations observed at the monitoring site. The difference is compared between the actual SO₂ concentrations (generated by the QA personnel equipment) against the station analyzer response.

The analyzers are challenged with independent gas concentrations (Levels 1–6) to best reflect ambient concentrations observed at the monitoring site. The MQO for performance evaluation results is that the difference be within ± 10 percent for Levels 4–6, within ± 15 for Level 3, and within ± 1.5 ppb or ± 15 percent for Levels 1–2.

Table 6. Performance Evaluation Results for SO₂ Analyzers in Percentage

Location	Level 1 0.3–2.9 ppb	Level 2 3–4.9 ppb	Level 3 5–7.9 ppb	Level 4 8–19.9 ppb	Level 5 20–49.9 ppb	Level 6 50–99.9 ppb
Anacortes	*	*	*	*	*	*
Cheeka Peak	*	*	*	*	*	*
Ferndale, Kickerville	*	*	*	*	*	*
Ferndale, Mountain View Rd	*	*	*	*	*	*
Malaga	*	*	*	*	*	*
Seattle, BH	*	*	*	*	*	*
* No evaluation performed during this quarter.						

2.1.4. Nitrogen dioxide (NO₂)

The MQO for the measurement of NO₂ is the relative precision (CV%) and bias be within ± 15 percent.

Table 7. DQI Results for NO ₂ Analyzers in Percentage				
Location	AQS Number	CV%	Bias	% Valid Data
Seattle, 10th & Weller	530330030	1.34	6.33	92
Seattle, BH	530330080	4.08	4.49	76*
Tacoma, S. 36th St.	530530024	4.07	± 3.50	89
* QC check failures. The analyzer has been recalibrated.				

Annual Performance Evaluations for NO₂

An evaluation involves an independent assessment by AQP QA personnel who use independent equipment to challenge the station analyzer with gas concentrations at levels that best reflect ambient concentrations observed at the monitoring site. The difference is compared between the actual NO₂ concentrations (generated by the QA personnel equipment) against the station analyzer response.

The analyzers are challenged with independent gas concentrations (Levels 1–6) to best reflect ambient concentrations observed at the monitoring site. The MQO for performance evaluation results is that the difference be within ± 15 percent for Levels 3–7 and within ± 1.5 ppb or 15 percent for Levels 1–2.

Table 8. Performance Evaluation Results for NO ₂ Analyzers in Percentage							
Location	Level 1 0.3–2.9 ppb	Level 2 3–4.9 ppb	Level 3 5–7.9 ppb	Level 4 8–19.9 ppb	Level 5 20–49.9 ppb	Level 6 50–99.9 ppb	Level 7 100–299.9 ppb
Seattle, 10th & Weller, near-road	*	*	*	*	*	*	*
Seattle, BH	*	*	*	*	*	*	*
Tacoma, S. 36th St.	*	*	*	*	*	*	*
* No evaluation performed during this quarter.							

2.1.5. Nitric oxide (NO)

The MQO for the measurement of NO is the relative precision (CV%) and bias be within ± 15 percent.

Table 9. DQI Results for NO Analyzers in Percentage

Location	AQS Number	CV%	Bias	% Valid Data
Cheeka Peak (NC)	530090013	4.68	- 4.98	91
Seattle, BH (NC)	530330080	1.34	1.30	94

Annual Performance Evaluations for NO

The MQO for performance evaluation results is that the difference be within ± 10 percent for Levels 6–7, within ± 15 percent for Levels 3–5, and ± 1.5 ppb or ± 15 percent for Levels 1–2.

Table 10. Performance Evaluation Results for NO Analyzers in Percentage

Location	Level 1 0.3–2.9 ppb	Level 2 3–4.9 ppb	Level 3 5–7.9 ppb	Level 4 8–19.9 ppb	Level 5 20–49.9 ppb	Level 6 50–99.9 ppb	Level 7 100–300 ppb
Cheeka Peak	*	*	0.00	*	0.75	*	7.00
Seattle, BH	†	†	†	†	†	†	†
* No evaluation performed at this level.							
† No evaluation performed during this quarter.							

Data Quality Indicators for Particulate Pollutants

- One-Point QC Precision Estimate for Particulate Pollutants (Average % D)

Every 30 days, a one-point flow rate verification (QC check) is performed on particulate instruments by measuring the actual and indicated flow of the instrument. The actual instrument flow is measured by the station operator using NIST-traceable standards. The difference between the actual flow and the indicated instrument flow is calculated and recorded by the station operator and submitted to the AQS.

- One-Point Flow Rate Bias Estimate (Bias)

The bias estimate is the systematic difference of the expected flows and the measured flows over time, in percentage. As described in the Monitoring Rule, bias estimates are calculated to determine if there is a systematic or persistent distortion of the data, which causes error in one direction.

Instrument flow rates can fluctuate over time. Therefore, a one-point flow rate verification (QC check) on the instrument is required every 30 days. The objective of the QC check is to measure the true flow rate of the instrument, using NIST traceable standards, while recording the indicated flow rate of the instrument. A positive (+) bias indicates that the instrument flow rates are operating above the actual (true) value while a negative (-) bias indicates that the instruments flow rate is below the actual value. A “±” symbol indicates that the instrument “straddles the line” and is neither positively nor negatively biased. The checks are aggregated by quarter, annual, and 3-year periods.

- Semi-Annual Flow Rate Audits (Audit % D)

In addition to monthly QC checks, QA personnel on a semi-annual basis perform an independent flow rate audit. The objective of the auditor is to measure the actual flow rate of the instrument using an independent, NIST-traceable standard, while recording the indicated flow rate of the instrument. The deviation between the two flows is calculated, recorded, and submitted to AQS.

2.1.6. Fine particulate matter (PM_{2.5} FEM - Continuous)

The MQO for the measurement of PM_{2.5} using an FEM instrument is that bias and precision (Average % D) be within ± 4 percent. Audit results (Audit % D) must be within ± 4 percent and the Design Flow must be within ± 5 percent.

Location	AQS Number	Average % D	Bias	Audit % D	% Valid Data
Anacortes (BAM 1020)	530570011	0.41	± 1.21	*	96
Bellingham (1405F TEOM)	530730015	- 1.69	- 2.20	*	99
Bremerton (8500 TEOM)	530350007	- 0.22	± 0.54	*	99
Darrington (8500 TEOM)	530610020	- 0.69	± 2.06	- 3.54	99
Ellensburg (BAM 1020)	530370002	2.05	4.71	*	95
Kent (8500 TEOM)	530332004	1.16	1.81	*	99
Lynnwood (8500/1405F TEOM)	530610005	- 0.49	± 3.94	*	51 ^{†‡}
Marysville (8500 TEOM)	530611007	- 0.70	± 1.66	*	99
Omak (BAM 1020)	530470013	- 0.59	- 0.99	1.20	88
Seattle, 10th & Weller (BAM 1020)	530330030	- 0.19	± 1.59	- 2.34	97
Seattle, BH (NC) (8500 TEOM)	530330080	- 0.98	± 3.36	*	98
Seattle, Duwamish (8500 TEOM)	530330057	- 1.47	- 1.92	*	95
Spokane, Augusta (BAM 1020)	530630021	1.22	± 3.29	- 0.60	100
Tacoma, South 36th St. (BAM 1020)	530530024	- 0.59	- 1.16	*	95

Table 11. DQI Results for Continuous FEM PM_{2.5} Monitors in Percentage

Tacoma, South L St. (8500 TEOM)	530530029	- 0.82	- 1.52	*	96
Toppenish (BAM 1020)	530770015	- 2.72	- 3.81	*	97
Vancouver 84th Ave. (BAM 1020)	530110024	- 0.20	± 0.78	*	100
Yakima S. 4th Ave. (BAM 1020)	530770009	- 0.99	- 1.56	*	100
* No evaluation performed during this quarter. † Instrument malfunction. The instrument has been replaced. ‡ This percentage differs from AMP430 (Completeness Report) since the report does not combine multiple method codes.					

2.1.7. Particulate matter (PM₁₀ FEM - Continuous)

The MQO for the measurement of PM₁₀ using an FEM instrument is that total bias be within ± 10 percent; precision (Average % D) and performance evaluation results (Audit % D) be within ± 4 percent.

Table 12. DQI Results for Continuous FEM PM₁₀ Monitors in Percentage

Location	AQS Number	Average % D	Bias	Audit % D	% Valid Data
Colville, E. 1st St.	530650005	- 0.33	± 1.09	- 0.35	98
Kennewick	530050002	1.06	2.69	1.74	100
Spokane, Augusta	530630021	0.94	± 2.45	- 1.05	100
Yakima S. 4th Ave.	530770009	- 0.47	± 1.29	*	91
* No evaluation performed during this quarter.					

2.2. Manual Data

Manual data refers to filter-based monitoring methods, which require an operator to physically install, and retrieve sample filters. Particulate matter is collected on a sample filter over a 24-hour period. After sampling has been completed, sample filters are collected by the operator and sent to the Manchester laboratory for gravimetric analysis. Depending on the method used at the monitoring site, the instrument is designed to selectively collect particulate matter at a specific flow rate on scheduled days.

- One-Point QC Precision Estimate for Particulate Pollutants (Average % D)

Monthly QC checks are performed on the instrument by monitoring personnel. The difference between the actual flow and the indicated instrument flow is calculated, recorded, and submitted into the AQS.

- One-Point Flow Rate Bias Estimate (Bias)

Manual data monitoring methods require accurate flow rate measurements in order to accurately determine pollutant concentrations. Particulate matter concentrations are calculated by the mass of the sample on a filter divided by the volume of air. The volume of air is calculated by the flow rate of the instrument over the elapsed sampling time. Instruments are calibrated to operate at a designed flow rate. Differences in flow rates affect actual concentrations. Figure 1 illustrates how a four percent difference in flow rate impacts the actual concentration of a PM_{2.5} sample.

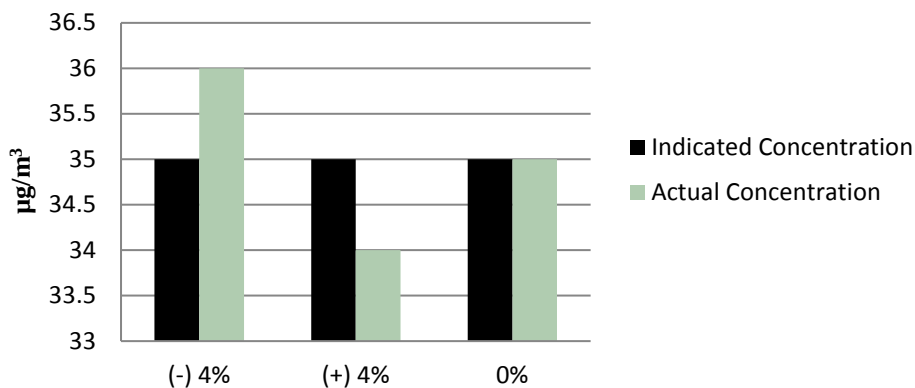


Figure 1. Graph illustrating how flows impact actual concentrations

Instrument flow rates can fluctuate over time. Therefore, a one-point flow rate verification (QC check) on the instrument is required every 30 days. The objective of the check is to measure the true flow rate of the instrument using NIST-traceable standards while recording the indicated flow rate of the instrument. The difference between the two is calculated in percentage to determine how “true” the indicated flow is. A positive (+) bias indicates that the instrument flow rate over time is operating above the actual (true) value. A negative (-) bias represents the instrument's flow rate is below the actual value. A “±” symbol represents the instrument “straddles the line” and is neither positively nor negatively biased.

- Semi-Annual Flow Rate Audits (Audit % D)

In addition to monthly QC checks, QA personnel on a semi-annual basis perform an independent flow rate check. The objective of the auditor is to measure the actual flow rate of the instrument using independent NIST traceable standards while recording the indicated flow rate of the instrument. The deviation between the two flows is then calculated and submitted to the AQS.

2.2.1. Fine particulate matter (PM_{2.5} FRM - Daily)

The MQO for the measurement of PM_{2.5} using FRM method sampling is that total bias be within ± 10 percent; precision (Average % D) and performance evaluation results (Audit % D) be within ± 4 percent.

Table 13. DQI Results for FRM PM _{2.5} Samplers in Percentage					
Location	AQS Number	Average % D	Bias	Audit % D	% Valid Data
Seattle, BH	530330080	- 1.07	± 3.80	*	87
Tacoma, South L St.	530530029	- 2.22	- 1.53	*	99
Tacoma, South L St. (collocated)	530530029	- 2.19	- 1.56	*	100
Yakima S. 4th Ave.	530770009	- 0.94	± 3.75	*	100
* No evaluation performed during this quarter.					

Precision Estimate for Manual and Continuous Collocated Samples (PM_{2.5})

Precision for manual and automated particulate method sampling is estimated using collocated sampling. Unlike the gaseous criteria, pollutants where one can use a standard of a known concentration to estimate instrument precision, duplicate measurements are made on-site for comparison. The precision (CV %) should be within ± 10 percent for the FRM and TEOM. Note that the relatively low ambient PM_{2.5} concentrations and the limited number of collected samples (every 12 days) at Tacoma South L St. may yield high imprecision that can be challenging to meet the recommended acceptance range.

Table 14. Precision Estimates for Collocated Samplers in Percentage			
Location	EPA Method-Parameter	AQS Number	CV%
Tacoma, South L St.	145-FRM PM _{2.5}	530530029	17.06

2.2.2. PM_{2.5} Chemical Speciation Network

The Chemical Speciation Network (CSN) is a national network of sites used to determine, over a period of several years, trends in concentration levels of selected ions, metals, carbon species, and organic compounds in PM_{2.5}. Flow checks are performed by station operators every 30 days and submitted to a national repository contracted by OAQPS.

In addition to monthly QC checks, QA personnel on a semi-annual basis perform an independent flow rate audit. The primary objective of the audit is to measure the true flow rate of the instrument using independent, NIST-traceable, standards while recording the indicated flow rate of the instrument. The deviation between the two flows is calculated. The MQO for the CSN is that the results be within ±10 percent. Note that the Beacon Hill station is equipped with a Super SASS sampler that has two extra flow channels.

Table 15. Audit Results for Speciation Samplers in Percentage

Location	AQS Number	SASS CH 1 Audit % D	SASS CH 2 Audit % D	SASS CH 3 Audit % D	SASS CH 4 Audit % D	URG Audit % D
Seattle 10th & Weller	530330030	- 1.66	0.33			- 3.30
Seattle, BH	530330080	*	*	*	*	*
Tacoma, South L St.	530530029	*	*			*
Yakima S. 4th Ave.	530770009	*	*			*
* No evaluation performed during this quarter.						

2.3. Meteorological Data

To ensure data of sufficient quality for modeling applications and permitting use, EPA guidelines for continuous monitoring for Prevention of Significant Deterioration (PSD) are followed for wind speed (WS), wind direction (WD), ambient temperature, ambient pressure (PA) and relative humidity (RH).

Table 16. Data Capture for Meteorological Parameters

Location	AQS Number	WS	WD	AT	PA	RH
Cheeka Peak	530090013	98	98	99	99	99
Colville, E 1st St.	530650005	100	100	100	---	---
Enumclaw	530330023	99	99	100	---	---
Ferndale, Mtn. View Rd.	530730017	100	100	100		
Kennewick	530050002	100	100	100	---	---
Malaga	530070012	97	97	100		
North Bend	530330017	100	100	100	---	---
Omak	530470013	100	100	100	---	---
Seattle, 10th & Weller	530330030	99	99	99	---	---
Seattle, BH	530330080	99	99	99	60*	99
Spokane, Augusta	530630021	100	100	100	---	---
Tacoma, 36th St.	530530024	100	100	100	---	---
Tacoma, Tower Dr.	530531016	100	100	100	---	---
Toppenish	530770015	77 [†]	77 [†]	100	---	---
Vancouver, Blairmont	530110011	100	100	100	---	---
Wenatchee	530070011	100	100	100	---	---
White Swan	530770016	99	99	100	---	---
* QC check failure. The pressure sensor has been recalibrated.						
[†] Anemometer malfunction. A new anemometer has been installed.						

2.4. Washington Air Quality Advisory Data

2.4.1. Light scattering of fine particulates (nephelometer)

The AQP uses a large network of instruments to report PM_{2.5} air pollution information to the public in near real-time via its WAQA that can be found on its public website. The majority of these instruments (nephelometers) measure light scattering of particulates, not PM_{2.5} directly. Ecology and its partners follow EPA guidance to use nephelometers to report “FRM-like” PM_{2.5} data. Because nephelometers are not an FRM or FEM, PM_{2.5} data collected using nephelometers cannot be used for NAAQS compliance determinations. The data are displayed in near real-time on Ecology and EPA websites for public information.

Location	AQS Number	% Valid Data
Aberdeen	530272002	96
Bellevue, Bellevue Way, discontinued 5/12/2017	530330037	99
Bellevue, 12th St.	530330031	100
Cheeka Peak	530090013	98
Chehalis	530410004	100
Chelan	530070007	93
Clarkston	530030004	94
Colville, E 1st St.	530650005	100
Dayton	530130002	66*
Ellensburg, discontinued 4/27/2017	530370002	98
Kennewick	530050002	100
Lacey	530670013	100
LaCrosse	530750005	49 [†]
Leavenworth	530070010	91
Longview	530150015	100
Mesa	530210002	84
Moses Lake	530251002	100
Mount Vernon	530570015	48 [†]
Neah Bay	530090015	100
North Bend	530330017	97
Okanogan	530470004	94
Pomeroy	530230001	99
Port Angeles	530090017	85
Pt. Townsend	530310003	100
Pullman	530750003	100
Puyallup, 128th Ave.	530531018	99

Table 17. Completeness Results for Nephelometers

Ritzville	530010003	100
Rosalia	530750006	100
Seattle, South Park	530331011	84
Shelton	530450007	100
Spokane, Monroe	530630047	100
Sunnyside	530770005	77 [†]
Tacoma, Alexander Ave.	530530031	99
Taholah	530270011	100
Twisp	530470009	99
Walla Walla	530710005	100
Wellpinit	530650002	99
Wenatchee, 5th St.	530070011	100
White Swan	530770016	76 [†]
Winthrop	530470010	82
Yacolt	530110022	99

* Instrument malfunction. A new nephelometer has been installed and calibrated.

† QC check failures. The nephelometer has been recalibrated.

Note: No QA evaluations are performed on nephelometers. The quality of the data is not assessed.

ACTION

ITEMS



Executive Memorandum

Date of Release: November 2, 2017
Date of Consideration: November 9, 2017
To: YRCAA Board of Directors
From: Office of the Executive Director
Subject: Fiscal Program Report

Keith M. Hurley

Issue: Consider Fiscal Reports, forms, and vouchers.

Recommendation(s): Accept and approve by minute action October 2017 AP Fiscal Vouchers (\$32,218.82), and the October Payroll Authorization (\$61,251.28). Out of A/P, \$0.00 was for Wood Stove Change-out Expenses, and \$3,322.30 was for Enterprise expenses.

Discussion: October Accounts Payable and Payroll Authorizations are enclosed for your approval. BVA and Supplemental Income are included as informational items.

Encl (5)



October 10, 2017

Fund 614-614 YRCAA

Fund 614-141 Enterprise

<u>Name</u>	<u>Warrant/MICR #</u>	<u>GL #</u>	<u>Amount</u>	<u>Date</u>
Charter Communications	33230	4201	\$ 703.02	10/11/2017
Coleman Oil Company**	33231	3201	\$ 571.95	10/11/2017
Cuillier Law Office	33232	4101	\$ 686.00	10/11/2017
Daily Sun News	33233	4401	\$ 395.00	10/11/2017
Dustin Harrington	33234	4301	\$ 162.00	10/11/2017
Five K Technologies	33235	3502	\$ 25.00	10/11/2017
Invisible Ink	33236	4101	\$ 75.00	10/11/2017
Leaf	33237	4501	\$ 186.07	10/11/2017
Nth Degree Environmental Engineering	33238	4101	\$ 250.00	10/11/2017
Northwest Community Action Center	33239	4101	\$ 120.00	10/11/2017
Kelsey Sanford	33240	4301	\$ 148.00	10/11/2017
Summit Environmental	33241	4901	\$ 164.00	10/11/2017
Verizon Wireless	33242	4201	\$ 329.24	10/11/2017
YRCAA	33243	4901	\$ 401.64	10/011/2017

\$ 4,216.92

***Reimbursement from Grant**

****NOC/Enterprise**

This is to certify that the invoices and warrants above for the Yakima Regional Clean Air Agency have been examined, audited and approved by the Alternate Auditing Officer for payment.

Total Amount: **\$ 4,216.92**

Christa Owen 10/11/2017
Christa Owen, Alternate Auditing Officer

Jon DeVaney 11/9/2017
Jon DeVaney, Board Chairman

Keith M. Hurley 10/11/2017
Keith M. Hurley, Auditing Officer



October 27, 2017

Fund 614-614 YRCAA

Fund 614-141 Enterprise

<u>Name</u>	<u>Warrant/MICR #</u>	<u>GL #</u>	<u>Amount</u>	<u>Date</u>
Abadan Reprographics	33244	4801	\$ 131.02	10/30/2017
Bradley A. Mellotte	33245	4501	\$ 3,638.29	10/30/2017
Crystal Springs	33246	3101	\$ 24.20	10/30/2017
Mark Edler**	33247	4301	\$ 69.00	10/30/2017
KeyBank**	33248	Various	\$ 5,208.13	10/30/2017
Nth Degree Environmental Engineering Solutions	33249	4101	\$ 1,125.00	10/30/2017
Ron's Office Equipment	33250	3101	\$ 176.10	10/30/2017
Mary Wurtz	33251	4301	\$ 127.93	10/30/2017

\$ 10,499.67

***Reimbursement from Grant**

****NOC/Enterprise**

This is to certify that the invoices and warrants above for the Yakima Regional Clean Air Agency have been examined, audited and approved by the Alternate Auditing Officer for payment.

Total Amount: **\$ 10,499.67**

Christa Owen 10/30/2017
Christa Owen, Alternate Auditing Officer

11/9/2017 Keith M. Hurley 10/30/2017
Jon DeVaney, Board Chairman Keith M. Hurley, Auditing Officer



October 27, 2017

Fund 614-614 YRCAA

Fund 614-141 Enterprise

<u>Name</u>	<u>Warrant/MICR #</u>	<u>GL #</u>	<u>Amount</u>	<u>Date</u>
Carey Motors	33252	6401	\$ 17,502.23	10/31/2017

\$ 17,502.23

***Reimbursement from Grant**

****NOC/Enterprise**

This is to certify that the invoices and warrants above for the Yakima Regional Clean Air Agency have been examined, audited and approved by the Alternate Auditing Officer for payment.

Total Amount: **\$ 17,502.23**

Christa Owen 10/31/2017
Christa Owen, Alternate Auditing Officer

Jon DeVaney 11/9/2017
Jon DeVaney, Board Chairman

Keith M. Hurley 10/31/2017
Keith M. Hurley, Auditing Officer

AUTHORIZATION FOR ELECTRONIC FUNDS TRANSFER

Direct Deposit Payroll & Payroll Taxes

Date: 10/30/2017

District: Yakima Regional Clean Air Agency

Contact Person: Christa Owen

Address: 329 North First Street, Yakima, WA 98901

Telephone No. 834-2050 ext 104 **Telefax No.** 834-2060

Authorization is given for the Yakima County Treasurer to electronically transfer the amounts listed below:

Name of Bank: Key Bank of Washington

ABA Routing Number: XXXXXXXXXX

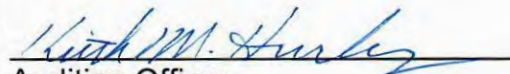
Bank Account Number: XXXXXXXXXX

Payroll Date: November 1, 2017

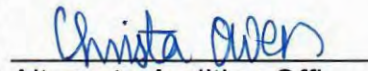
Transfer Amount(s): \$ 61,251.28

Total Amount of Electronic Transfer: \$ 61,251.28

Authorizing Signatures (No facsimile signatures accepted.):


Auditing Officer

Chairman Board of Directors


Alternate Auditing Officer

Date October 30, 2017

Note: The Yakima County Treasurer's Office must receive the completed authorization by 12:00 noon, two (2) business days prior to payroll date. An original must be provided to the County Treasurer's Office if a telefax is sent. *Do not consider a telefax delivered until you have verified with the Treasurer's Office that it has been received.*

Contact Persons at County Treasurer's Office: **Cindy**

Telephone Number: 509-574-2780
(01-2008)

Telefax Number: 509-574-2801

YAKIMA REGIONAL CLEAN AIR AGENCY

SUPPLEMENTAL INCOME STATUS for 2017 on October 31, 2017

CY 2017 \$.40 PER CAPITA (Rounded Amounts)

City/Town	Past Due	Assessment Amount	Total Amt Due	Date Received	Amount Received	Balance Due	Responses
Grandview	\$ -	\$ 4,480	\$ 4,480	1/27/2017	\$ 4,480	\$ -	Pd in full
Granger	\$ 350	\$ 1,456	\$ 1,806	1/31/2017; 2/22/2017; 4/14/2017; 7/14/2017; 10/16/2017	\$ 1,806	\$ -	Pd in full
Harrah	\$ -	\$ 260	\$ 260	1/27/2017	\$ 260	\$ -	Pd in full
Mabton	\$ -	\$ 924	\$ 924	1/19/2017	\$ 924	\$ -	Pd in full
Moxee	\$ -	\$ 1,524	\$ 1,524	1/19/2017	\$ 1,524	\$ -	Pd in full
Naches	\$ -	\$ 332	\$ 332	1/12/2017	\$ 332	\$ -	Pd in full
Selah	\$ -	\$ 2,998	\$ 2,998	1/12/2017	\$ 2,998	\$ -	Pd in full
Sunnyside	\$ -	\$ 6,512	\$ 6,512	1/25/2017; 4/7/2017; 7/14/2017; 10/11/2017	\$ 6,512	\$ -	Pd in full
Tieton	\$ -	\$ 502	\$ 502	1/27/2017	\$ 502	\$ -	Pd in full
Toppenish	\$ -	\$ 3,586	\$ 3,586	1/26/2017	\$ 3,586	\$ -	Pd in full
Union Gap	\$ -	\$ 2,460	\$ 2,460	1/26/2017	\$ 2,460	\$ -	Pd in full
Wapato	\$ -	\$ 2,016	\$ 2,016	1/26/2017	\$ 2,016	\$ -	Pd in full
City of Yakima	\$ -	\$ 37,288	\$ 37,288	1/19/2017; 4/17/2017; 8/1/2017; 10/16/2017	\$ 37,288	\$ -	Pd in full
Zillah	\$ -	\$ 1,256	\$ 1,256	1/24/2017	\$ 1,256	\$ -	Pd in full
Yakima Co.	\$ -	\$ 34,394	\$ 34,394	1/1/2017; 4/1/2017; 7/1/2017; 10/1/2017	\$ 34,394	\$ -	Pd in full
Totals:	\$ 350	\$ 99,988	\$ 100,338		\$ 100,338	\$ -	

FY 2018 Monthly BVA

October 2017 Report Date: November 9, 2017		Budget	Actual Current	Actual Year to Date	Year to Date % of Budget
REVENUE					
REVENUE 614 YRCAA Base Operations					
Stationary Source Permit Fees					
614-32190001	Minor Sources	\$ 161,700	\$ -	\$ -	0.0%
614-32190008	Synthetic Minor Sources	\$ 21,280	\$ -	\$ -	0.0%
614-32190006	Complex Sources	\$ 19,554	\$ -	\$ -	0.0%
614-32290001	Title V Sources	\$ 122,845	\$ -	\$ 101,625	82.7%
614-32190002	New Source Review	\$ 31,500	\$ 6,569	\$ 24,211	76.9%
Subtotal, Stationary Source Permit Fees		\$ 356,879	\$ 6,569	\$ 125,836	35.3%
Burn Permit Fees					
614-32290005	Residential Burn Permits	\$ 63,120	\$ 5,184	\$ 8,064	12.8%
614-32290007	Agricultural Burn Permits	\$ 28,000	\$ 1,365	\$ 4,798	17.1%
614-32290011	Conditional Use Burn Permits	\$ 2,000	\$ -	\$ -	0.0%
Subtotal, Burn Permit Fees		\$ 93,120	\$ 6,549	\$ 12,862	13.8%
Compliance Fees					
614-32190005	Asbestos Removal Fees	\$ 32,200	\$ 2,133	\$ 10,934	34.0%
614-32190009	Construction Dust Control Fees	\$ 8,365	\$ 1,446	\$ 4,011	47.9%
Subtotal, Compliance Fees		\$ 40,565	\$ 3,579	\$ 14,945	36.8%
Subtotal, All Permit Fee Revenue		\$ 490,564	\$ 16,697	\$ 153,643	31.3%
Base Grants					
614-33366001	EPA, Core Grant	\$ 97,172	\$ -	\$ 30,520	31.4%
614-33403101	DOE, Core Grant	\$ 77,283	\$ -	\$ 20,688	26.8%
Subtotal, Base Grants		\$ 174,455	\$ -	\$ 51,208	29.4%
Fines & Penalties					
614-35990001	Civil Penalty	\$ 2,500	\$ 123	\$ 7,479	-
614-35990001	Other Fines	\$ -	\$ -	\$ -	-
Subtotal, Fines & Penalties		\$ 2,500	\$ 123	\$ 7,479	-
Supplemental Income					
614-33831001	Supplemental Income	\$ 100,360	\$ 19,913	\$ 36,205	36.1%
Subtotal, Supplemental Income		\$ 100,360	\$ 19,913	\$ 36,205	36.1%
Other Income					
614-36111001	Interest	\$ 2,024	\$ 388	\$ 1,531	75.6%
614-36990014	Miscellaneous Income	\$ 150	\$ 184	\$ 432	288.1%
Subtotal, Other Income		\$ 2,174	\$ 572	\$ 1,963	90.3%
Total YRCAA Base Operations Revenue		\$ 770,053	\$ 37,305	\$ 250,498	32.5%
REVENUE 614 YRCAA Grant Operations					
614-33403105	Wood Stove Ed	\$ 5,331	\$ -	\$ 5,331	100.0%
614-33403108	PM 2.5	\$ 21,050	\$ -	\$ 5,263	25.0%
614-33403107	Woodstove Change-out	\$ 132,000	\$ -	\$ 42,164	31.9%
Total YRCAA Grant Operations Revenue		\$ 158,381	\$ -	\$ 52,757	33.3%
REVENUE Enterprise Operations					
614-34317001	VE Certification Fees	\$ 79,800	\$ 25,625	\$ 29,525	37.0%
614-34317002	Other Enterprise Revenue	\$ 415	\$ -	\$ -	0.0%
Subtotal, Enterprise Revenue		\$ 80,215	\$ 25,625	\$ 29,525	36.8%
Total Base, Grant and Enterprise Revenue		\$ 1,008,649	\$ 62,930	\$ 332,780	33.0%

FY 2018 Monthly BVA

October 2017	Budget	Actual Current	Actual Year to Date	Year to Date % of Budget
Report Date: November 9, 2017				

EXPENSES**EXPENSES 614 YRCAA Base Operations****Salaries**

614-1001	Salaries	\$ 495,855	\$ 42,049	\$ 163,886	33.1%
614-2002	Benefits	\$ 179,781	\$ 14,774	\$ 57,581	32.0%
614-1003	Overtime	\$ -	\$ -	\$ -	-
Subtotal, Salaries		\$ 675,636	\$ 56,823	\$ 221,467	32.8%

Supplies

614-3101	Office Supplies	\$ 7,180	\$ 216	\$ 1,407	19.6%
614-3101	Safety Equipment	\$ -	\$ -	\$ -	-
614-3201	Vehicles, Gas	\$ 2,780	\$ 147	\$ 544	19.6%
614-3501	Small Tools/Equipment	\$ 300	\$ -	\$ -	-
614-3502	Computer Network	\$ 8,900	\$ 200	\$ 3,727	41.9%
Subtotal, Supplies		\$ 19,160	\$ 563	\$ 5,678	29.6%

Services

614-4101	Professional Services	\$ 20,365	\$ 2,136	\$ 6,624	32.5%
614-4101	Laboratory Analyses	\$ 200	\$ -	\$ -	0.0%
614-4125	Treasurer, Yakima County	\$ 1,375	\$ 44	\$ 175	12.7%
614-4201	Communications, Phones/Internet	\$ 13,152	\$ 1,032	\$ 4,119	31.3%
614-4202	Postage	\$ 3,690	\$ -	\$ -	0.0%
614-4301	Travel & Transportation	\$ 2,950	\$ 1,005	\$ 1,351	45.8%
614-4401	Public Education	\$ 4,000	\$ 506	\$ 508	12.7%
614-4401	Publications, Legal Notices	\$ 1,000	\$ 395	\$ 1,106	110.6%
614-4501	Rents & Leases, Equipment	\$ 3,260	\$ 186	\$ 1,001	30.7%
614-4501	Rents & Leases, Space	\$ 43,659	\$ 3,638	\$ 14,553	33.3%
614-4601	Insurance	\$ 12,662	\$ -	\$ 12,505	98.8%
614-4801	Maintenance, Motor Vehicles	\$ 2,450	\$ 1,116	\$ 1,200	49.0%
614-4801	Maintenance, Equipment	\$ 2,065	\$ 131	\$ 283	13.7%
614-4801	Maintenance, Computers	\$ 265	\$ -	\$ -	0.0%
614-4801	Maintenance, Building	\$ 875	\$ -	\$ 668	76.3%
614-4901	Memberships	\$ 540	\$ -	\$ -	0.0%
614-4901	Training	\$ 2,900	\$ -	\$ 1,300	44.8%
614-4901	Service Chgs & Interest	\$ 4,600	\$ 402	\$ 1,267	27.5%
614-4901	Miscellaneous Services	\$ 7,205	\$ 164	\$ 328	4.6%
614-4901	DOE Oversight Fees	\$ 4,787	\$ -	\$ -	0.0%
Subtotal, Services		\$ 132,000	\$ 10,755	\$ 46,988	35.6%

Capital Out-Lay & Fixed Assets

614-6401	Capital Out-Lay/Fixed Assets	\$ 6,500	\$ 17,502	\$ 17,502	-
Total YRCAA Base Operations Expenses		\$ 833,296	\$ 85,643	\$ 291,636	35.0%

EXPENSES 614 YRCAA Grant Operations**614-33403105 Wood Stove Ed****Salaries**

614-1001	Salaries	\$ 3,956	\$ -	\$ 248	-
614-2002	Benefits	\$ 1,462	\$ -	\$ 87	-
614-1003	Overtime	\$ -	\$ -	\$ -	-
Subtotal, Salaries		\$ 5,418	\$ -	\$ 335	-

Supplies

614-3101	Office Supplies	\$ -	\$ -	\$ -	-
Subtotal, Supplies		\$ -	\$ -	\$ -	-

FY 2018 Monthly BVA

October 2017 Report Date: November 9, 2017		Budget	Actual Current	Actual Year to Date	Year to Date % of Budget
Services					
614-4139	Professional Services	\$ -	\$ 120	\$ 120	-
614-4202	Postage	\$ -	\$ -	\$ -	-
<i>Subtotal, Services</i>		<i>\$ -</i>	<i>\$ 120</i>	<i>\$ 120</i>	<i>-</i>
<i>Subtotal, Woodstove Grant Expenses</i>		<i>\$ 5,418</i>	<i>\$ 120</i>	<i>\$ 455</i>	<i>-</i>
614-33403108 PM2.5					
Salaries					
614-1001	Salaries	\$ 15,367	\$ 1,395	\$ 5,053	32.9%
614-2002	Benefits	\$ 5,683	\$ 490	\$ 1,357	23.9%
614-1003	Overtime	\$ -	\$ -	\$ -	-
<i>Subtotal, Salaries</i>		<i>\$ 21,050</i>	<i>\$ 1,885</i>	<i>\$ 6,828</i>	<i>32.4%</i>
Supplies					
614-3101	Office Supplies	\$ -	\$ -	\$ -	#DIV/0!
<i>Subtotal, Supplies</i>		<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>#DIV/0!</i>
Services					
614-4101	Professional Services	\$ -	\$ -	\$ -	#DIV/0!
<i>Subtotal, Services</i>		<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>#DIV/0!</i>
Capital Out-Lay & Fixed Assets					
614-6401	Capital Out-Lay/Fixed Assets	\$ -	\$ -	\$ -	-
<i>Subtotal, PM 2.5 Grant Expenses</i>		<i>\$ 21,050</i>	<i>\$ 1,885</i>	<i>\$ 6,828</i>	<i>32.4%</i>
614-33403107 Woodstove Change-out					
Salaries					
614-1001	Salaries	\$ 12,715	\$ 677	\$ 936	7.4%
614-2002	Benefits	\$ 5,555	\$ 238	\$ 329	5.9%
614-1003	Overtime	\$ -	\$ -	\$ -	-
<i>Subtotal, Salaries</i>		<i>\$ 18,270</i>	<i>\$ 915</i>	<i>\$ 1,265</i>	<i>6.9%</i>
Supplies					
614-3101	Office Supplies	\$ -	\$ -	\$ -	-
<i>Subtotal, Supplies</i>		<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>-</i>
Services					
614-4101	Professional Services	\$ 120,400	\$ -	\$ 4,620	3.8%
<i>Subtotal, Services</i>		<i>\$ 120,400</i>	<i>\$ -</i>	<i>\$ 4,620</i>	<i>3.8%</i>
Capital Out-Lay & Fixed Assets					
614-6401	Capital Out-Lay/Fixed Assets	\$ -	\$ -	\$ -	-
<i>Subtotal, Woodstove Change-out Grant Expenses</i>		<i>\$ 138,670</i>	<i>\$ 915</i>	<i>\$ 5,885</i>	<i>4.2%</i>
<i>Total, Grant Operations Expenses</i>		<i>\$ 165,138</i>	<i>\$ 2,920</i>	<i>\$ 13,168</i>	<i>8.0%</i>
EXPENSES 141 Enterprise Operations					
Salaries					
141-1001	Salaries	\$ 12,776	\$ 1,205	\$ 8,222	64.4%
141-2002	Benefits	\$ 4,722	\$ 423	\$ 2,441	51.7%
141-1003	Overtime	\$ -	\$ -	\$ -	-
<i>Subtotal, Salaries</i>		<i>\$ 17,498</i>	<i>\$ 1,629</i>	<i>\$ 11,111</i>	<i>63.5%</i>

FY 2018 Monthly BVA

October 2017		Budget		Actual Current		Actual Year to Date		Year to Date % of Budget	
Report Date: November 9, 2017									
Supplies									
141-3101	Office Supplies	\$	400	\$	74	\$	504		126.0%
141-3201	Vehicles, Gas	\$	1,700	\$	560	\$	664		39.1%
141-3501	Small Tools/Equipment	\$	200	\$	-	\$	-		0.0%
Subtotal , Supplies		\$	2,300	\$	634	\$	1,168		50.8%
Services									
141-4101	Professional Services	\$	-	\$	-	\$	-	#DIV/0!	
141-4202	Postage	\$	-	\$	-	\$	-	-	
141-4301	Travel & Transportation	\$	6,550	\$	2,689	\$	4,339	-	
141-4501	Rents & Leases, Space	\$	4,100	\$	-	\$	235		5.7%
141-4801	Maintenance, Motor Vehicles	\$	200	\$	-	\$	-		0.0%
141-4801	Maintenance, Equipment	\$	500	\$	-	\$	36		7.2%
141-4901	Miscellaneous Services	\$	-	\$	-	\$	-	-	
Subtotal, Services		\$	11,350	\$	2,689	\$	4,610		40.6%
Capital Out-Lay & Fixed Assets									
141-4500	Capital Out-Lay/Fixed Assets	\$	-	\$	-	\$	-	-	
Total Enterprise Operations Expenses		\$	31,148	\$	4,951	\$	16,889		54.2%
Summary of Revenue vs Expenses:									
Prior-Year Carry Over Funds		\$	125,000	\$	-	\$	-		0.0%
Total Revenue, Base, Grants & Enterprise		\$	1,133,649	\$	62,930	\$	-		0.0%
Total Expenses, Base, Grants & Enterprise		\$	1,029,582	\$	93,514	\$	321,693		31.2%
Fund Balance		\$	104,067	\$	(30,584)	\$	(321,693)		
Operating Reserves		\$	(20,933)						
Estimated Available Fund Balance		\$	125,000						