New Source Review
by the Northwest Clean Air Agency

northwest
CleanAir
agency

Serving Island, Skagit & Whatcom Counties

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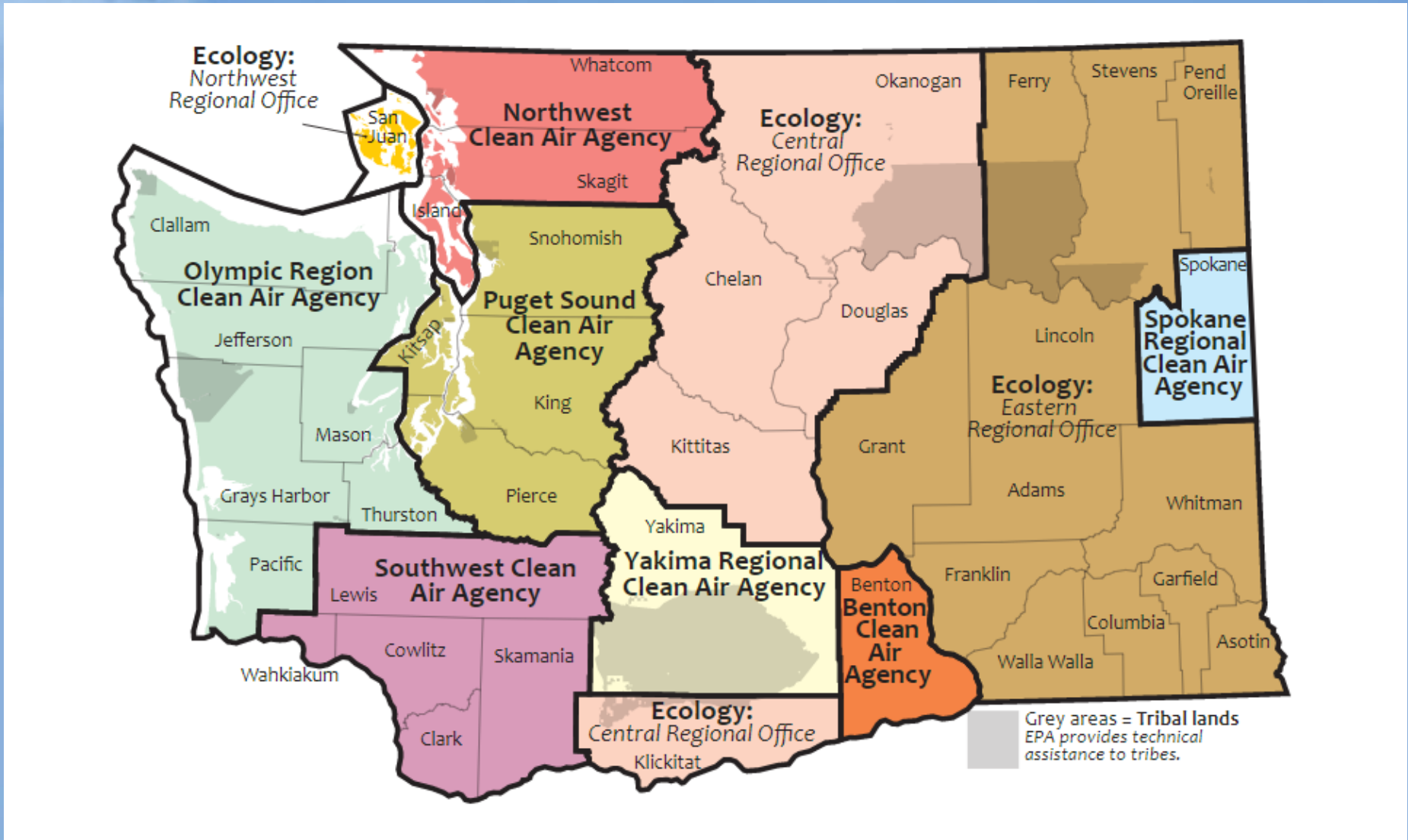
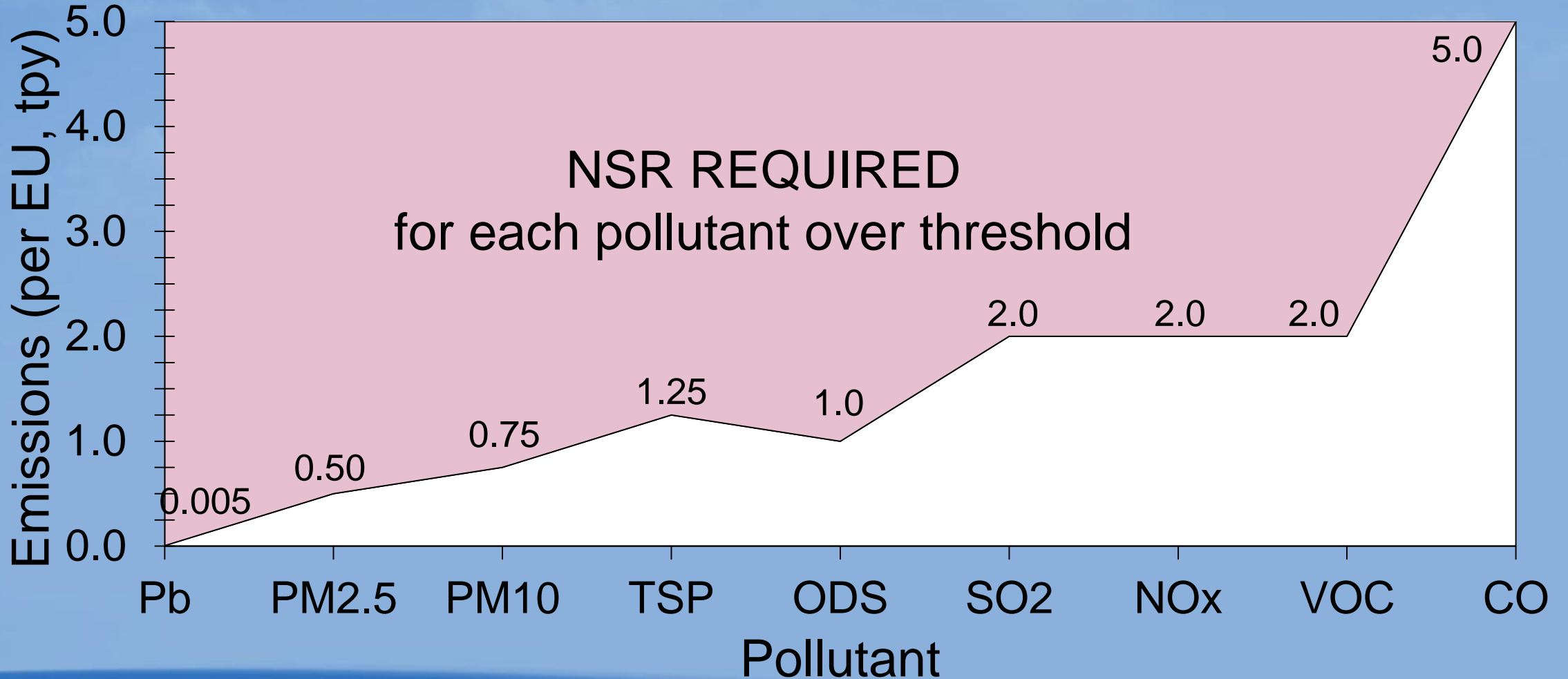# Northwest Clean Air Agency

- 23 employees
  - 6 permit writers, 5 inspectors
- 23 AOP sources
- 498 registered sources
- about 60 minor NSR permits per year
- 3 General Orders
  - dairy digesters
  - automotive refinishing (paint spray booths)
  - gas stations
- NWCAA Section 300

Step 1: Is a permit needed?

1. Is the emissions unit (EU) categorically exempt?

    •   List of categorically exempt units in NWCAA 300.3

2. For each pollutant from each EU:

    •   Are uncontrolled, PTE emissions less than the exemption threshold amount for that pollutant in NWCAA 300.4(D)?

NSR pollutant exemption threshold, per EU

Emissions (per EU, tpy) vs Pollutant

NSR REQUIRED
for each pollutant over threshold

- Pb: 0.005
- PM2.5: 0.50
- PM10: 0.75
- TSP: 1.25
- ODS: 1.0
- SO2: 2.0
- NOx: 2.0
- VOC: 2.0
- CO: 5.0

2. Are uncontrolled PTE emissions of TAP less than the Small Quantity Emission Rate (SQER)?

PDF **WAC 173-460-150**

Table of ASIL, SQER and de minimis emission values.

The following table lists the common name of TAPs, the chemical abstract service (CAS) number; the averaging period; the acceptable source impact level (ASIL); the small quantity emission rate (SQER); and de minimis emission value.

Common Name	CAS #	Averaging Period	ASIL (µg/m³)	SQER (lb/averaging period)	De Minimis (lb/averaging period)
Acetaldehyde	75-07-0	year	3.7E-01	6.0E+01	3.0E+00
Acetamide	60-35-5	year	5.0E-02	8.1E+00	4.1E-01
Acetonitrile	75-05-8	24-hr	6.0E+01	4.4E+00	2.2E-01
2-Acetylaminofluorene	53-96-3	year	4.6E-04	7.5E-02	3.8E-03
Acrolein	107-02-8	24-hr	3.5E-01	2.6E-02	1.3E-03
Acrylamide	79-06-1	year	6.0E-03	9.8E-01	4.9E-02
Acrylic acid	79-10-7	24-hr	1.0E+00	7.4E-02	3.7E-03
Acrylonitrile	107-13-1	year	3.4E-03	5.6E-01	2.8E-02
Actinomycin D	50-76-0	year	4.0E-07	6.5E-05	3.2E-06
Alar (daminsozide)	1596-84-5	year	2.0E-01	3.2E+01	1.6E+00
Aldrin	309-00-2	year	2.0E-04	3.3E-02	1.7E-03
Allyl chloride	107-05-1	year	1.7E-01	2.7E+01	1.4E+00
3-Amino-9-ethylcarbazole hydrochloride	6109-97-3	year	4.5E-02	7.4E+00	3.7E-01
2-Amino-3-methyl-9H-pyrido[2,3-b]indole	68006-83-7	year	2.9E-03	4.8E-01	2.4E-02

Step 2 – Apply BACT and estimate controlled emissions

- apply BACT to each pollutant under NSR at that EU

- estimate the controlled PTE for each pollutant at each EU

- calculate the project emission rate by summing BACT controlled PTE from each EU under NSR

Step 3 – Ambient impact analysis

Is the project emission rate > NWCAA's impact threshold?

No - pollutant is assumed to have an acceptable ambient impact
Yes - Conduct air dispersion modeling

Does modeling demonstrate compliance with the federal and state ambient air quality standards?

Yes - Ambient impact is acceptable
No - establish permit limits to ensure standards are met

Technical Worksheet

- **Project description**
- **Fees**
- **Public Notice**
- **SEPA/GHG**
- **Basis for NSR**
- **Impact analysis – criteria and toxic air pollutants**
- **PSD/AOP analysis**
- **BACT Review**
- **Basis for permit conditions**
- **Review by Engineering and Compliance team**

Thank you!

NWCAA 300.4(D)

POLLUTANT EXEMPTION THRESHOLD LEVEL (ton per year)
(1) Total Suspended Particulates: 1.25
(2) PM10: 0.75
(3) PM2.5: 0.5
(4) Sulfur Dioxide: 2.0
(5) Nitrogen Oxides: 2.0
(6) Volatile Organic Compounds, total: 2.0
(7) Carbon Monoxide: 5.0
(8) Lead: 0.005
(9) Ozone Depleting Substances, total: 1.0
(10) Toxic Air Pollutants: The small quantity emission rate (SQER) specified for each TAP in WAC 173-460-150

Example

	NOx	CO	Styrene		
Unit 1	3 tpy	1 tpy	0		NSR for NOx
Unit 2	1 tpy	6 tpy	0		NSR for CO
Unit 3	0	0	75 lb per day		NSR for styrene
Unit 4	0	0	30 lb per day		-
de minimis	**2 tpy**	**5 tpy**	**65 lb per day**		

NWCAA 300 - New Source Review (NSR)

300.1 requirement for a NSR permit

300.2 PSD/major NSR

300.3 categorical exemptions

300.4 de minimis PTE exemptions

300.7 application format

300.8 & 9 processing of application

300.10 option to appeal

300.11 permit must be used within 18 months

300.12 permit revision option

300.13 requirement to comply with NSR permit

300.14 option for NSR non-applicability determination

300.16 option for coverage under a General Order

300.17 option to use another WA agency permit for temp sources

300.25 permit for replacement/alteration of control technology