Introduction to Clean Air Act Permits

Effective Permit Applications

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Trinity Consultants

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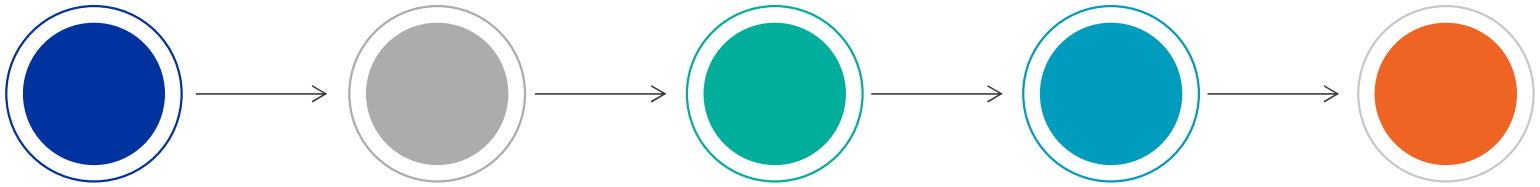
Ideal Project Progression

Application Development

- EnvE Staff
- Consultants
- Manufacturer/Design

Agency/Public Review

- Project Manager/EnvE
- DEQ/LRAPA
- Public Interest Groups



Project Design

- Manufacturers
- Design Team
- EnvE Staff

Application Submittal

- Management
- Consultants/Lawyers
- EnvE Staff

Permit Issuance

- DEQ/LRAPA

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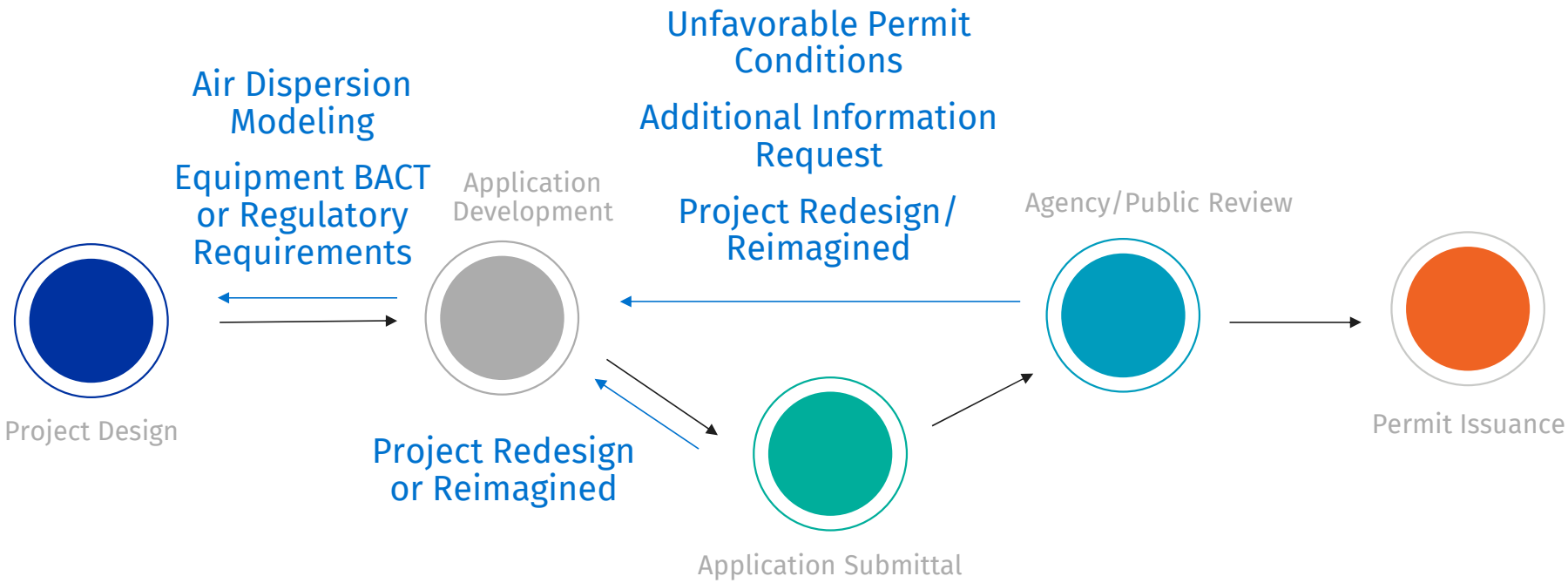
Realistic Project Progression



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Permitting for New Facilities

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Permit Applications – Where to start?

- Obtaining project description/parameters, process flow diagram and facility plot plan

- Identifying ***all*** potential emission sources:
  - Combustion sources (boilers, emergency generators)
  - Material handling (drop points, storage piles)
  - Evaporative emissions (tanks, mixing vessels)
  - Control Devices (baghouses, VOC control devices)

- What about mobile sources?

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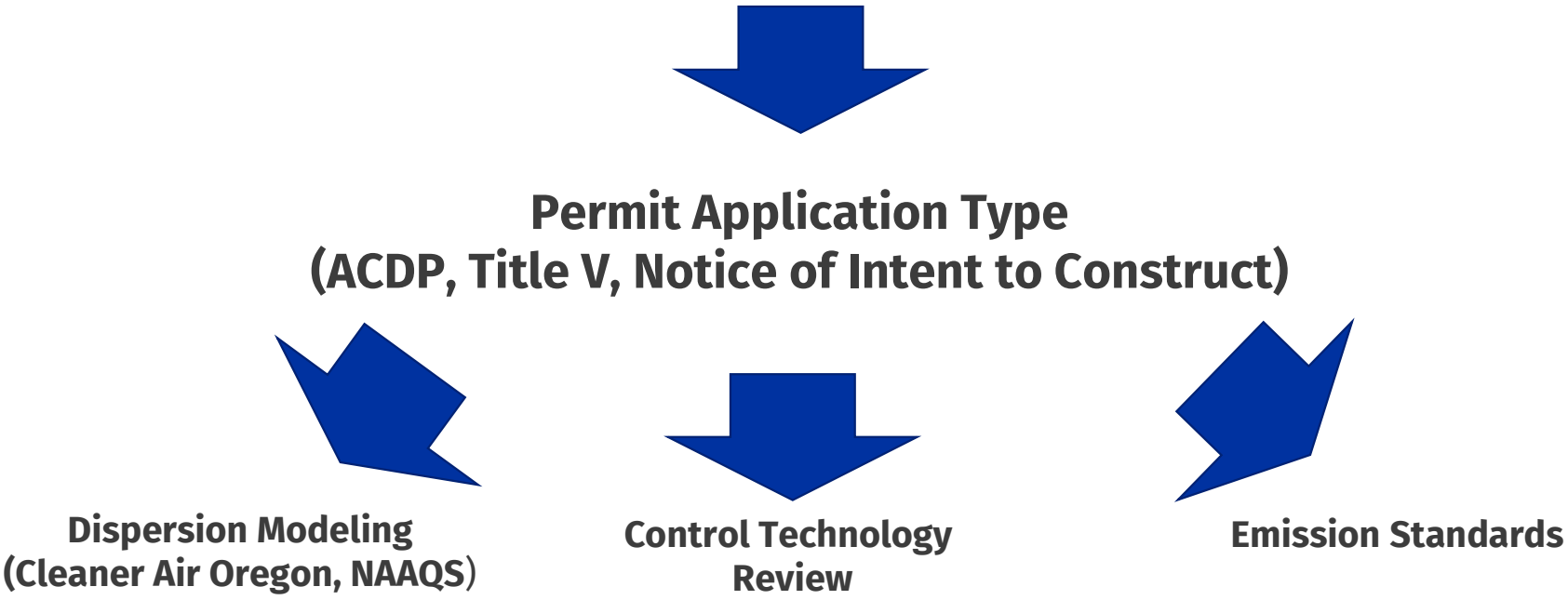
Gating Items for Permit Applications

Emissions Calculations + Source Type + NAAQS Designation



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Emission Calculations

- Selection of Emission Factors:
  - Oregon DEQ Approved Factors
  - Industry Standards
  - AP-42
  - Supplier Guarantees
  - Source Testing

Pollutant	Significant Emission Threshold (tpy)
CO	100
VOC/NO_X/SO_2	40
PM	25
PM_{10}	15
$PM_{2.5}$	10
Total HAPs*	25
Single HAP*	10
GHGs	75,000

* Represents Title V threshold for pollutant

- Throughput/Usage Values:
  - Typically based on maximum potential or rated capacity
  - Do the selected values provide the facility operational flexibility?

- Total emissions for ***each pollutant*** are compared to regulatory emission thresholds

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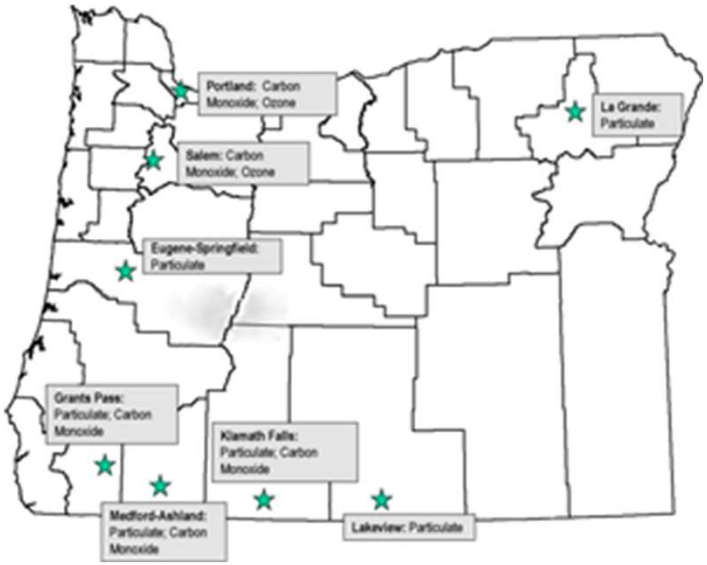
Source Type

- Oregon DEQ has list of facilities that require specific ACDPs:
  - Air Curtain Incinerator = General ACDP
  - Synthetic resin manufacturing = Simple ACDP
  - Total emissions are compared to emission thresholds to ensure a more stringent permit is not needed (i.e., Standard ACDP, Title V)
- Federal regulations require specific facilities to obtain a Title V permit, regardless if over Title V thresholds
- Federal regulations also require lower major source emission thresholds for specific source types (list of 28)

Non-Attainment and Maintenance Areas In Oregon

- Carbon monoxide:
  - Portland Area
  - Eugene/Springfield Area
  - Grants Pass Area
  - Klamath Falls Area
  - Medford Area
  - Salem Area
- PM_{10}:
  - Grants Pass Area
  - Klamath Falls Area
  - Medford Area
  - La Grande Area
  - Oakridge
- $PM_{2.5}$:
  - Klamath Falls Area
- Ozone:
  - Portland Area
  - Medford Area
  - Salem Area



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Key Permit Application Components

- Emissions drive which permit application components will be required

- **Most facilities will be required to:**
  - **Complete short term NAAQS modeling for NO_X, SO_2 and $PM_{2.5}$:**
    - **If emission values exceed SER for given pollutant, additional modeling will be required**
  - **Complete a risk assessment pursuant to Cleaner Air Oregon (CAO)**

- Processes may be required to comply with control technology/emission standard requirements:
  - Typically Available Control Technology (TACT)
  - Reasonable Achievable Control Technology (RACT)
  - Best Available Control Technology (BACT)

- In depth regulatory applicability review (i.e., which rules apply)

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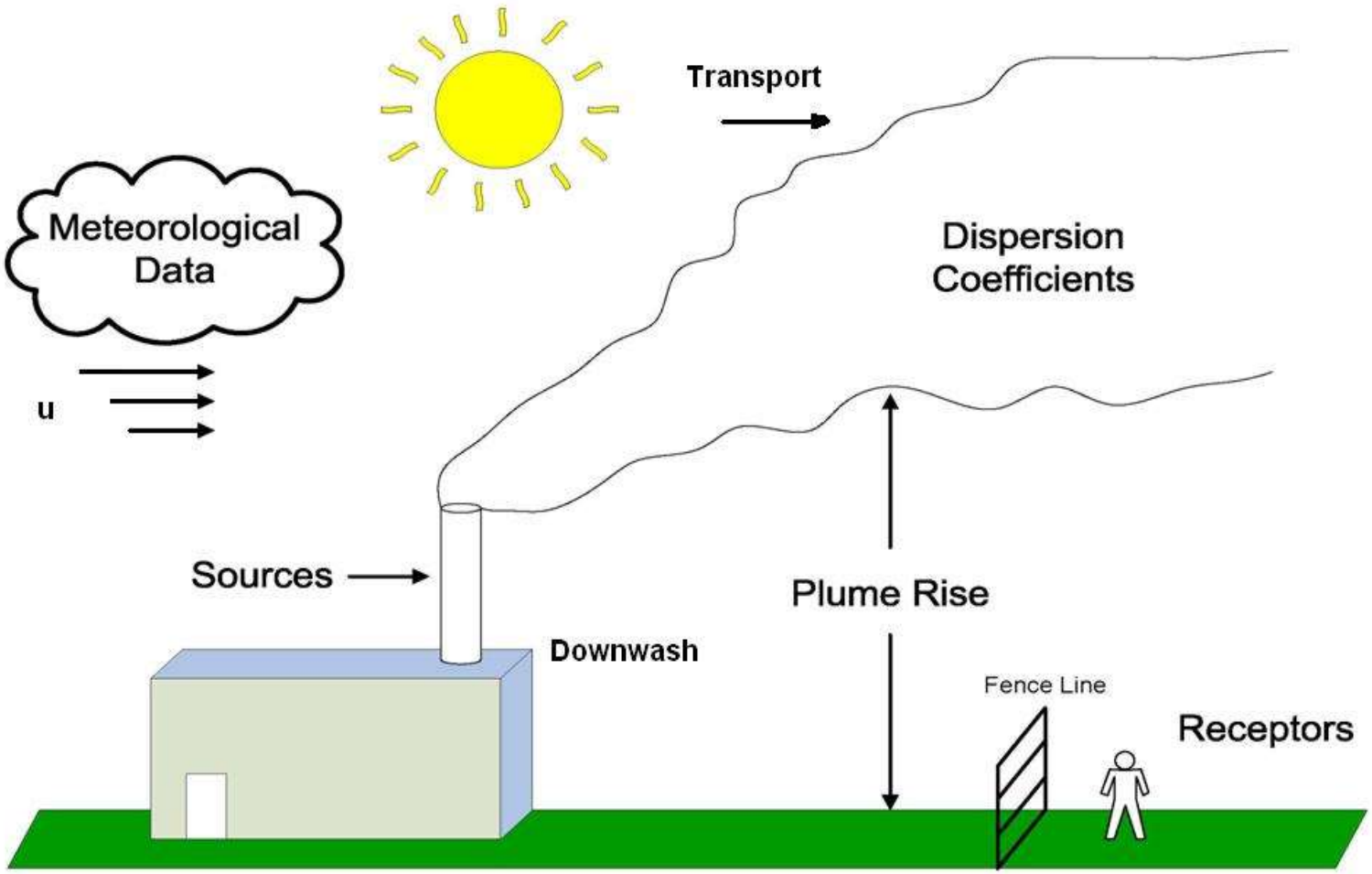

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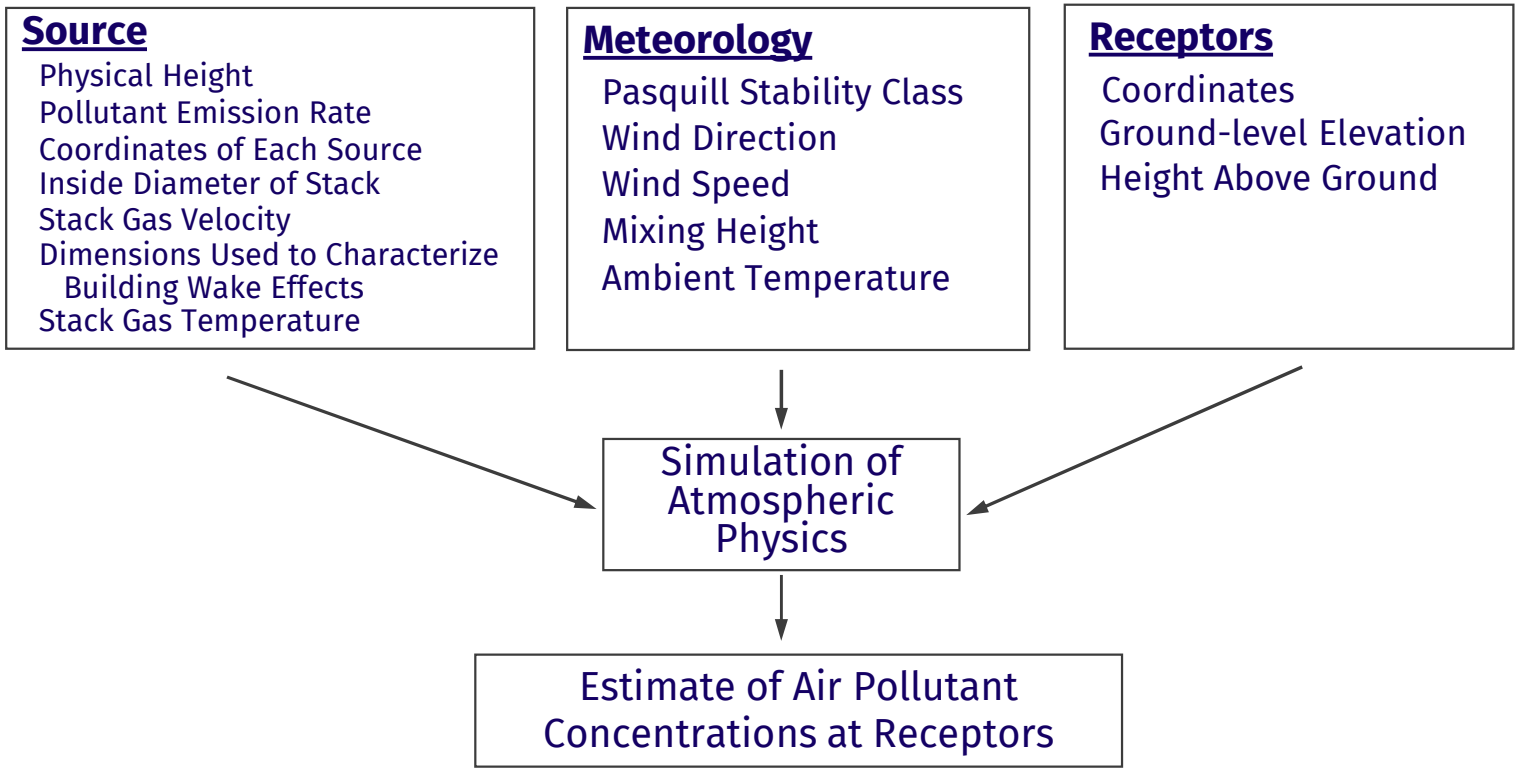
Dispersion Modeling Basics



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NAAQS Modeling 3 Tiers for NCs

Tier 1 Significant Emission Threshold (SET)	Tier 2 Screening Modeling	Tier 3 Refined Modeling
• Max emissions less than SET, no modeling required • NO_2 = 3 lbs/hr • SO_2 = 3 lbs/hr • $PM_{2.5}$ = 5 lbs/day	• Use DEQ Online Tool • Only allowed for single point source • Uses AERSCREEN and regional met and background data	• AERMOD • Required if multiple units or Tier 1 and 2 fail

▸ *May accept a limit to stay below SET for Type 2 or 3*

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Effectiveness of a Pre-Application Meeting

- Meeting with Oregon DEQ or LRAPA to discuss project, goals, etc.

- Some goals include:
  - Alignment on submittal requirements, including fees
  - Discuss any recent changes to policy/rules to consider
  - Answer immediate technical questions from agency, potential permit conditions
  - Estimated permitting timeline

- Ultimately helps Oregon DEQ anticipate what will be submitted and minimize questions throughout the permit application review process

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Groups to Coordinate With

- Permitting coordinator or permit writer(s)

- Cleaner Air Oregon (CAO) Group:
  - Discuss emission inventory requirements/questions
  - If preliminary modeling/risk assessment information is known, can discuss risk assessment approach

- NAAQS Modeling Group:
  - Confirm specific requirements for NAAQS modeling
  - Availability of preprocessed meteorological data
  - Inclusion of nearby emissions sources

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What pre-construction activities are allowed?

- Different activities are allowed for minor vs. major NSR permitting actions
- Recommend checking with Oregon DEQ/LRAPA what has historically been allowed
- **Note that facilities who elect to do these activities are doing so at their own risk**

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Permitting for Existing Facilities

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Differences for Existing Facilities

- Unless triggering Major or State New Source Review (NSR), application will require details specifically to the proposed changes

- Notice of Intent to Construct (NC) Process:
  - Streamlined process for smaller projects that do not require permit modification
  - Typically requires emission calculations, regulatory review and application forms
  - Usually 0 – 60 day approval from agency after submittal (Type 1 and 2 Changes)
  - As of March 1, 2023, Type 2 requires air dispersion modeling demonstration
  - As of March 1, 2023, emissions associated with project change must be calculated using regulated air pollutant emission capacity

- NCs requiring permit modification are more involved (i.e., dispersion modeling) and have longer approval process - Changes to emission limits, monitoring requirements, etc.

- Renewal applications should include requested PSEL update to align with PTE for the facility and if requested by Oregon DEQ, a dispersion modeling demonstration. March 1, 2023 rule change!

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Cleaner Air Oregon for Existing Facilities

- Oregon DEQ and LRAPA have prioritized facilities into three different groups:
  - Group 1 – facilities already called into program
  - Group 2 – next on list to be called in (LRAPA has called in at least one Group 2 source)
  - Group 3 – facilities that will be called into program likely after Group 2 facilities

- If permitting action triggers State NSR then updated toxic emissions inventory must be included with permit application

- Evaluate impact of upcoming or potential projects on toxic emissions:
  - Additional pollutants introduced to facility
  - High-risk pollutants to consider

- Triennial reporting requirements, next report will be due in 2024

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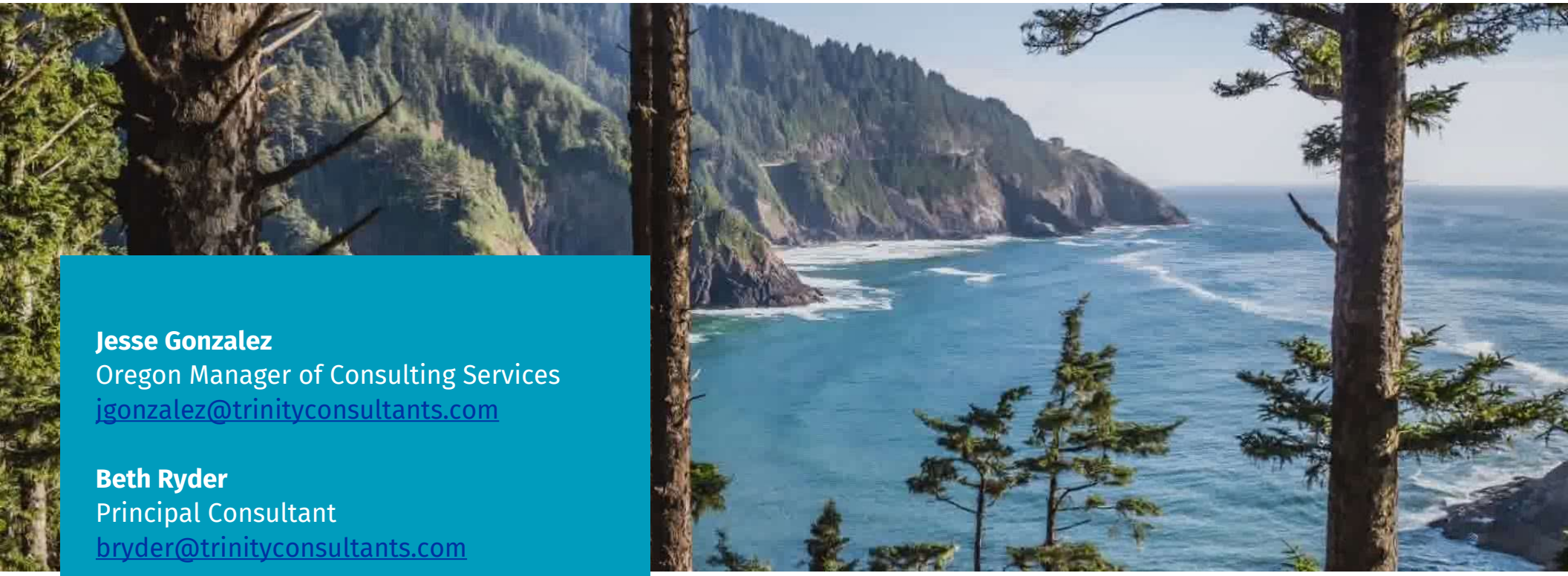

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