

Senate Environment and Natural Resources Committee
900 Court St. NE.
Salem, Oregon 97301

RE: In support of SB 931

4/2/2019

Dear Chair Dembrow, Vice-Chair Olsen and members of the Senate Environment and Natural Resources Committee,

On behalf of the many hundreds of rural Oregonians who work with Beyond Toxics, we again raise the issue of the need for better forestry herbicide spray notification before the State Legislature. We ask for your support for SB 931. This proposed legislation would provide timely and accurate information about upcoming aerial herbicide sprays on nearby timber lands as well as ensure high quality data and program monitoring and tracking for the Oregon Department of Forestry (ODF).

At the invitation of Peter Daugherty, Beyond Toxics participated in the 2012 ODF Notification User Group to help develop and provide feedback for the FERNS notification system. We continue to support ODF's efforts to create efficient and accurate electronic notification and record keeping.

In both 2015 and 2017, many Oregon rural residents came to the State Capital to ask for timely and accurate notification prior to an aerial herbicide spray. These are your constituents from Curry, Josephine, Lane, Lincoln, Clatsop, Douglas, Multnomah and Tillamook counties. 2019 constitutes their third effort to seek help at the Legislature. The residents of Gold Beach learned through the experience of being sprayed by a helicopter that timely notification may have prevented human exposure for the people who were outside during the time the spray was taking place. They learned that, had the helicopter operator been required to file the records described in SB 931 with ODF, investigators from the Oregon Department of Agriculture would not have wasted so much time finding the identity of the operator, figuring out the location of the spray operation and testing for the presence of the actual chemicals that were sprayed.

On June 8, 2016, Beyond Toxics attended a workshop put on by ODF, Hampton Forests and Western Helicopter Services. The purpose of the workshop was to improve our understanding of how helicopters function during aerial spray operations and to learn how timber companies assess projects and prepare for aerial spray operations on their private timber lands.

Dale Claussen from **Hampton Forests** shared his company's **Best Practices for Forest Herbicides Resource Guide**. The Resource Guide gives a detailed description of the Company's site assessment protocol and their schedule of preparations to carry out an aerial herbicide spray. Hampton Timber deserves appreciation for following best business practices when planning aerial herbicide spraying. Their Resource Guide is detailed and could be an excellent guide and model for other companies.

In regards to notification and record keeping for aerial herbicide sprays, here is a summary of the business practices for aerial herbicide spray Hampton Forestry presented at the April 8 workshop.*

- **3 Months Prior to an Aerial Herbicide Spray, Hampton Forestry:**
 - Identifies location safety concerns
 - Identifies sensitive neighbors
 - Bids out the job
 - Determines Application timing and costs
- **3 – 6 Weeks Prior:**
 - Identifies the unwanted vegetation
 - Determines the best herbicide mix
 - Contacts the herbicide dealer
 - Chooses the heliport site location
 - Reviews safety strategies for
 - Public roads
 - Schools
 - Parks
 - Reviews Sensitive Resources
 - Domestic Water Intakes, Municipal watersheds, streams, creeks & wetlands
 - Endangered or threatened species
- **4 – 6 Weeks Prior:**
 - Calculates their herbicide needs and supplies
 - Reviews individual EPA product label use instructions for mixing and rates
- **2 Months Prior:**
 - Signs the legally binding agreement with the herbicide applicator operator
- **1 Month Prior:**
 - Notifies neighbors of the application plan
 - Includes a Letter of Intent and a personal meeting
- **1 – 2 Months Prior:**
 - Notifies ODF of the timing, etc.
- **2 – 4 Weeks Prior:**
 - Purchases herbicide products
 - Verifies “delivered product is the ordered product”
 - Reviews EPA label AGAIN (emphasis Hampton’s)
- **2 – 3 Weeks Prior:**
 - Verifies ODF Notifications received and processed
- **2 Weeks Prior:**
 - Is ready to carry out Application Records Requirements
 - Schedules site visits with neighbors to discuss concerns
- **1 Week Prior:**
 - Prepares list of Herbicide Products to be Utilized
 - Review legally binding agreement with herbicide applicator
 - Create GIS/GPS shapefiles for pilot and crew

Mr. Claussen also stated Hampton Forest voluntarily observes a 60' no-spray buffer from the neighboring property line, which provides more protection than the Oregon Forest Practices Act requirement for a 60' buffer from a home or school building. He further stated that both Hampton and Starker Forest companies regularly contact neighbors by email list-serve or by Facebook messages. *Communicating with neighbors can be an opportunity for good relations rather than a fear-based problem.*

To summarize, Hampton is ready to go with their site plans at least 2-4 weeks in advance of an aerial spray operation. "Preparedness" includes reviewing all herbicide application record requirements, purchasing the herbicide products they will use, signing contracts with their helicopter operator, and notifying neighbors and ODF. In that final 1-2 weeks, the landing site has been chosen and there is a plan to move the equipment and the chemicals to the staging site. Communications with neighbors in advance is part of the standard operating procedures. We can assume that this type of planning is standard practice for timber companies operating in Oregon. This is professional planning. This is the way business is done by responsible companies. Decisions about when to spray and what herbicides to use are not left to the last minute, contrary to what has been said by some industry representatives. It takes a lot of advance planning to get a helicopter, the chemical batch and fuel trucks and all the associated personnel to the landing site.

Hampton's Resource Guide verifies that timber owners and their contracted helicopter pesticide applicators have the necessary information to properly inform the Oregon Department of Forestry on the *what-where-when-how* of aerial herbicide sprays at least one week in advance of the planned spray. Timber companies continue to tell the public and members of the legislature they want to be good neighbors. They've testified before legislators that they are good neighbors. Good neighbors don't put their neighbors in harm's way. Good neighbors communicate. Using the FERNS database to ensure accurate and timely notifications to the neighbors who have registered with the system is the most efficient and fair way to practice good neighbor practices. It's a pathway toward building trust and stronger public relations as well.

The technology for online notification and record keeping is cheaper, simpler and more accessible than ever before. Even local governments have implemented electronic recordkeeping for pesticide sprays. For example, Metro government has developed the Pesticide Application Record (PAR), a centralized tool for reporting, tracking and analyzing pesticide applications. Built on the Esri-GIS platform, the program standardizes data entry and minimizes applicator errors. By going directly to an online database, Metro is able to monitor and track all applications – by location, pesticide or contractor. All Metro contractors and staff are required to use PARS for any pesticide applications on Metro property. It meets ODA requirements, streamlines record keeping for applicators and ensures high quality data. Applicators can use a smart phone in the field or desktop at the office to create records that are uploaded and transferred to Metro's secure servers. Applicators receive a pdf application record document via email they can use for their own record keeping needs. *METRO staff has offered to share a demonstration of the PARS system to legislators at their request so that decision makers can better understand the benefits of the system and the ease of providing a framework for good record keeping and tracking. ***

Oregonians deserve the basic right to know when an ultra-hazardous aerial herbicide spray will occur near their homes and property. We urge the Legislature to learn more about standard operating practices that make timely and accurate notification on FERNS possible and aligned with new technologies and best business practices. Please adopt a statutory requirement that will standardize these practices by providing:

- **Timeliness:** 24-48 hour notification prior to an aerial spray to ensure their safety on their own property;
- **Clarity:** Indicating if sprays are aerial, ground, hack and squirt or roadside sprays, and giving their exact location;
- **Accurate and Complete Records:** Require that daily spray records are uploaded to FERNS within 7 days of a spray.

Rural residents have the right to bring their children and pets indoors, put the livestock in the barn and experience honest, equitable and good neighborly relations with adjacent forest owners. Please vote to approve SB 931 and send it with a “do pass” recommendation to the floor of the Senate.

Sincerely,

Lisa Arkin, Executive Director, Beyond Toxics

John and Barbara Burns, Cedar Valley residents

Eric and Kathryn Rickard, Cedar Valley residents

James and Pam Aldridge, Cedar Valley residents

On behalf of the six people who were sickened from pesticide exposure and have died since the helicopter aerial spray incident in Cedar Valley in October, 2013.

*Jim Welsh
Chuck Ott
Sandy Smith
Clinton Smith
Keith Wright
Bob Mathers*

Attachments:

*Attachment A is “Hampton Forests Best Practices for Forest Herbicides Resource Guide,” the handout provided to ODF 6/8/2016 workshop attendees

** Attachment B is the PAR Fact Sheet prepared by Metro Government

**Best Practices
For
Forest Herbicides**

**Resource Guide
Event 1**

June 8, 2016

Dale O'bussen w/ Hampton Forests

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1) Characteristics for Assessing a Spray Project

1. General layout of the Project – Aerial View
 - a. How many spray units?
 - b. How many acres?
 - c. How many acres can the helicopter spray per tank?
 - d. How many days at this Project Staging Area?
2. Assessing the Best Spot for a Project Staging Area
 - a. Season Issues
 - i. Is it wet or dry out there?
 - ii. Winds
 - b. Helicopter Operating Considerations
 - i. Pilot Safety
 - ii. Elevation
 - iii. Round trip flight time to each spray unit
 - iv. Overnight security for equipment
 - c. Road access
 - i. Distance from your home base
 - ii. Condition of roads
 - iii. Round trip time to water source
 - iv. Potential for multiple heliports?
 - d. Water Source Considerations
 - i. Is it irrigation or domestic?
 - ii. Does it need testing?
 - iii. Do you need owner's permission
 - iv. Do you need permitting?
 - e. Regulations
 - i. Is a written plan required to be filed within this jurisdiction?
 - ii. Protected species
 1. Exposed to spray?
 2. Exposed to disturbance?
 - iii. Other regulatory concerns
 - iv. Is there need for ODF or ODA observation?
 - f. Good Neighbor Considerations
 - i. Will the helicopter be flown in or trailered in?
 - ii. How much of the operation will be visible from towns, major roads, or other venues?
 - iii. Can the helicopter avoid residential areas in routing from staging area to each spray unit?

2) Characteristics for Assessing an Individual Spray Unit

1. Topography

a. Physical Features

- i. Dimensions and shape of spray unit. Total acreage.
- ii. Vertical climb from bottom to top
- iii. Obstructions
 1. Power lines?
 2. Leave trees?
- iv. Altitude minimums
- v. Closed in; or neighbors
- vi. Use of neighboring property: timber, residential, farm, crop types, livestock
- vii. Visibility. Who can see the unit, from how far off?

b. Boundaries

- i. Forest
- ii. Roads
- iii. Water
 1. Lakes
 2. Streams & Rivers
- iv. How big a buffer of vegetation already exists on each boundary?

c. Vegetation & Soil

- i. Is this spray for Site Preparation or Release?
- ii. Variety of seedlings
- iii. What is the targeted Vegetation
- iv. Soil characteristics

d. Water Within the Spray Unit?

- i. Rivulets?
- ii. Seasonal concerns. Active rain run off.

e. Based on a, b, and c: what kind of application methods should be used?

2. Human Access & Relationships

a. Neighbors

- i. Attitude and disposition of adjacent neighbors
- ii. Attitude and disposition of close by, or nearby neighbors

b. Types of Humans that Might Be Present on Day of Event.

- i. Mushroom pickers
- ii. Hunters
- iii. Hikers

- iv. Bikers
- v. Protesters
- vi. Other Contractors
- vii. Peanut Gallery?
- c. Controlling Access
 - i. Locations for road and path restrictions
 - ii. Locations for advisory signs
 - iii. Will staff be required in addition to signage?
 - iv. Does the situation require law enforcement? Present or on standby?
 - v. Location for Peanut Gallery

3) Pre-operations Checklist – SHOW #2

- **3 months Prior:** Identify Application Areas
 - Budget Considerations
 - Identify Location Specific Safety Concerns
 - Identify Sensitive Neighbors
- **3 months Prior:** Contact Potential Application Operators
 - Bidding Procedure or Negotiate
 - Desired Application Timing
 - Application Cost
- **3 to 6 weeks:** Visit Application Areas to Determine Objectives and Desired Outcomes
 - Identify Unwanted Veg
 - Determine Best Herbicide Mix
 - Contact Herbicide Dealer Representative for Advice
 - Heliport Site Selection
 - Size, Location, Distance/View of Application Area
 - Crew Safety
 - Review Safety Concerns and Mitigation Strategy
 - Powerlines, Antennas, Wildlife Trees, Slide Debris, Driveways, Public Roads, Schools, Parks, Etc.
 - Review for Sensitive Resources
 - Domestic Water Intake
 - Municipal Watershed
 - Endangered or Threatened Species
 - Streams, Creeks, Wetlands
 - Property Lines

- **4 to 6 weeks:** Determine Approximate Herbicide Supply Needs
 - Application Area Calculations
 - Total Area by Mix
 - Total Area by Product
 - Application Rate per Acre
 - Various Products Available
 - Individual EPA Product Label Use Instructions Review
 - Product Strength and Mixing Characteristics Review
 - Additional Product Considerations
 - Volatility
 - Odor
 - Solubility
- **2 months:** Sign Legal Agreement with Herbicide Application Operator
 - Legally Binding Agreement Language is Paramount
 - Application Timing
 - Objectives / Desired Outcomes
 - Training and Regulatory Requirements Compliance
 - Specific Equipment Requirements
 - Insurance Requirements
 - Communication Plan – Detail specifics of ongoing and frequent communication throughout project
- **1 month:** Notify Neighbors of Application Plan
 - Letter of Intent and Contact Information for Personal Meeting
- **1 to 2 months:** Notify Oregon Dept of Forestry of Application Plan(s)
- **2 to 4 weeks:** Notify Oregon Dept of Water Resources of Intent to Draft Water for Agriculture Use
- **2 to 4 weeks:** Purchase Herbicide Products
 - Double Check Intended Application Plan
 - Verify Delivered Product is Ordered Product
 - Review EPA Label Use Instructions AGAIN
 - Create Safe Herbicide Product Storage
 - Dry, Locked and Out of the Way – Meets fire code and containment regulations, if required
 - Appropriate Spill Kit Close
 - Post EPA Label Use Instructions and **Safety Data Sheet** for Each Product
 - Safety Training for Personnel Who May Contact Herbicide Products Prior to Use
 - Appropriate Product Measurement Devices
- **2 to 3 weeks:** Verify ODF Notifications Received and Processed for Comments
- **2 weeks:** Site Visits with Neighbors to Discuss Concerns

- **2 weeks:** Create Final Plan for Application Season
 - Review **OSHA Worker Protection Standard** for Posting Requirements, PPE, Etc.
 - Personnel Involved Have Required Training
 - Personal Protective Equipment
 - Road Signs / Barricades to Block Off Application Areas
 - Communicate with Affected Personnel, Contractors, Neighbors, Public, etc.
 - Application Records
 - Record Requirements
 - Calibrated Weather Measurement Device for Air Temp, Relative Humidity and Wind Speed/Direction (Azimuth)
 - EPA Label Use Instructions on Hand at All Times
- **1 to 2 weeks:** Create/Update Pre-Operations Briefing Material and Application Info
 - Create GIS/GPS Shapefiles for Pilot and Ground Crew
 - Communication Plan for all personnel involved in the project
 - Safety Briefing Materials
 - List of Herbicide Products to be Utilized
 - Agreement Overview
 - ODF Notification List with Sensitive Resources Plans
 - Emergency Action Plan Complete with Air Ambulance Instructions
 - Herbicide Spill Cleanup/Reporting Requirements
 - Spill Kit Review

Metro Pesticide Application Record (PAR) System

February, 2019

Overview

Metro has developed a centralized tool for reporting, tracking and analyzing pesticide applications. Built on the Esri platform, the tool is designed to standardize data entry and minimize errors. It meets the ODA reporting requirements and more. The Pesticide Application Record (PAR) combines a customizable mobile survey with a cloud-based dashboard. By going directly to an online database, Metro can monitor all applications – by location, pesticide, or contractor.

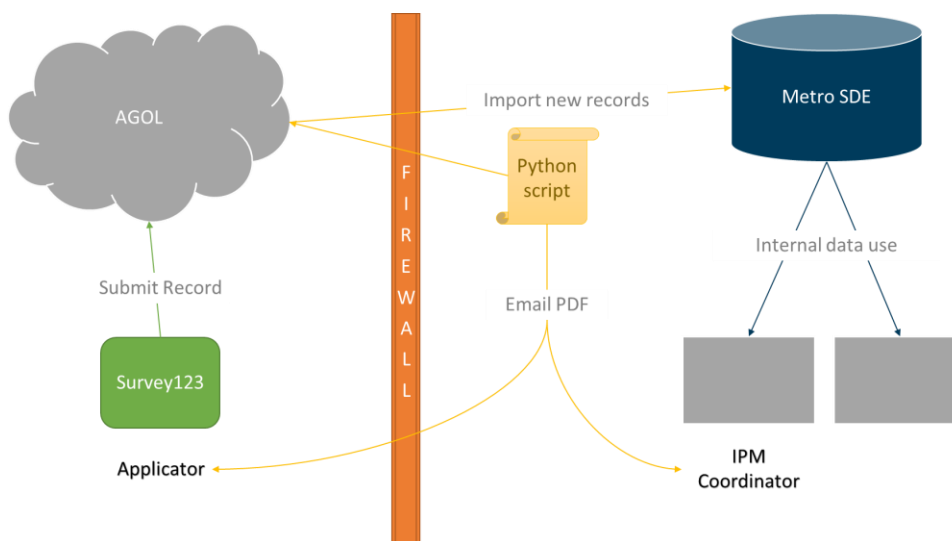
Background

Metro invested significant time in developing a comprehensive PAR form. Paper records were labor-intensive and introduced too many errors; other technologies proved inadequate for mobile reporting or lacked the data analytics. Metro utilized its investment in geospatial technologies to create a suite of tools that handled both the field and office requirements, and provided a map-based view of the applications. The system went live in 2017.

Technology

The technology is Esri. While it has a cloud component, data is copied to an internal secure server through automated scripting. While the applicator submits the record electronically, they receive a pdf copy for their own records within 24 hours. The survey itself is rapidly configurable and the technology scalable. Public entities interested in using (free of charge) and adapting the customized base coding developed by Metro or in having Metro offer a hosted service, contact Robert Kirkman, Metro Research Center at Robert.Kirkman@oregonmetro.gov.

Metro's internal IPM program Pesticide Application Record System



- Mobile client – Esri Survey123
- Dashboard – Esri Survey123 (cloud based), Microsoft Power BI
- Database - Esri ArcGIS Online (initial), Metro SQL/SDE (authoritative)
- Mailing report – custom Python script
- PAR record copy – custom Python script

Data Dashboard (DRAFT in development)

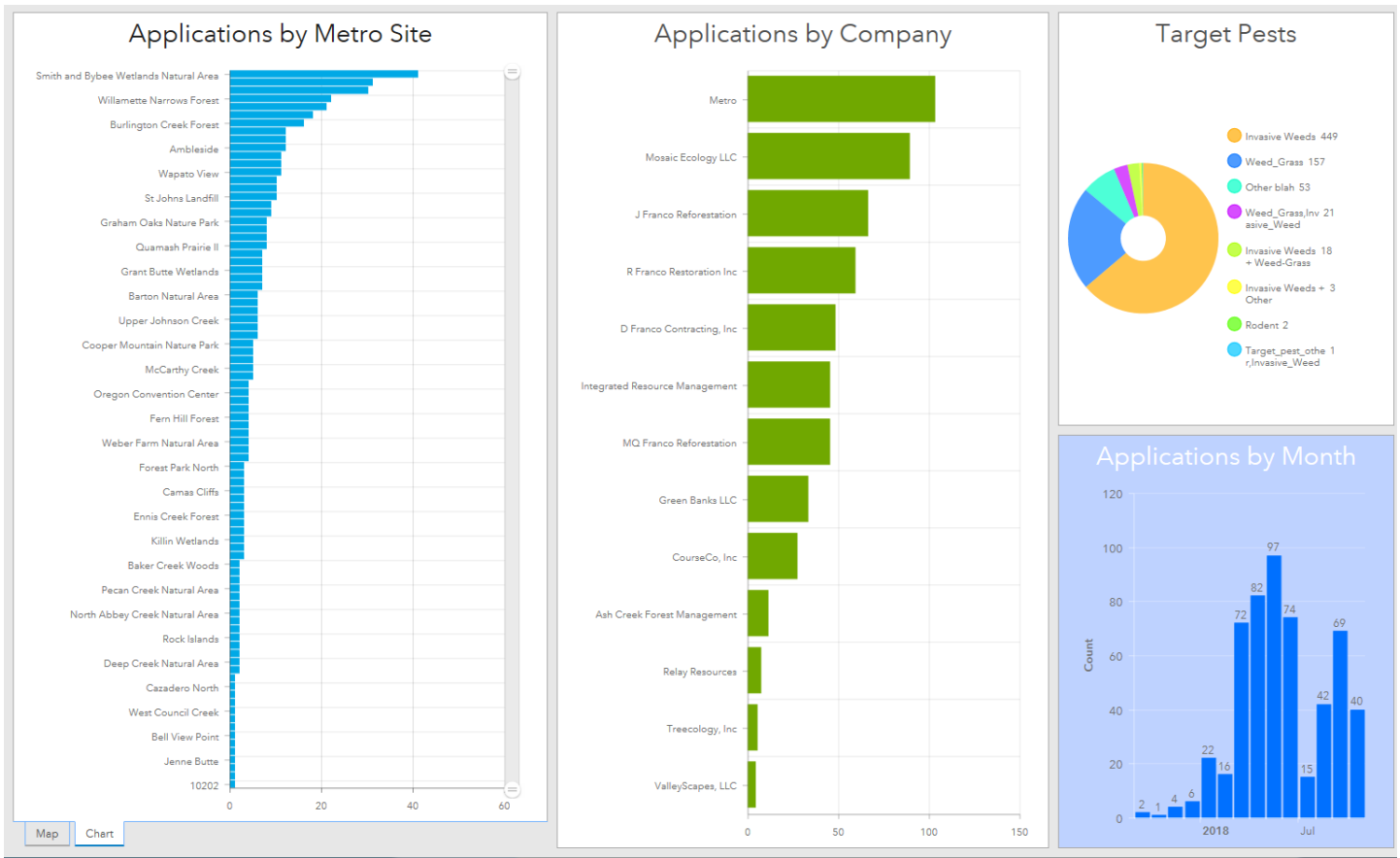


Figure 1 Business intelligence allows rapid querying of application data.

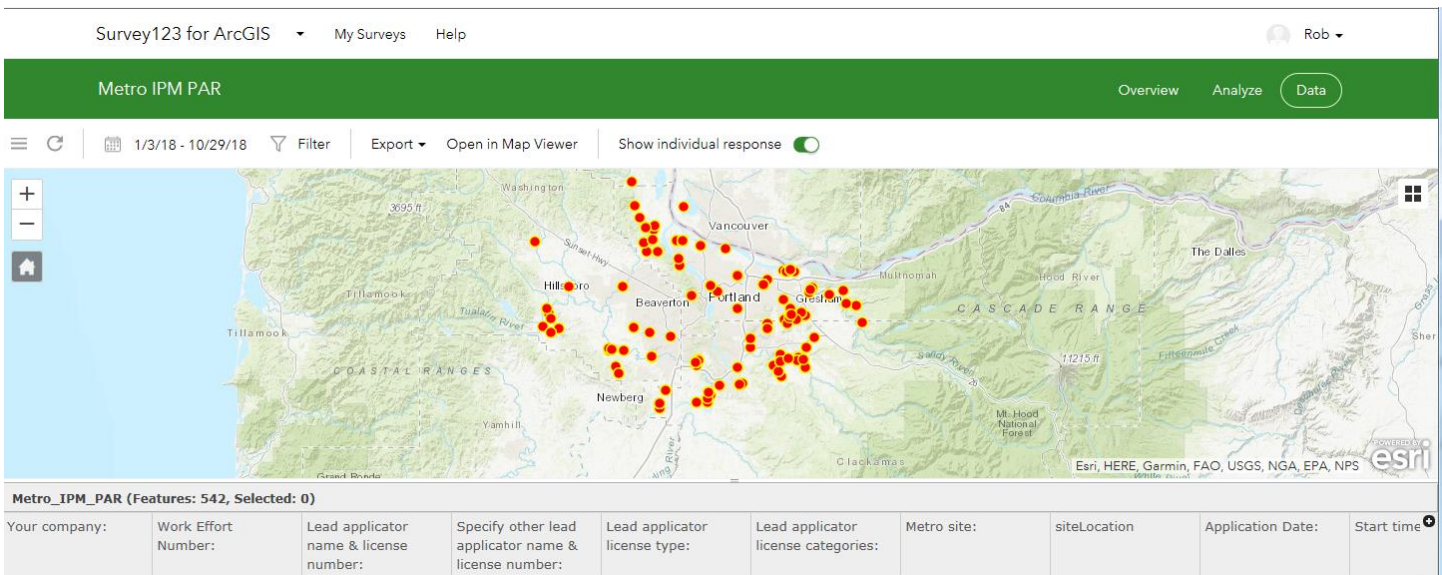


Figure 2 Integrated mapping shows locations of applications.

Screenshots of form in mobile format

The figure displays 12 screenshots of the Metro Pesticide Application Record form, organized into a 3x4 grid. Each screenshot shows a different section of the form, designed for mobile use with large, clear input fields and a numeric keypad. Red boxes highlight specific features: 'Pesticide Applicator' in the General Information section, 'Yes' in the Weather section, and a camera icon in the Additional Applicators section. The form includes sections for General Information, Weather, Product Details, Treatments, and Additional Applicators, with various input fields for company name, license categories, weather conditions, product details, and signatures.

Figure 3. The PAR survey is broken down into smaller components for easy entry – only the relevant fields show up for the applicator. Smartphone screens allow electronic signatures.

Contact

For more information, contact: Rob.hamrick@oregonmetro.gov, Carl.grimm@oreognmetro.gov



Lisa Arkin <larkin@beyondtoxics.org>

Fw: Metro Pesticide Application Record System information

1 message

Carl Grimm <Carl.Grimm@oregonmetro.gov>
To: Lisa Arkin <larkin@beyondtoxics.org>
Cc: Scott Klag <Scott.Klag@oregonmetro.gov>

Mon, Apr 1, 2019 at 8:53 PM

Hello Lisa – I wanted to let you know that Metro staff would be happy to provide another demonstration of our internal Metro IPM Program Pesticide Application Record (PAR) system to your staff or other interested parties.

As you know our PAR is an Esri based pesticide application record survey tool that we require all our contractors and staff to use for any pesticide applications on Metro property. It meets ODA requirements and more, streamlines record keeping for applicators, ensures high quality data and facilitates program monitoring, tracking and improvement. Applicators can use a smart phone in the field or desktop at the office to create records that are uploaded to the cloud then transferred to Metro's secure servers. Applicators then receive via email a pdf application record document they can use for their own record keeping needs.

While Metro does not have intentions to create a public facing interface for the PAR system – it is used for internal program tracking and evaluation only – the system does serve to make fulfillment of any public records requests very efficient.

If any entities are interested in using the PAR technology, please let us know – Metro can freely share the custom coding for adaptation or explore the possibility of hosting other entity's systems at Metro.

Thank you again for your interest in the PAR and please let me know if you have any further question about it or any other aspects of our internal IPM program.

--Carl

Carl Grimm

Senior solid waste planner

Resource conservation and recycling

My gender pronouns: he, him, his

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 **Metro Pesticide Application Record System Factsheet 02-01-19.pdf**
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