

# Risk Based Leak Surveys (BP#15-16)

## Current status and plans for 2021

**François Rongere, Monique Montague**

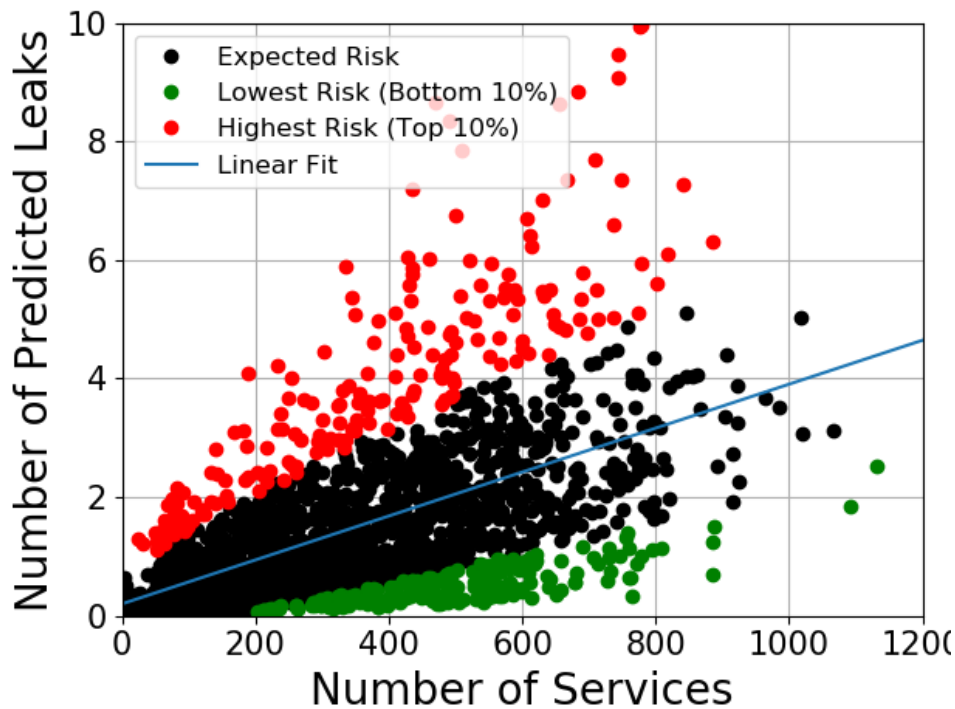
January 21<sup>st</sup>, 2021



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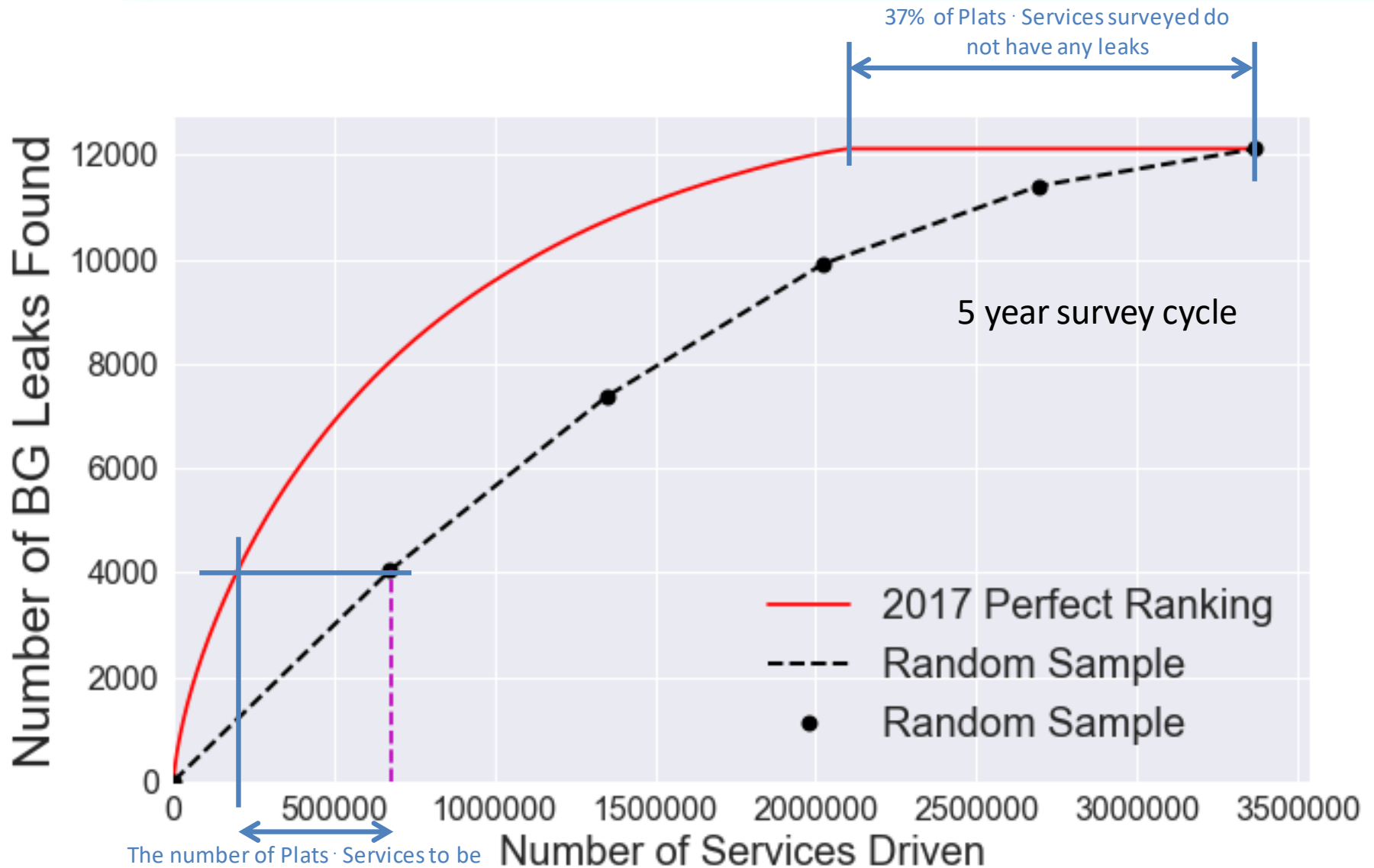
- Prioritize the plats to be surveyed in order to optimize the number of leaks found, minimize the time leaks stay open and reduce emission.

**Distribution of leaks found per plat (2017)**





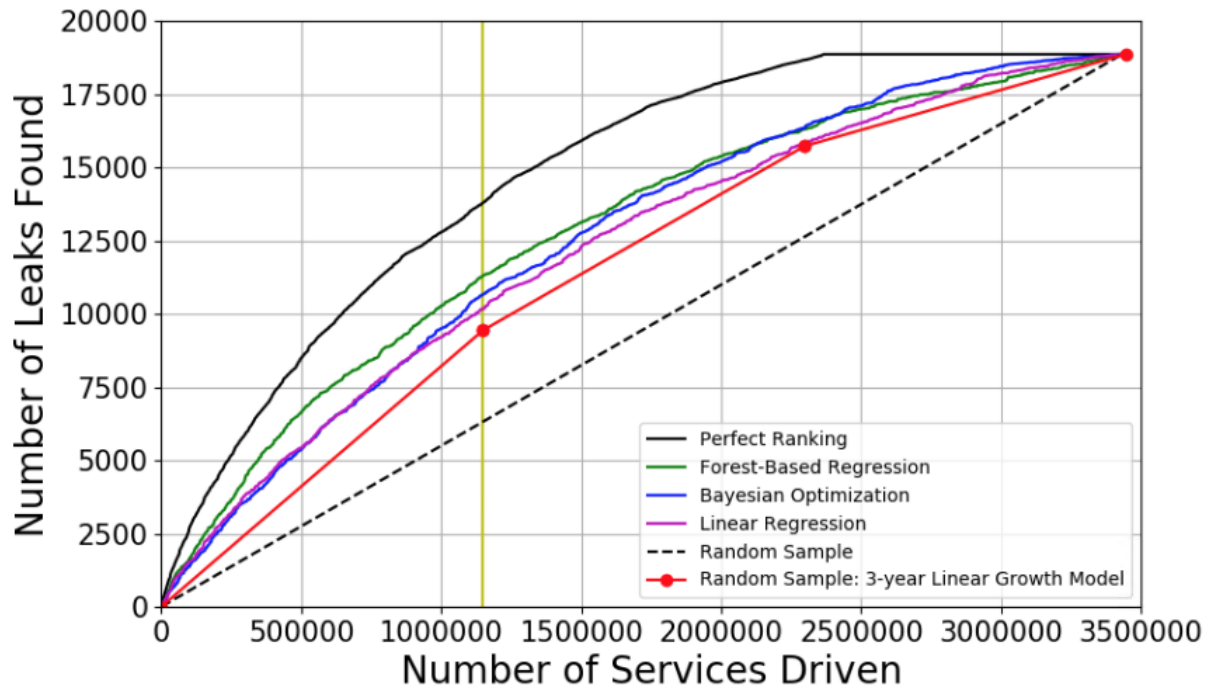
# The Potential of prioritization



The number of Plats · Services to be surveyed can be reduced by 70% for the same number of leaks found

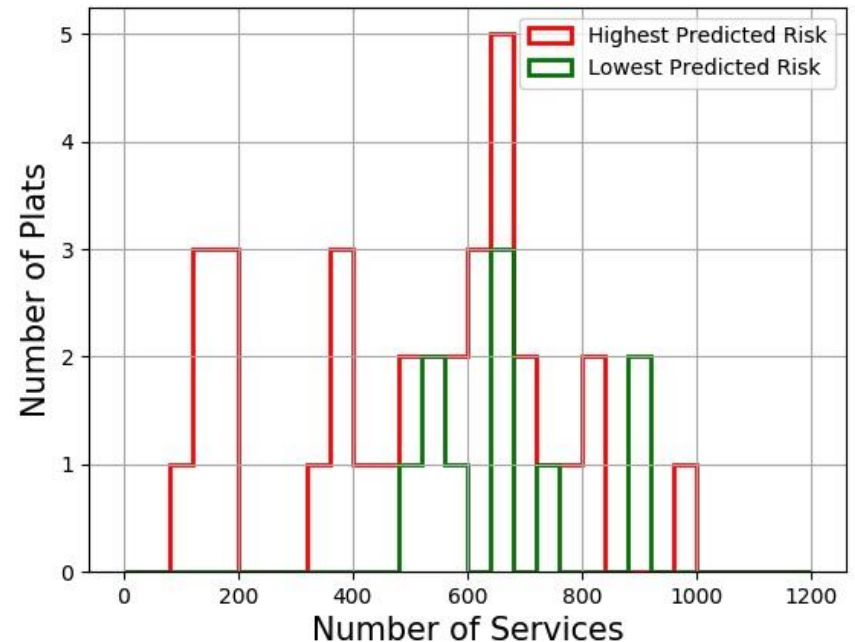
# To predict the number of leaks per plat

- We combine the DIMP Likelihood of Failure (LoF) model that estimates the likelihood of a leak for each segment of the Distribution System based on threats and the data collected by the Picarro car in the year before the survey.



# Validation – Data Set

- 44 plats identified by 2019 Risk Based Survey model for validation
  - 34 high-risk plats and 10 low-risk plats
  - Driven and investigated in addition to compliance schedule
  - Represents multiple geographies and plat sizes (number of service taps)

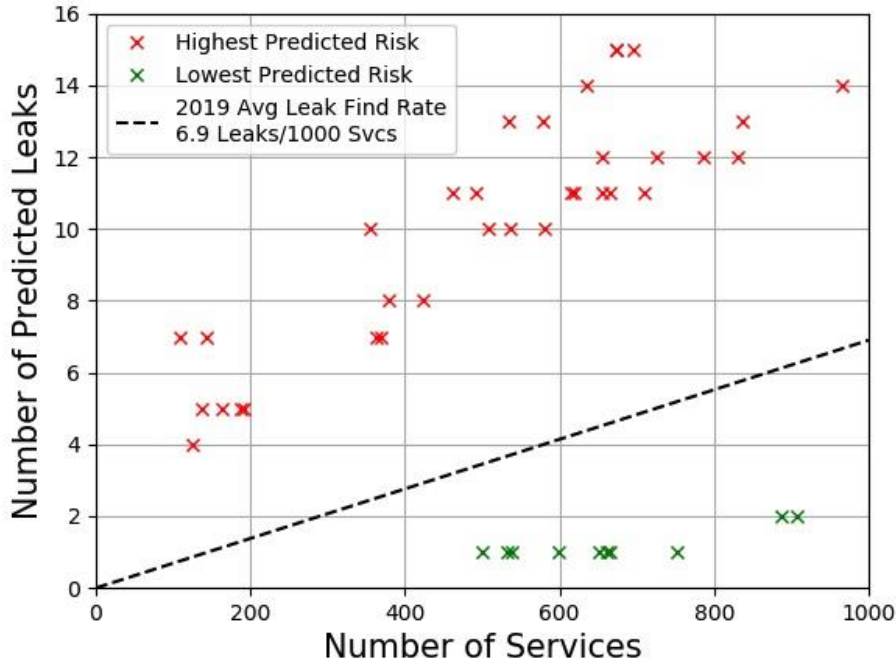




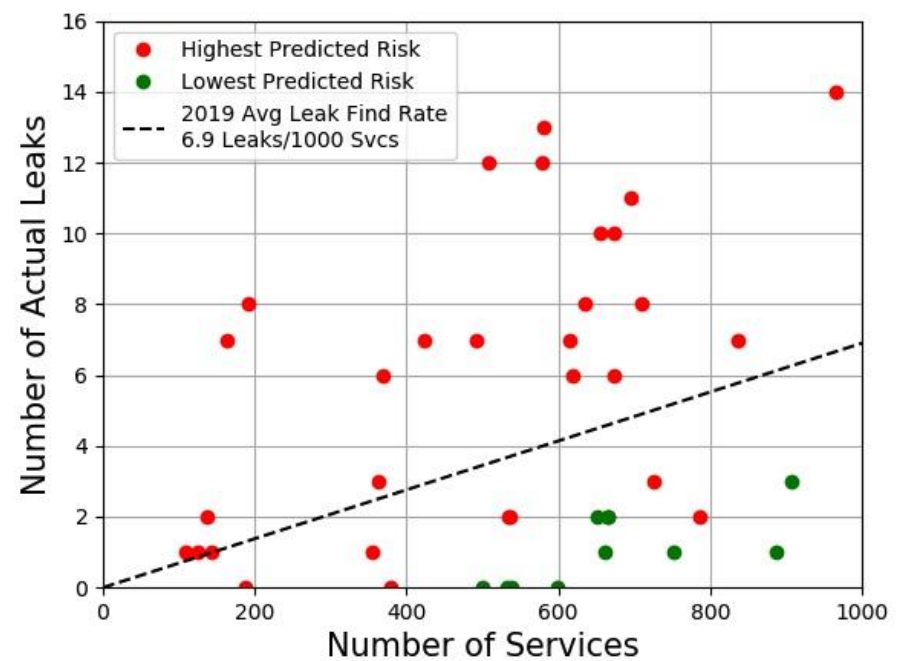
# Ranking Performance

	Number of Plats	Number of Services	Predicted Leaks	Predicted Leaks / 1000 Svcs	Actual Leaks	Actual Leaks / 1000 Svcs	Delta Between 2019 Average (6.9 Leaks/ 1000 Svcs)
Predicted High-Risk Plats	34	17,379	345	19.9	255	14.7	+113% (2.1x)
Predicted Low-Risk-Plats	10	6,693	12	1.8	10	1.5	-78% (0.2x)

### Prediction



### Actual



- Since the model can estimate the number of leaks for each plat after calibration on the total number of leaks found on surveyed plats, we use the model to calculate the number of unknown leaks from the non-surveyed plats improving emission report accuracy.
- Some questions must be addressed before deployment of Risk Based Leak Survey:
  - Synchronization with Meter Set Atmospheric Corrosion surveys
  - Integration with compliance requirements
  - Impact on resource management
  - Optimization
- These questions will be analyzed in 2021 using extensive data collected in 2019 and 2020.



# Plan for 2021

- Although PG&E wishes to implement the risk-based leak survey to aid in reducing overall methane emissions, it is important to always remain in compliance.
- Throughout 2021, PG&E R&D will take a deep dive into addressing all obstacles pertaining to the implementation of the risk-based leak survey.
- Once all obstacles are identified, PG&E plans to perform an in-depth analysis on each obstacle, working with our internal groups and subject matter experts to iron out the details.
- Potential obstacles currently being investigated include:
  - Mismanagement of the alignment of the Atmospheric Corrosion and safety compliance surveys.
  - Impacts to resource management.
  - Copper and unprotected steel surveys.



# Thank you

François Rongere  
[fxrg@pge.com](mailto:fxrg@pge.com)

Monique Montague  
[mn1c@pge.com](mailto:mn1c@pge.com)



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