**Title:** Two Regulatory Spray Drift Models: Differences and Uses

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**Presentation Format Preference:** Platform Talk

**Abstract:** Pesticide spray drift is the movement of pesticides away from the intended application area through the air at the time of application or soon after. DPR’s Environmental Monitoring Branch models spray drift deposition from pesticide application methods including aerial, ground boom, and airblast. Spray drift modeling is used to determine spray drift exposure and set buffer zone distances to prevent damage to non-target organisms. DPR uses two different models: AGDISP and AgDRIFT®. AGDISP is a physics-based model that requires high user skill level accepts site-specific input data, and produces site-specific results. AgDRIFT® is an empirical model, has a limited set of pre-determined inputs, is not site specific, and represents the most conservative scenario estimates of spray drift deposition. The different assumptions and modeling approaches inform which model DPR chooses for which task. Parameters that affect spray drift, such as droplet size distribution and wind speed, will also be discussed.