

Unmanned Aerial Vehicle's (UAV)- Capability



UAVs for Oil Spill Response Operations

UAVs can provide a distinct advantage during a spill response when compared to traditional methods of surveillance for certain scenarios. UAVs are an added tool in the surveillance tool box.

UAVs can range from rotary to fixed wing, long range high altitude to short range low altitude. UAVs can utilise multiple sensors including Visual (HD), Infrared, and Ultraviolet to support a response. Additionally, some UAVs can be used for gas monitoring.

- UAV providers are fully integrated into OSRL's response processes and workflows through regular exercises, training, and collaboration on procedures;
- For oil spill response operations, UAVs can keep personnel out of hazardous situations, provide efficiencies during shoreline surveys, support SCAT teams, and have potential applications for Inland and Offshore operations.
- An OSRL response specialist provides expertise on interpreting UAV outputs and directly supporting the UAV team to ensure effective mission support and valuable deliverables are produced for in-field teams and the Incident Command.



Photographs taken from a UAV

Outputs and Deliverables

- Geo referenced imagery, and video of the overflight
- Real time imagery and video transmitted to responders in-field
- Track logs of the UAV flight
- UAV overflight report (as required)
- Other GIS compatible products, and live streaming to a command centre may be available upon request, and will be subject to availability of equipment and personnel.

OSRL Call-Off Agreement

- UAVs can be mobilised through contacting the OSRL Duty Manager
- Response is on a best endeavours availability and is dependent upon obtaining permission to fly availability of the UAV suppliers to respond.
- Each UAV team comprises of an experienced UAV Pilot and Sensor operator and an OSRL response specialist

UAV Mobilisation and Response

To provide a UAV capability, OSRL has entered into strategic partnerships with UAV operating companies. Regular training and the standardising of response procedures/outputs helps to ensure a consistent approach is achieved during each incident.

Applications of UAVs in a response

- Shoreline clean-up assessment Technique (SCAT) team support (segmentation, determining scale of oil, form completion)
- Habitat mapping
- Booming plan development
- Site security
- Post treatment inspection
- Hazing wildlife
- Verification of oiling
- Improve offshore encounter rates
- Gas monitoring
- Salvor support
- Wildlife surveying
- Preparedness services (sensitivity mapping)
- Equipment and people tracking
- Long term monitoring
- Short range and long range missions

Benefits of utilising UAVs

- Provide access to hard to reach areas
- Provide a different perspective to ground surveys and other surveillance
- Lower cost relative to manned aircraft
- Variety of sensors can be used
- Typically require minimal space for launch and recovery (reach some places inaccessible to other aircraft) provide greater flexibility in-field
- Can package into easy to handle bags