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Case Study Wetland Mapping Project - Western States

Our survey team has extensive experience planning for and executing high resolution aerial surveys around the world from the US (including Hawaii) to Europe. The projects vary in size and scope from film acquisition, to large format digital photography and LiDAR surveys. More specifically, we have used our combination of high resolution stereo imagery and photointerpretation for wetland mapping in the north eastern US states.

In 2015, we applied this method of wetland mapping to a 430km route corridor for a proposed gas pipeline in the north eastern states. High resolution multispectral aerial imagery was captured during leaf-off conditions using a fixed-wing Cessna Stationair aircraft. Data was divided into a series of sub-sections and subjected to a variety of photogrammetric workflows to produce color infrared ortho-mosaics and triangulated block files along the route. The data were accurately georeferenced using ground observations and were utilized by Normandeau's photointerpretation team to undertake wetland mapping along the route.

We have also undertaken repeat habitat mapping surveys over an extensive area of the Everglades, Florida. For the past five years we have captured ultra-high resolution (2-5cm GSD) imagery of the site to map mangrove growth, classify vegetation cover and monitor the shift in brackish habitat as freshwater sheet flow is restored from the north. Pixel-based classification algorithms are used to quantify the change in coverage of different habitats year on year.

In Europe APEM's high resolution aerial surveys have been used extensively to carry out Phase I habitat surveys for route corridors and planned developments for the water, power and construction industries.

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