

FORM TITLE – Project Scope Development (PSD)

| | Description | Provide Comments |
|--------------------------------|---|------------------|
| Title | State of knowledge + capability for remote sensing for water applications | |
| Project Type | <input checked="" type="checkbox"/> State-of-knowledge <input type="checkbox"/> Problem Definition <input type="checkbox"/> Knowledge Generation <input checked="" type="checkbox"/> Knowledge Transfer <input checked="" type="checkbox"/> Knowledge Adoption <input checked="" type="checkbox"/> Benefit Realisation | |
| Problem | The water industry needs to understand changes occurring at large spatial scales, or in difficult to physically access locations and across various time scales. Climate change and rapid urbanization will increase the need for such ability. Due to expense and impracticality, the water industry increasingly needs to rely upon remote sensing. Hence, the water industry ideally needs access to on-demand remote sensing products (and guidance in their use) for decision support and planning, but also the ability to commission or undertake ad-hoc analyses. | |
| Background/Description: | Remote Sensing is the science of obtaining and interpreting information from a distance using sensors that are not in physical contact with the object being observed; however, this is a broad definition. The use of remote sensing for operational purposes in hydrology, and water resources, while not new, is a fast-growing field. However, remote sensing requires familiarity with an entire new set of technologies and expertise and needs to be adapted for application to management strategies; Given satellite imagery data accessibility and affordability is improving rapidly, it is timely for the water industry to learn more about this advanced capability and opportunities for its application to water resources and hydrological challenges, and potential operations. | |
| Objectives: | <ul style="list-style-type: none"> • Desktop summary of existing capabilities and tools currently available, investigating advantages and disadvantages of these technologies and their applications. • Guidance on technique or tool selection e.g. efficacy or applicability of drone data capture versus use of satellites. | |
| Scope/Deliverables: | This project captures the state of knowledge and share this information with members. New satellite capability is increasing the availability and quality of information available in Australia. Providing higher resolution data and greater coverage and frequency. How is this capability currently being used and by whom and how can this assist the water sector? | |
| Stakeholders | Melbourne Water | |

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| Investigative or Research approach | The research is a desk top study involving investigation and collation of national and international information. A critical review of literature and service providers technical information will be conducted, and a detailed report/guidance document will be published. The project team will be consulted about publishing the outcome of this work as an online Wiki style information hub. | |
| Indicative Funding required: | <input checked="" type="checkbox"/> Small (<\$100k) <input type="checkbox"/> Medium (\$100-\$500k) <input type="checkbox"/> Large (>\$500k) | |
| Duration/Start | <input type="checkbox"/> Short (<6 months) <input checked="" type="checkbox"/> Medium (6-18 months) <input checked="" type="checkbox"/> Long (>18 months) Start: March 2020 | |