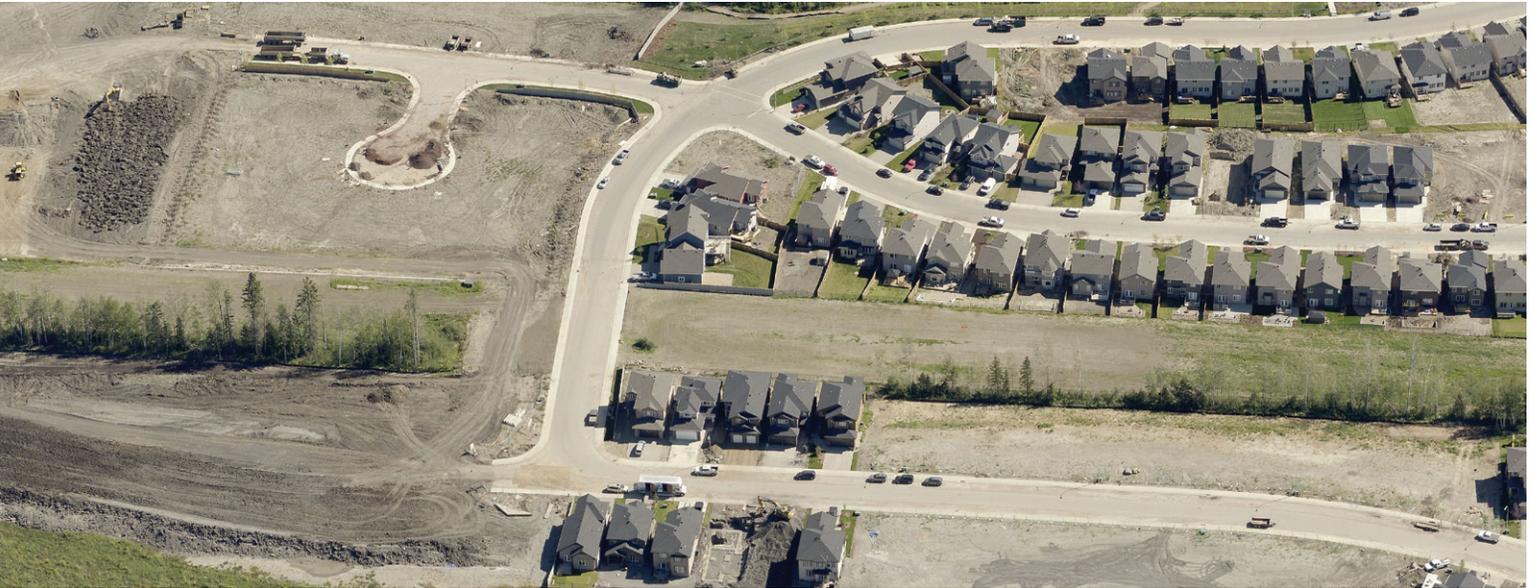# Leveraging Technology to Monitor Large Land Masses

The Regional Municipality of Wood Buffalo is going through a growth spurt that any city, county, state or province would envy.

Located in northeast Alberta, Canada, Wood Buffalo sits atop oil deposits that are arguably as large as those found in Saudi Arabia. As a result, the formerly quiet area is undergoing massive growth and development — think one-thousand building permits per month.

"The pace of growth is a double-edged sword," says Justin Ngan, Manager, Geographic Information Systems for Wood Buffalo. "Most cities would beg for this kind of economic development and investment. But there is a flip side to it all. That is you have to manage it — all 68,000+ km² (26,255 miles²) of it."

Central to helping Ngan and his team stay on top of the continual change is Pictometry imagery and analytical tools. As Ngan states, "Pictometry allows us to see every square mile of the region so that we can effectively address concerns and manage needs. Ultimately we're accountable to every resident of the region regardless if they live in Fort McMurray, one of the hamlets, or out in the rural hinterland."

Safety First

At the top of Ngan's list of concerns for the region is safety and Pictometry has helped him to address it. "Our geography and other factors make us vulnerable to wildfires. We have acres of boreal forests, long winters and a dry climate. Pictometry provides us with the images and information we need to make better and more informed decisions when dealing with emergency events," explains Ngan.

"The imagery gives us a clear understanding of the activity that is occurring in our region so that during a wildfire, we can use that information to understand risks to people and property and respond appropriately."

Equitable Assessments, Thoughtful Planning

Pictometry imagery is also utilized by Wood Buffalo's assessment team, helping to ensure that property and equipment assessments are current and equitable across the region.

"Pictometry is a very important tool for our department for a number of reasons," says M. Brian Moore, Director of Assessments and Taxation. "Wood Buffalo is truly unique in terms of its dependence upon property taxes. In fact, 84% of our regional revenue comes from property tax. That's more than double most municipalities. And it's particularly important given the rapid rate of growth and development we're currently undergoing."

As Moore explains, "When you have that kind of growth you have to invest a lot in infrastructure that will support the growing population and serve the needs of incoming industry in terms of more roads, more sewage, etc. We're at a place where we need to make significant budget commitments now just to stay ahead of the curve."

This increased demand on the property tax base requires the department to have the most robust property assessment and taxation system. For many of Wood Buffalo's needs, Pictometry is that tool.

Richard Baron, Manager, Assessment Branch for Wood Buffalo adds, "The area we're responsible for is so vast and some parts so remote that you can only reach them by plane. Much of the activity involving surface disruptions are to be self-reported by the responsible parties but it's not uncommon for reports to be filed late or simply missed. Pictometry allows us to see any changes that have taken place and ensures our assessments are current, accurate and truly reflective of what exists on a given parcel."

Baron also notes that while the imagery is helpful in adjusting evaluations up, it's also helpful in determining when they should go down.

He states, "Often private property values are negatively impacted by development. Pictometry imagery allows us to fully appreciate those changes and make any necessary adjustments on behalf of the property owner."

While many assessment departments would be overwhelmed by the increased workload brought on by the growth in Wood Buffalo, Moore says it's just the opposite for his department.

"Pictometry basically allows us to use our trained assessors more effectively. Where they used to go out and essentially hunt for changes, thanks to Pictometry they now go out knowing precisely what they're looking for. That saves us significant time and money. Add that to the additional monies we're picking up in assessments and Pictometry basically pays for itself and then some."

Responding to Community Needs

As happens in any community, residents often raise concerns. Sometimes it's about cars driving too fast on a stretch of road or too many cars parked on a block, sometimes it's about boundary lines and who's doing what on a given piece of land. In many cases, imagery increases our ability to understand and address our residents' concerns more efficiently.

"Residents call in to speak with our staff about various concerns. The beauty of Pictometry is that while we're on the phone with the resident we can call up an image of the area and actually see what the concern is. We feel good about being able to respond quickly and intelligently about issues and our residents feel good knowing that they don't have to wait very long to get a resolution."

Wood Buffalo's Public Operations Group also uses the images to make sure public resources, such as community parks and greenways, are properly maintained. Justin states, "With all the development that's taken place, it's important for us see the year-to-year changes such as the amount of turf coverage. There's a lot of work and building being done in the region and we need to understand the landscaping needs so that we can secure the appropriate contracts for mowing and maintenance."

Access to Imagery as a Means to Economic and Tourism Growth

Ngan and his team are planning to make their Pictometry images available via a public web viewer. Pictometry imagery could prove very useful in promoting investment opportunities to parties outside the region. "With the level of detail and currency of the images, it's very easy for investors to assess opportunities and gain a better understanding of the region. The hope is that by making the region visually accessible, we can draw more interest and activity," says Ngan.

Making images publicly available improves access to the vast array of natural hiking trails, camping spots, fishing locations and winter off-road vehicle playgrounds. "The region has so much more to offer than what you see and hear in the news. We hope that Pictometry helps us to showcase Fort McMurray as a great place to live, work, and play."

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