

WRANGELL- ST. ELIAS NATIONAL PARK AND PRESERVE

CENTRAL ALASKA NETWORK

Vegetation Monitoring Program

Summary Trip Report: Windy Lake Mini-grid

18 June – 27 June, 2008



Lead Author: E. Fleur Nicklen
Contributors: Kara Thies, Christina Thompson

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PURPOSE:

The purpose of this trip was to establish permanent plots for vegetation sampling at the Windy Lake mini-grid according to the Central Alaska Network (CAKN) vegetation monitoring protocols. We completely sampled the 17 points west of Jack Creek. Due to lack of time, flooding, and private property, 7 points were not sampled. Point 8 landed in Jack Creek and we completed only the grid point data for this point.

PERSONNEL:

Fleur Nicklen - crew leader, vascular plant composition/collection, plot/quadrat variable estimates, transect data

Kara Thies - non-vascular plant composition/collection, soils

Christina Thompson – plot photos, tree and sapling measurements, tree coring, transect data

ACCESS TO MINI-GRID AND CAMPING POSSIBILITIES:

The Reeves Field airstrip on the Nebesna River has long been washed out and is no longer usable. The Windy Lake mini-grid is still accessible via float plane. We originally planned to take a park plane on floats to Windy Lake, but we decided to take ATVs to our camp spot (photos 1 & 2) because it seemed unlikely the park would have a plane on floats and there was a remote possibility that Windy Lake would still be frozen after our cold spring. Near the end of the Nebesna Road an ATV trail starts that apparently goes to the Nebesna River. We did not go that far, but stopped before the second Jack Creek crossing that was between points 8 and 9 of the mini-grid. It is very likely that this ATV trail will not be an option in the future. Severe flooding occurred in July 2008, leaving 6 foot drop-offs in the trail. The trail might not be repaired because there is an ongoing lawsuit about the legitimacy of this ORV trail in the park. Even if the trail is repaired, I would not recommend using it. It is horrifically muddy and requires much pushing to get unstuck every 10 minutes. This is fairly unpleasant to do and not safe for gear, which is always on the verge of falling off the nearly toppling ATVs. But worst of all is the first Jack Creek crossing (map 3). Even when the water is moderately low, it is almost un-crossable and extremely dangerous. It took almost 4 hours to travel about 4 miles via ATV to our campsite.

Flying in to Windy Lake would probably be easier than taking ATVs. The downside to this option is that you will be on the edge of the mini-grid and access to points will be more difficult. Camping at Windy Lake near point 25 might not be as good as our camp spot on Jack Creek. The water is clear in Windy Lake, but the camping directly around the lake may be muddy. Thick alders lined the lake on the west edge and to the SW it got a little tussocky. The south end might be the best area to find camping. I should note that it may not even be possible to land on the lake in which point 25 falls. It may only be possible to land in the lake NE of this, which I did not see and cannot make any camping recommendations.



Photo 1. ATV loaded with our gear next to the dangerous Jack Creek crossing.



Photo 2. Good section of the ORV trail to our camp spot. We are about 2 west miles from the creek where we camped.

Our campsite was located just off the ATV trail and right next to Jack Creek between points 8 and 9 (photos 3 and 4, map 1). We had good access to water and loads of wonderful morels (photo 7)! Although we were within the mini-grid boundaries, most of the points closest to us were on private property (points 2, 3, 7, 8, and possibly 4). Because the history of issues between the park and private landholders, we felt very strongly that we did not want to install permanent markers on non-park land. So we were essentially on the edge of the mini-grid.



Photo 3. Looking north towards our cook tent on west side Jack Creek with Devil's Mountain in the back left of photo. Photo taken after the creek had risen.



Photo 4. Cook tent before the creek rose—note large gavel bar.

HIKING:

Hiking around the Windy Lake mini-grid is moderately brushy in mostly tall white spruce forest with patchy thickets of willow and alder. There are 3 strips of bog-tussocks in the valleys that are difficult to walk through (photo 6).

There are several trails that run through the mini-grid which help improve travel time. Heading NW on the main ATV trail, between points 9 and 14 is a trapping trail used by Vicki Penwell's husband, Lee. This trail is visible on the IKONOS image as a strip of birch trees (map 1). It takes you to point 20. Near point 20 there is a T in the trail; at this point the trail on either side gets pretty boggy. Heading west at the T takes you back to the main ATV trail and east takes you north of point 19 (map 1).

The creek we camped next to was initially crossable. It is a fairly deep (2-3ft), slow moving stream. I think even at its low level crossing the stream would be challenging, especially for shorter legged people. Mid-way through our sampling trip, after several days of rain, Jack Creek rose about 2 feet (Compare photos 3 and 4). We waited until our last day of sampling to attempt to cross it, hoping that it would go down. We waded in, but about a third of the way across, the water came up to our crotches and we decided not to cross. Submerging our backpacks seemed like a bad idea.

There is private land within the Windy Lake mini-grid. This is denoted on the topo maps as odd, little black splotches (map 2). On the Trails Illustrated topo map of Wrangell-St. Elias the private property is denoted by a highlighted rectangle. We decided to not do points that fell within this area, which is located on the SW side of the creek next to which we camped. Since we never managed to cross the creek by our camp, we never saw evidence of private land or encountered anybody. Apparently some of the private buildings have washed away in past floods.

WEATHER AND ENVIRONMENTAL CONDITIONS:

The weather at Windy Lakes was a mix of sun, rain, cold, hot, bugs, and wind. The first three days were clear and warm with highs in the upper 60s to lower 70s. The kind weather gave us a false pretense of what was to come. Persistent rain moved in for the following four days, bringing much cooler temperatures and fresh snow at about 5,000 ft. The rain was very unpleasant; it was impossible to dry anything out with the air temperature so cool. The final two days cleared up until the unpleasant hike out when the ATV broke down in the cold rain and mud. Mosquitoes and white socks were rampant during our stay at Windy Lake.

SAFETY CONSIDERATIONS:

Dangerous stream crossings and flooded ORV trails on the way to Windy Lake posed the greatest safety issues on this mini-grid. Although we did not personally use the ATVs, I was concerned for the people carrying our gear on the ATVs. There were many opportunities for the vehicles to roll over large tussocks and in deep mud pits. After dropping us off at the Jack Creek crossing, one ATV floated 15 meters down river until it finally got traction again. If

ATVs are used in the future, make sure those driving have plenty of experience. The second Jack Creek crossing (at our camp) is also potentially dangerous crossing on foot. The stream is not very fast-flowing, but it is deep and could easily carry someone away. It is not possible to ATV across this creek.

Bears are always a concern. Our campsite had very poor visibility. Open space for camping was limited, so our camp was a little too close to our cook tent. We heard a good amount of crashing at camp, but it was a high moose and beaver browse area and the noise always turned out to be one of these animals. A grizzly was spotted at the ATV trail head, about 4 miles from our camp, but we never saw it. We saw some bear scat, but most of it was old.

We were able to check in each day with our radios on Channel 7 to Thelma Schrank at the Slana Ranger Station. It was also possible to reach the Slana Ranger station by satellite phone.

PHENOLOGY OBSERVATIONS:

The vegetation at the Windy Lake mini-grid is dominated by tall white spruce with a patchy willow understory. Permafrost level is fairly shallow at most of the plots. In the valleys are tussock bogs with a few black spruces. There were a couple sedges that were not flowering in the wet areas that made distinguishing different species difficult. In the forest plots, *Linnaea borealis*, *Orthilia secunda*, and *Saussurea angustifolia*, and *Pedicularis labradorica* were just beginning to bud. *Ledum groenlandicum*, *Vaccinium vitis-idaea*, *Pyrola grandiflora*, *Rosa acicularis*, *Mertensia paniculata*, *Lupinus arcticus*, and *Stellaria longipes* were flowering. *Salix spp.* and *Arctostaphylos rubra* were beginning to fruit. On average we had between 22 and 23 vascular species at each point. We visited this mini-grid in mid to late June and the phenology was advanced enough that I had little trouble with species identification.

GENERAL NOTES ON PLOT-WORK AND PLOT OBSERVATIONS:

I collected 58 vascular plant specimens from the Windy Lake mini-grid; I began on collection number EFN-00-001 and ended on EFN-08-058 (Table 1). Kara collected 57 nonvascular plants (KT-08-001 to KT-08-056, KT-08-519) (Table 1). The number of the first photo taken at Windy Lake was 100-0003 and the last number was 100-0237 (Table 1). Kara collected soil samples from every plot that we fully sampled. Most plots only had either a mineral or organic soil collection, but at plots 18 and 22 Kara collected both mineral and organic soils. Trees were present in all fully sampled plots except for points 14 and 17. Every sampled plot except for point 25 had saplings. Christina cored trees in all sampled plots except for 22 and 25.

Table 1. Collection series for the Windy Lake mini-grid.

Collector	Identifier	Series
Nicklen	Vascular plants	EFN-08-001 to EFN-08-058
Thompson	Photos	100-0003 to 100-0237
Thies	Nonvascular collections	KT-08-001 to KT-08-056, KT-08-519

ACTIVITES:

Wednesday, June 18

At 7:00am in Copper Center we loaded a truck with our gear and food. We picked up a trailer in Glennallen and then headed to Slana with Eric Veach and Tom Johnson. We arrived in Slana around 10:30am and picked up 2 six-wheelers. We met Vicki Penwell, who advised us about the private property and her husband's trap line trail (described under Hiking), and Thelma Schrank, who we checked in with via radio each morning while out in the field.

After loading the six-wheelers onto the trailer, we headed out on the Nebesna Road. We stopped by the Freed property and attempted to help Lil (invasive plant person) who had locked her keys in her car. We arrived at the ORV trail at 12:40 and ate lunch. Eric and Tom took off on the six-wheelers with our gear and we walked behind (photo 2). The first Jack Creek crossing was tricky. One plant press fell into the creek, but luckily was retrieved and did not get too wet (it was wrapped in a trash bag). Eric and Tom had to take the ATVs upstream to avoid a swift spot where the trail crosses the creek and we carried the gear through willow back to the trail. Eric and Tom sort of floated the ATVs back to where the trail crosses. After this first crossing, the trail deteriorates. It is riddled with many bottomless mud pits that have to be driven around on very uneven tussock bog. We arrived at the second Jack Creek crossing at 5pm and set up camp.

Weather: The weather was spectacularly clear driving to Slana; we had terrific views of all the mountains. As we headed out on the ORV trail there was a very light drizzle.

Thursday, June 19

On Thursday we sampled points 5 and 10. It was a little bit of a bushwhack to point 5. It is best to stay away from the edge of the creek where it gets brushy and boggy at times. Point 5 is located in a lovely open tall spruce forest with quite a few dead trees. Since this was our very first plot, it took nearly 4 hours. It was an easy walk up and over a low hill in nice open woodland to point 10. We didn't start point 10 until 3:30 and finished at 6:50. We attempted to do a bunny plot, but had some trouble with the PDA. The data on this first bunny plot may not have been saved.

Weather: It was a mostly sunny warm day with ample mosquitoes.

Friday, June 20

At 8:30am we headed out on the ORV trail and at the small bridge we left the trail and headed NE to point 16. We arrived at point 16 at 10:00. I had to use the antenna to get satellites for the GPS unit. 16 was fairly thick, brushy plot. We finally finished at 2:30, ate lunch and headed to point 21. We started sampling at 3:30 and finished at 6:30. Point 21 is located on the east edge of a boggy stream valley with moderately steep, dry slopes to the east and west. We did a bunny plot after finishing the plant work. On our way back to camp

we navigated to points 14/15 and then took the trapping trail back to the ORV trail. We were back to camp at 8:45pm.

Weather: Sunny and warm.

Saturday, June 21

On 21 June we completed plots 20, 25, and 24. At 8am we hiked up the ORV trail to the trapping line up to point 20. After point 20, we walked to point 25, which is more than half in a lake. We ate lunch before beginning 25. Since it was a relatively warm day, I went shoeless into the lake and installed the center monument in about 1 ft of water (photo 5). It was a wet year, and it is possible that in the future the center will not be under water. This point had interesting sedges, grasses and aquatic forbs.



Photo 5. Fleur putting in the point 25 center monument.

At 4pm we started point 24. This was a very alder-rich point and it took us until 7:30 to finish. Heading back to camp it began to rain—the showers and sunlight made a beautiful rainbow highlighting the bright trees and dark mountains (photo 6). Unfortunately, we took a trail we thought headed towards camp, but instead took us out of the mini-grid and through a fairly unpleasant bog. We turned around and found Lee’s trapping trail and finally got back to camp at 9pm.



Photo 6. Sunlight mixed with our first showers. This is a good photo of some of the boggy areas that are in the valleys of the Windy Lake mini-grid.

Weather: Sunny and warm in the morning. By late afternoon it clouded over and we had showers.

Sunday, June 22

Since Saturday was a fairly long, rough day, we did two close points on Sunday— 12 and 13. To get to point 12 we headed out the main trail at 8am, turned right (S) at the little bridge and then took another old meadow-y trail to the left (NE) until it ended in alders. We headed up the hill until we reached point 12, which was in a nice open tall spruce forest with a SE aspect facing the Nebesna River. When I went to get the center point, the Trimble said low battery and shut down. It had given no indication of low battery previously. I recorded the center point using the Garmin. We finished 12 at 12:20pm and walked to point 13, which we finished at 4:30. We did a bunny plot. We were back to camp at 5:30. Once back at camp I tried charging the Trimble with the camcorder battery, but it would not let me get past a page

that wanted owner information, nor could I enter any such information. We had some tasty morels this evening (as well as other evenings) (photo 7).



Photo 7. One of the many morels found in the alder thicket near our campsite.

Weather: It rained all Saturday night and into Sunday morning. It was cool and moist in the morning, but did not start raining hard until the afternoon. High winds also picked up in the afternoon. Temperatures dropped down into the upper 40s/low 50s.

Monday, June 23

This morning I could not get through to Slana via radio, so I called in with the satellite phone. I also called Josh Scott, the GIS specialist at WRST, to see if he could help me with the Trimble problem. He wanted some time to investigate the issue, so I was scheduled to call him back in 1 hour. Meanwhile we headed out in the rain to point 23. At this point we got word that the Trimble was not fixable and that Josh, Eric, and Pete Dalton (ranger) were willing to come out and deliver a new Trimble to us. The plan was for us to meet them between 6 and 7pm, about two miles up the trail. We had just enough time to do one more point before slogging up the mud pit of a trail to meet these guys. We completed point 22, which was in a nice open bog with a couple small black spruce mixed in with the white spruce. After this point we essentially ran (since we thought we were late) down the trail that runs just north of point 19. We passed the intersection with the trapping trail and continued straight along this boggy trail to the intersection with the ORV trail about a mile west of the mini-grid. Here we dropped our gear and sprinted (with several dives into mud pits) to where we had planned to meet the Trimble bearers. When we got to the spot, they were not there. It was 7pm and I could reach no one via sat phone. We thought we had missed them

and turned back to camp. We got back at 8:30pm and soon heard ATVs. Josh, Eric, and Pete arrived. Unfortunately, when they found us we were very tired and very wet. My hand shook as I reached for a piece of cheese Eric offered me (not from cold as it appeared, but from carrying the heavy gun), and soon rumors were circulating around WRST headquarters that we were hypothermic and starving. They offered to ATV the three of us to the Freed cabin for the night and then bring us back. It was good that we declined this offer because that night the creek rose substantially and we may not have been able to get back. They also built a fire for us and we warmed up a bit. They headed out that night around 10pm.

Weather: Cold rain all day. Fresh snow at 5,000 ft. Rain persisted through evening. The river rose about 2 feet (photos 3 and 4).

Tuesday, June 24

On Tuesday we completed points 15 and 14. We had a late start this morning because of our late night with Eric, Pete, and Josh. Point 15 was a very thick plot with spruce and small birch. Next we completed point 14, which was in a drainage. We also did a bunny plot here. It was too late to do point 9, so we headed back to camp at 8pm.

Weather: Rained very hard in the morning. When the clouds began to break in the afternoon, we could see more fresh snow on the mountains. Temperatures warmed up a bit also.

Wednesday, June 25

Today we had planned on doing 3 points on the other side of Jack Creek towards the Nebesna River, but since the creek was so high, we changed our plans. Instead we completed 17, 18, and 19. Point 17 was in a sedge meadow between two small lakes. We called in several ravens at this point; the only ravens we saw at any mini-grid this summer. We ate lunch and walked to point 18, which was fairly nondescript and un-diverse. We finished 18 at 5:15pm. Although it was getting later, we wanted to get 19 done to finish the row we were on. 19 was a nice very open spruce forest/bog with a beautiful view of the mountains east of the Nebesna River. We got back to camp using Lee's trapping trail and the ORV trail at 9pm.

Weather: Mostly sunny.

Thursday, June 26

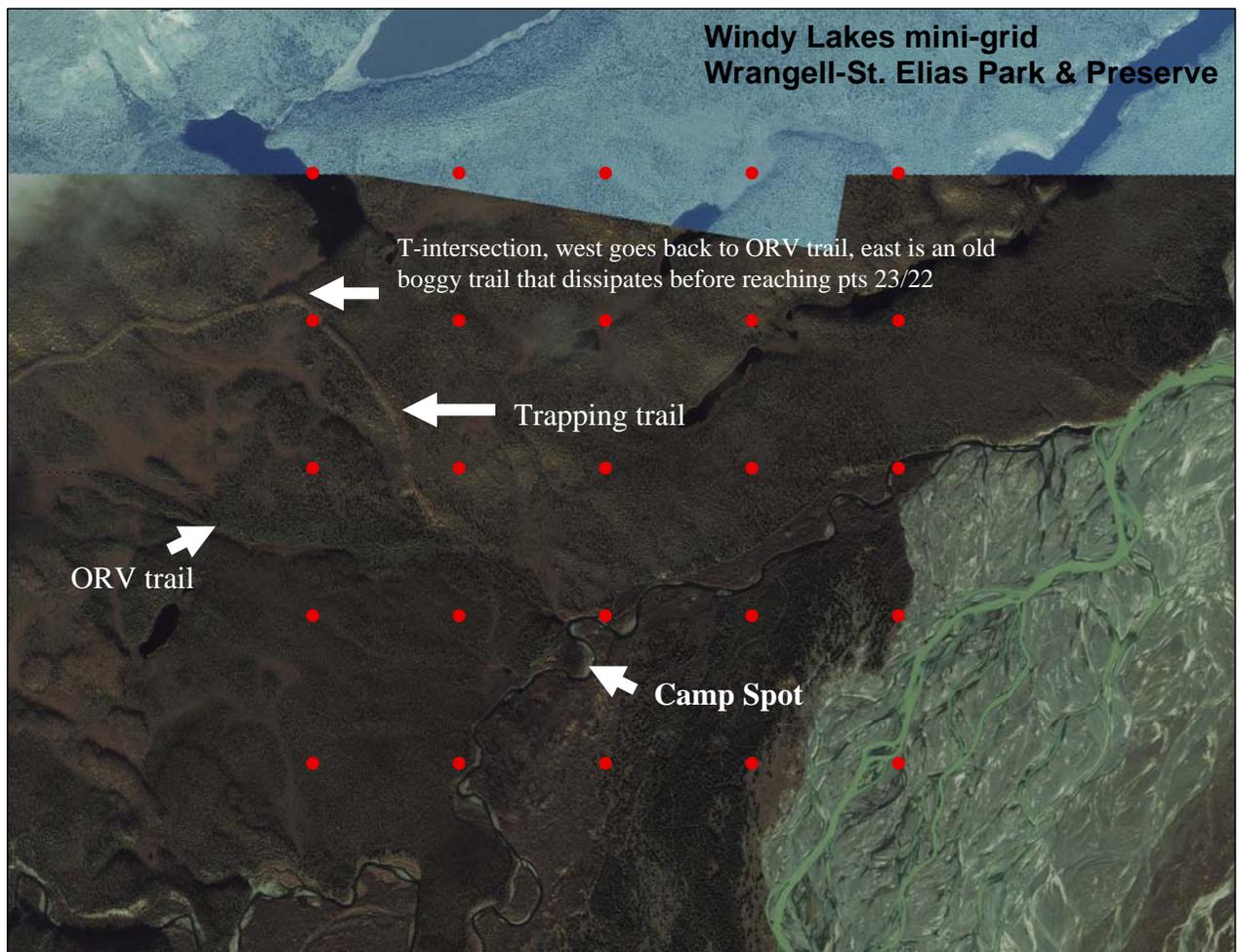
Again we planned on doing points 1, 6, and 11, but the creek was too high. I attempted to cross, but it would have been well over my waist if I had gone further. Submerging the backpack in water seemed like a bad idea. Instead we did point 9. We checked out point 4, but it was on the other side of the creek and point 8 was in the creek. We did a grid point for point 8. We got back to camp at 2pm and called to see if we could be picked up earlier the next day.

Weather: Sunny and warm. Thunderstorms in the afternoon and rain (photo 6).
Temperatures also dropped and it was very cold at night.

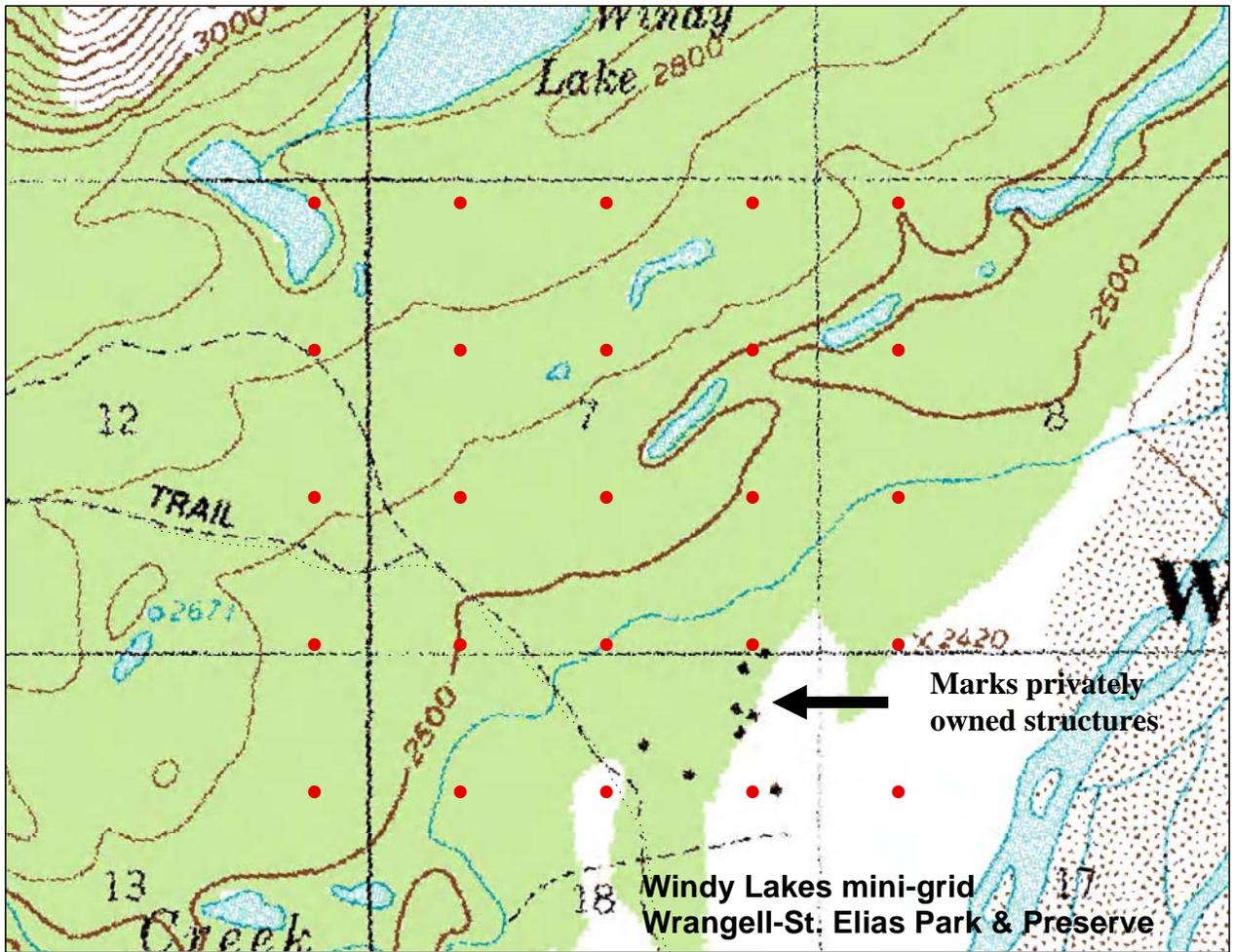
Friday, June 27

Eric and Pete left Copper Center around 5am to come pick us up. They arrived around 10:30am and we loaded up our gear on the ATVs. Again the trail was muddy and the vehicles frequently had to be pushed. At some point the soil probe fell off Pete's ATV. We walked back a good ways looking for it, but never found it. Just before the dangerous Jack Creek crossing, one of the ATVs died and some time was spent trying to get it running again. The crossing was scary, but luckily no one rolled and no gear was lost. We finally got back to the car and arrived in Copper Center at 7pm.

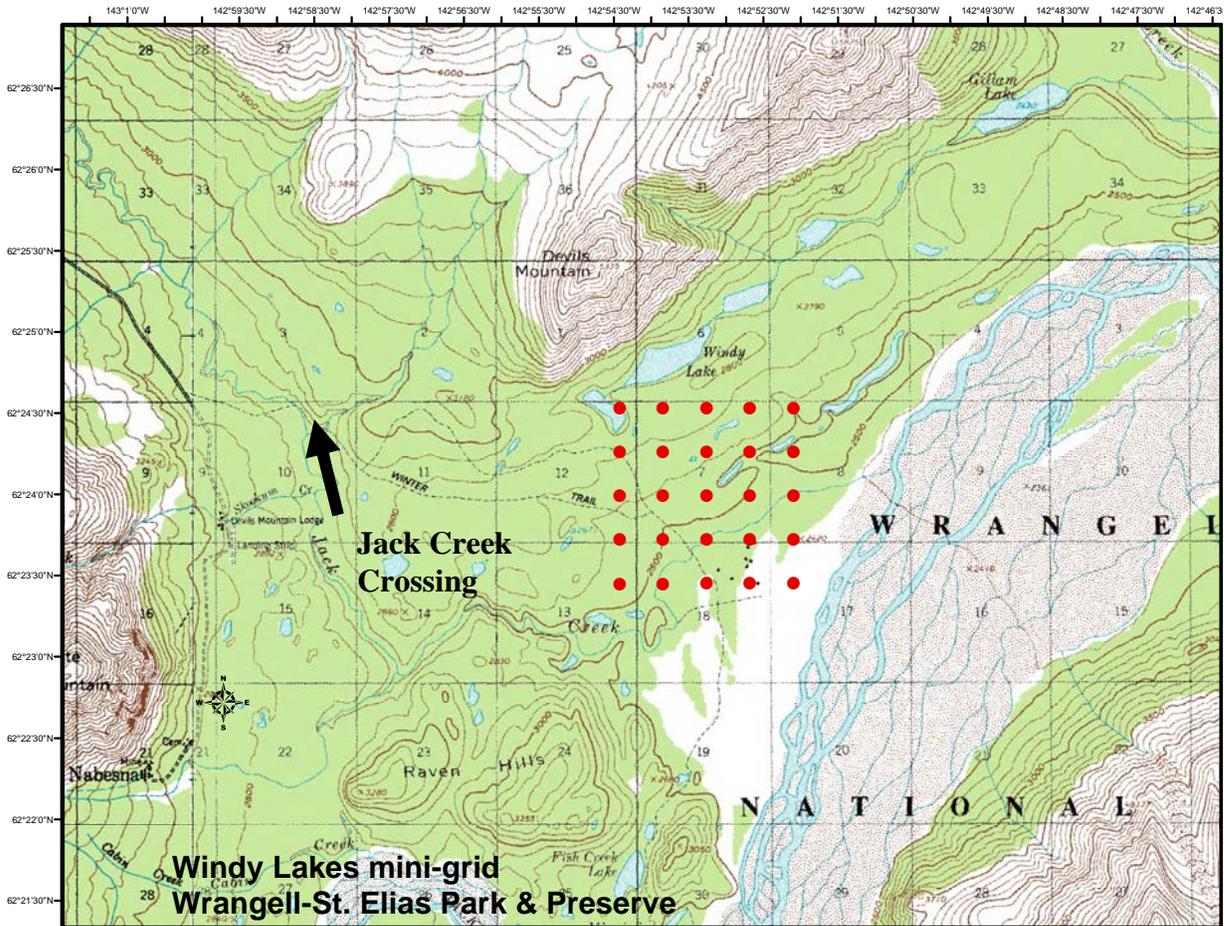
Weather: Rain and drizzle all day.



Map 1. Ikonos image of Windy Lake mini-grid.



Map 2. Topo map of Windy Lake mini-grid. Note private buildings.



Map 3. Topo map of Windy Lake mini-grid. Note dangerous Jack Creek crossing.

CONCLUSIONS AND FUTURE CONSIDERATIONS:

In the future I would consider flying into Windy Lake rather than taking the ORV trail (which may no longer exist anyway). If ATVs are used, make sure the drivers are very experienced and you have adequate straps to hold down the gear. I would also suggest acquiring more information about the private land between the creek we camped on and the Navesna River.