

BOARD OF COMMISSIONERS

SNY ISLAND LEVEE DRAINAGE DISTRICT

ANNUAL NEWSLETTER

2011



There have been many times during the course of conversations with people from other parts of the country either in person or over the phone that when they hear that we're from "the *Sny*" there is a short pause, then the inevitable question of

"what's a *Sny*"? And the reply is, "the *Sny* Island Levee Drainage District", followed by the explanation that "*Sny*" is French for "*crooked channel*". How could one have chosen a better description for the *Sny*? But from its inception as a dream of Charles Clark to the reality that it is today, it represents so much more than "*crooked channel*". It's a way of life, a commitment, a vision, a work in progress, a legacy, a trust to be passed on. It brings us to repeating stories time and time again of events that transpired in years past. Yet we never tire of hearing them. There's something about this thing called the "*Sny*" that brings out our instincts to protect, preserve, nurture, improve and develop. Each year at this time, we take a few moments to rest, relax and reflect on the year that was in the *Sny*. Then, as has been the case during the course of our history, we move ahead to face new challenges. This is what we do. It's who we are.

NOT ANOTHER FLOOD!!!

2011 started with flood predictions on the Mississippi River from the National Weather Service that were beyond serious. The runoff from the melting of an unusually heavy snow



pack north of us combined with predicted heavy rain events put us on a collision path with yet another flood fight in the Sny. The National Weather Service and the Corps of Engineers began alerting us late in the winter that the conditions were set up for a 2011

flood event that could surpass flood elevations in 2008. Officials from I.E.M.A., the Pike County Sheriff's Department, and both the Adams and Pike County Emergency Management offices worked with the Sny to monitor flood forecasts as well as make early preparations for what was predicted to be a serious flood event. The District's flood fighting team met at the Sny Business Office for a status report on March 25. River conditions that had been forecast for the area were reviewed by David Greenwood, the Pike County Emergency Management Coordinator. Plastic placed on the river side slope of the levee in the East Hannibal area in 2010 to prevent through seepage was repositioned and secured with new sandbags. All stayed alert to daily river conditions upstream in anticipation of yet another flood event. The good news was the flood never materialized.

However, we did experience high river stages which meant the Sny gravity outlets to the Mississippi remained closed, thus dictating the operation of the District's three pumping facilities. The seepage resulting from high river stages coupled with spring rainfall meant running the District's pump stations on a 24 hour per day, seven day per week basis through much of the spring and early summer. Even though the predicted flood never materialized to the extent forecast for our area, our pumping operations continued throughout the summer. With the onset of the summer's dry weather, we were able to totally shut down our operations at both Pump Stations 1 & 3A and drastically reduced pumping hours at Pump

Station 4 by mid-August. In fact, for the first time in more than three years, we were able to open the gravity outlets at Pump Station 3A allowing the Sny to flow to the river for an extended period. They remain open today. In noting the pumping operations from a historical perspective, from 1996 thru 2007 (which included two flood years), the

average annual pumping hours in the District was a little over 6,800 hours. In 2011 we pumped over 14,000 hours. Diesel fuel costs at our pump stations for 2011 totaled more than \$1,100,000.00 with more than 351,000 gallons of fuel purchased. Customarily, we top off our fuel tanks for the winter. The District's three pumping stations have a storage capacity of about 137,000 gallons. We would need to purchase 100,000 gallons of diesel fuel to top off the tanks this year. Currently, our finances will not allow for that.



Pump Station #1 - Hull



The increased amount of operating hours also translates into increased wear and tear on the pumps. A malfunction in pump #2 at Pump Station 1 led to major repairs to it prior to our 2011 pumping season. The unit was pulled from the pump bay and moved to Awerkamp Machine in Quincy for repairs and re-conditioning. The pump was back in

service by March 4 with repair costs totaling more than \$71,600.00.

LEVEE CERTIFICATION/MAINTENANCE

From March of 2010 through mid-October of 2011 the Sny's field staff was busy attending to maintenance work on our main stem river levee in Reaches 1 & 3. The added attention given to the river levees came about to meet more stringent Federal standards to maintain the Sny's 100-year flood protection certification. As a result of the devastation caused by Hurricanes Katrina and Rita in the gulf coast region of the country, the Federal government initiated new inspection procedures and strict enforcement of standards for all river levee systems throughout the United States. In addition, a detailed listing of all levee systems was required to be compiled in a new National Levee Database. In 2008, the Sny was required to sign what was known as a "PAL" (Provisionally Accepted Levee) agreement which gave the District until November of 2010 to provide sufficient data to the Federal Government to re-certify the Sny levee system for 100-year flood protection. By signing the agreement, the

District would retain its 100-year flood protection status while preparing the appropriate documentation for re-certification. Had the agreement not been signed, the District would have been immediately de-certified.

As a result, all homes within

the District financed by loans backed by the Federal government would be required to purchase flood insurance and at much higher rates. Construction opportunities within the District would be severely restricted. The District's river levee maintenance programs would be severely curtailed, if not stopped altogether. More stringent Federal guidelines for maintenance of drainage ditches could potentially be implemented. The District could be forced to lower the elevation of its main stem river levees. As one can see, the loss of the District's 100-year certification would be devastating.



Throughout 2008 and 2009, the District was involved in recovery efforts from the '08 flood event. Levees were re-stored to their certified elevations, plastic and sandbags cleaned up,



350L Loading Volvo Quarry Truck
Lock & Dam 22 Dredge Disposal
Site

roads and ramps restored along with general clean-up. In surveying the levee system at the completion of the recovery from the flood, slope deficiencies were noted by the District's engineering firm, Klingner & Associates that would lead to the de-certification of the levees in Reaches 1 & 3. This slope degradation was due to a loss of material from the '08 flood event. Even though it was the Sny's position that correcting the slope deficiencies was a Federal

responsibility, the terms of the PAL agreement meant not enough time was available for the work to be completed by the government. The decision was made for the Sny to move forward to get the job done within the prescribed Federal timeline. Sand was needed on the land side slope of the levee throughout much of Reach 1 as well as in Reach 3. In March of 2010, the District began moving sand from the District's dredge material disposal site at Lock & Dam 22 to deficient levee sections in that immediate area. Two, 40-ton off-road quarry trucks were rented from Rudd Equipment in St. Louis to move the material. Upon noting the success in using two of the trucks, a third was added to the project. The District's 350L and 324DL excavators operated by District staff were used to load the trucks which were also driven by District staff.



Quarry Truck Off Loading – Reach 1

As work on this phase of levee maintenance continued, the District received word from the Rock Island Corps office that significant dredging was needed on a segment of river channel

south of Hannibal known as “Cave Hollow” in order to keep barge traffic moving through the area. For years, the Sny had been working with the Rock Island staff to develop long term dredge disposal sites throughout the District. One of those sites in the area of what is locally known as “Mathena’s Crossing” in Reach 1 was chosen to receive the material. Through the cooperation of officials from Levee Township, numerous



Mathena’s Crossing Dredge Disposal Site

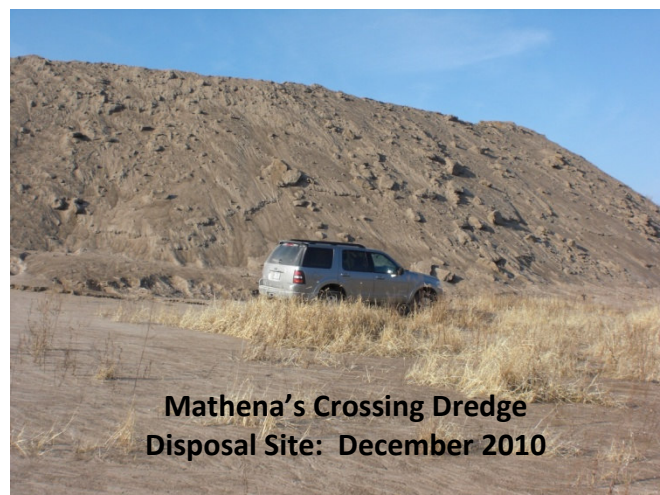
federal and state agencies, the Sny and the local landowner, Bob Richter, the site was authorized. The Corps dredge Goetz began working the latter part of October in 2010, running 24 hours/day, seven days/week for about three weeks to open up the main channel



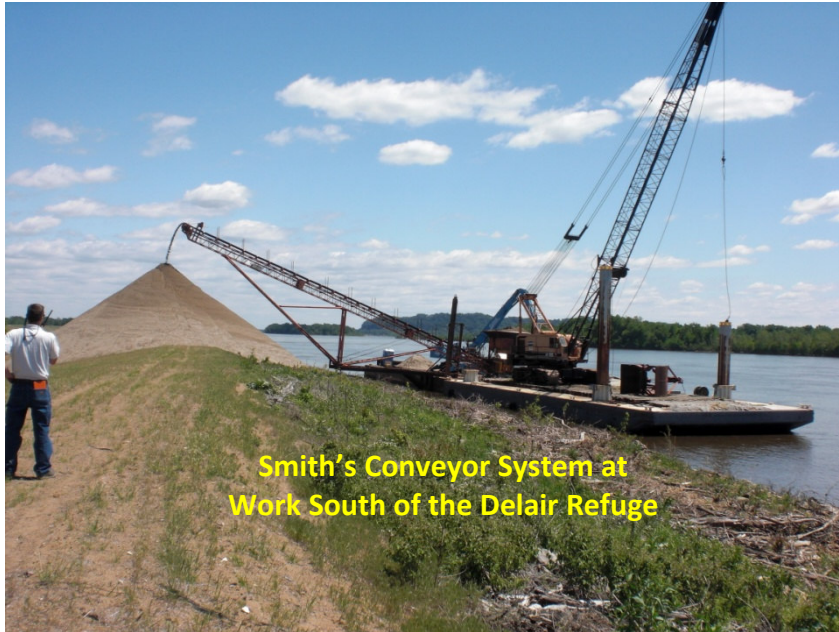
**Sand Placement
Reach 1 River Levee**

and side chutes. It was estimated that the Sny received approximately 350,000 cubic yards of sand for its use. As luck would have it, the spoil site for the material was right where it was needed. Upon finishing hauling the sand from the Lock & Dam 22 site, the loading operation moved to the Mathena’s Crossing site. Corps and Sny equipment worked

side by side as material was brought in from the dredge and loaded out on haul trucks, all at the same time. This work continued through July 13, 2011, when the project in Reach 1 was completed and the entire fleet of trucks, bulldozers and excavators were moved to begin work in Reach 3.



While work on Reach 1's river levee continued, preparations were underway on maintenance work that was required in Reach 3. Through on-site survey work, Klingner & Associates determined the appropriate amount and location for sand needed to meet certification requirements in Reach 3. A minimum of 68,500 cubic yards of sand would be necessary to



Smith's Conveyor System at Work South of the Delair Refuge

meet land side slope requirements. The District looked for land side borrow areas for sand in Reach 3, but to no avail. Dredge material spoil sites like those utilized in Reach 1 (Rock Island Corps District) to provide the sand for necessary slope maintenance did not exist in Reach 3 (St. Louis Corps District). The absence of such sites was due to differences that exist between channel maintenance methods and

equipment in the Rock Island Corps District and those in the St. Louis Corps District. Completion of the work by the end of December, 2011 was critical in order to get necessary

documentation to FEMA to meet a March, 2012 deadline. The District contracted with Smith Quarries in Louisiana, Missouri, to provide the minimum amount of sand necessary. Mike Christensen and the staff at the quarry developed a conveyor system to off-load sand from barges loaded with material dredged from Smith's existing permitted dredge sites. Using GPS coordinates, the



Off-Loading Barge – Gilgal Landing

sand was placed at the most strategic locations to facilitate getting the sand where it was most needed along the Reach 3 main stem river levee from Kiser Creek south through the



Delair Wildlife Refuge Site

Delair Wildlife Refuge. Seven off-load sites were chosen. In order to have an adequate amount of sand on hand to facilitate slope work in Reach 3, this stockpiling process was initiated at the same time slope work in Reach 1 was being completed. On May 16, Smith began moving sand to the southern most Reach 3 site just south of the Delair Wildlife Refuge. One of the Sny's excavators and a bulldozer were moved into Reach 3 with Smith's

equipment to assist with the efficient stockpiling of sand. Once the appropriate amount of sand to complete work in one area was stockpiled, the operation moved to a new location. By mid-July, work on the Reach 1 levee was complete. Having moved the three quarry trucks, an excavator and a bulldozer, we began moving sand from stockpile sites for slope maintenance in Reach 3. Smith completed delivery of sand to the last stockpile site on October 7. The District finished the placement of sand on the levee slopes the week of October 10.



**Sand Being Dumped
on the levee slope in
the Snyder's Landing
Area of Reach 3**



**Finished Levee
Slope – Snyder's
Landing**

As this newsletter is being completed, our engineers continue to gather appropriate data for submittal to FEMA by March, 2012 at which time we hope to receive our recertification.



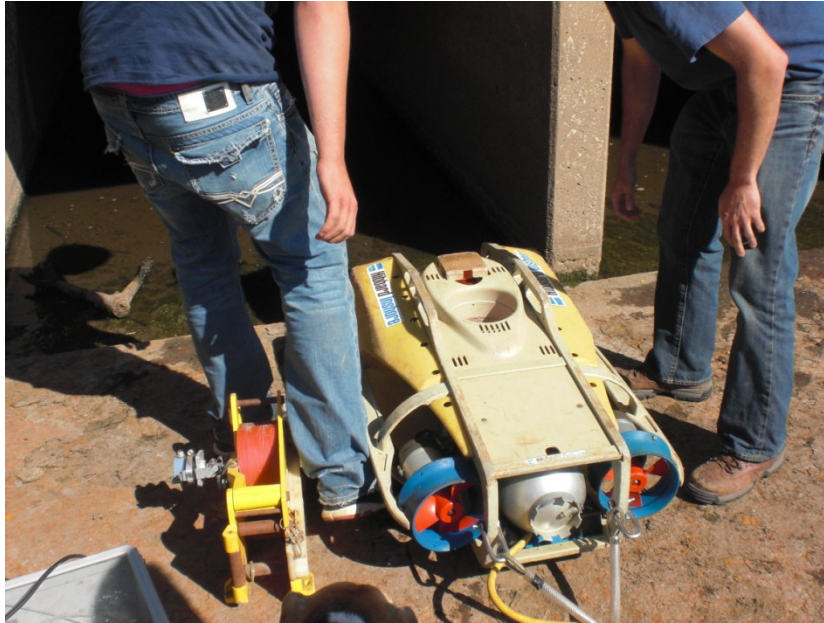
The top left image shows a Volvo quarry truck hauling sand for placement on the land side slope of the main stem river levee running parallel to the Kansas City Southern Railroad as it crosses into



Illinois across the river from Louisiana. The top right image is a shot of the levee with sand having been dumped on the slope for re-shaping. The image at the left is that same section of levee with a finished slope on it.

New inspection regulations that went into effect included the requirement to have all aqueducts inspected. The District has nearly 1.5 miles of aqueducts going under the Hadley McCraney, Kiser Creek and Bay Creek/ Six Mile Diversion channels. In addition, the gravity outlets to the river at Pump Stations 3A and 4 had to be inspected. Since the aqueducts allowing the Sny to flow under the Hadley McCraney and Kiser Creek Diversion Channels are set at a level grade, Klingner & Associates was able to complete the inspection by sending

two of its technicians in them to visually review their conditions. The aqueducts at the pump



stations as well as those draining the Pleasant Hill and Kinderhook "V" areas are basically full of water year-round. These areas were inspected by an underwater device ("the yellow submarine") that recorded video of the condition of the interior of the drains. The results of the inspections were then turned in to the U.S. Army Corps of Engineers Rock Island Office. All of the Sny aqueducts passed these particular inspections.

As many of you may recall, during the height of the 2008 flood event, the main stem levee in the area of the '93 break site in Reach 1 had significant slope stability problems due to a poor quality of material in the levee coupled with seepage from the river. The decision was made to remove the poor slope material replacing it with clean sand hauled to the site from Reichert's sand pit in Fall Creek Township. The area was then tiled to catch the water and drain it off the levee to the toe before it reaches the levee surface. The tile worked perfectly. With the predicted approach of yet another flood in 2011, the decision was made to install drain tile in yet another section of levee with severe seepage issues. The levee section in question known as "the Horseshoe" in Fall Creek Township had posed similar problems in past flood events, so the decision was made to tile the area to alleviate seepage concerns. Greg Uppinghouse was contracted to plow in 3,100' of 6" drain tile in that particular section of levee in late April. As river levels began to rise, the tile worked perfectly, picking up the water in the levee cross-section and draining it off before it could get to the levee surface. This process proved to work so well that additional tiling is schedule for levee sections from Kiser Creek south to Snyder's Landing and from U.S. 54 south to the Kansas City Southern Railroad prior to the spring of 2012.



Tiled Levee Section
"Horseshoe Area"
Reach 1



As has been noted earlier in the newsletter, since hurricanes Katrina and Rita the Corps of Engineers has been following a path of strict adherence to the guidelines for levee maintenance and upkeep. In addition, another level of inspection called a “periodic” inspection has been added to the Corps levee review process. The “periodic” inspection is a much more detailed, in depth walking tour of specific segments of the levee & drainage district. Standards for proper levee design,

construction and maintenance are followed to a tee. A specific issue that has evolved throughout the Rock Island Corps District from the inspection process is called “levee encroachment”. Farming too close to the levee toe, within 15’, is now being written up as an “unacceptable” rating. Instances of this were noted by the Corps throughout the Sny. We have appealed to the Corps to no avail that we have not witnessed any levee degradation as a result of this practice. It is our intention to work with all of our landowners and tenant farmers to resolve this issue to the benefit of all. In the meantime, we ask that farming practices be maintained at least 15’ off the toe of the levee. We would also caution you and your contract sprayers to be extra careful when spraying herbicide along District levees. Overspray killing the grass within the 15’ area off the toe will also lead to an “unacceptable” rating for us.

DRAINAGE SUPPLIES



As you all are aware, we continue to maintain a large inventory of galvanized and polyethylene drainage tubes at the Sny office. We also have access to a wide variety of accessories

including water control structures, flapgates, bands, tees and elbows that you might need in your particular application. Our staff is always eager to assist you with your drainage supply needs and provide you a competitive quote on whatever equipment your particular situation might call for. In this past year, we sold 7,080’ of drainage tubes of all shapes and sizes to meet your needs.

BRUSH CONTROL PROGRAM

Another very successful program that continues year after year is our brush control program. If you have a need for herbicide to control brush along a “district ditch” that runs through your property, please give us a call. We will provide the herbicide to spray the brush if you will apply it. This past year, the District spent over \$5,000.00 on “Crossbow” supplied to local landowners to help control brush on these types of “district ditches”.



FROM THE LEGAL PERSPECTIVE



In our 2010 Newsletter, we reported that the Norfolk Southern and Kansas City Southern Railroads had challenged their respective assessments resulting from the District’s 2008 re-assessment process. At that time, the Sny had prevailed over the railroad challenge at the Federal District Court level in Springfield. The railroads appealed the District Court decision to the 7th Circuit Court of Appeals in Chicago. The 7th Circuit rendered a decision that from our perspective had mixed results. The 7th Circuit ruled that the railroad assessment be remanded back to the District Court due to a lack of enough information from the Sny to justify the railroads’ new assessments. At the same time, the railroads requested that the Court direct the Sny to assess the railroads at the same benefit level as agricultural ground. The Court denied the railroad request stating that the District had the right to assess the railroads for benefits gained and that railroad benefits are not the same as those of agricultural land. The issue continues at the Federal District Court level in Springfield.

In April, the District petitioned the Circuit Court of the 8th Judicial Circuit in Pittsfield to approve a special assessment to repay money borrowed to finance existing District debt, complete various river levee and sedimentation basin projects and purchase various pieces of equipment and a storage building. Following a series of public meetings and other communication from landowners, the District filed an amended petition to the Circuit Court of the 8th Judicial Circuit in Pittsfield seeking the Court’s approval to borrow up to \$5,853,916.09 to finance the repayment of money borrowed to complete levee maintenance work and pump station repairs as well as pay other debt obligations, professional fees and interest charges associated with the loan repayment over five years. Out of several hundred landowners, two formal objections were filed. One local landowner secured legal counsel and appeared at a hearing in front of Judge Dianne Lagoski on October 24 in Pittsfield challenging the District’s petition. Judge Lagoski ruled in favor of the District on all counts and directed that an assessment roll be prepared to finance the repayment. The District is currently working with our computer programmers and other consultants to develop the assessment roll. Upon its completion, each landowner will be mailed a notice outlining the details of the special assessment.



FLOOD PROTECTION – NEW ORLEANS, LOUISIANA

The Commissioners and Superintendent Reed attend the annual meeting of the Mississippi Valley Flood Control Association held in New Orleans, Louisiana in December. The meeting allows for continued interaction with drainage officials from the Sny south to New Orleans as well as Congressmen, Senators and

officials from Corps headquarters in Washington, D.C. who attend. Last year and again this year we were able to tour work done on the \$14.6 billion hurricane protection system in New Orleans that we've all heard about in the aftermath of Hurricanes Katrina and Rita. In 2010, we toured the construction of the massive concrete floodwall protecting the city. This year, we were able to tour what has been called the largest pump station in the world as well as other pumping facilities and flood gate projects. The following images are of the \$1 billion pumping station constructed to dewater the greater New Orleans area should a hurricane occur. This facility is equipped with eleven pumps, each capable of pumping 780,000 gallons of water per minute. Each pump is driven by a 5000 horsepower Caterpillar diesel engine. The pump station has an on-site fuel storage capacity of 300,000 gallons of diesel fuel which at full operation will power the station for three days. To give you an idea of the capacities referred to, the total pumping capacity of every pump in the Sny is 1,100,000 gallons of water per minute. Our total horsepower at all three pump stations combined is 5,240. We have a combined pump station fuel storage capacity of about 137,000 gallons. The New Orleans facility is massive.

We were informed that the station will only be operated occasionally for maintenance purposes. Also, if the fuel is not used within one year, it is





removed from the premises and new fuel brought in to replace it to insure having the highest quality of fuel available at all times. We were informed that the station will only be used should a hurricane occur. The facility will also provide a “safe haven” for operators to be on duty 24 hours/day during the course of a hurricane. VERY IMPRESSIVE.

TIS THE SEASON



What a joyous time of the year. The Christmas season is here whether we're ready for it or not. The Board and Staff of the Sny want to take this opportunity to wish you and yours the happiest of holiday seasons. Merry Christmas and Happy New Year to all of you from all of us. In observance of the holiday season, the Sny Business Office will be closed on December 23, 26, 30 and January 2. Please be safe and enjoy the holidays!!

The financial report included with this year's newsletter reflects audited figures for the fiscal year ending October 31, 2010. If you would like to access this year's as well as previous newsletters electronically, it can be found in PDF format at www.snyisland.org/newsletter.htm.


Dan Lundberg - President


Brady Bogrowman - Secretary


Russell Koeller - Commissioner

SNY ISLAND LEVEE DRAINAGE DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE -
BUDGET AND ACTUAL - ANNUAL MAINTENANCE FUND
YEAR ENDED OCTOBER 31, 2010

	Original/ Final Budget	Actual	Variance- Positive (Negative)
Budgetary Fund Balance, November 1, 2009	\$ (2 338 343)	\$ (2 338 343)	\$ -
Resources (Inflows)			
Annual maintenance assessments	2 057 201	1 865 795	(191 406)
Charges for Services			-
Materials and pipe sales	49 018	79 516	30 498
Hunting lease and farm income	50 430	50 430	-
Investment income		10 064	10 064
Disaster income - FEMA		222 260	222 260
Other	8 500	32 418	23 918
Loan proceeds	-	1 342 324	1 342 324
Amount Available for Appropriation	<u>(173 194)</u>	<u>1 264 464</u>	<u>1 437 658</u>
Charges to Appropriations (Outflows)			
<i>Current</i>			
General Government			
Administrative office	262 472	288 228	(25 756)
Office of the board	204 638	465 898	(261 260)
Dredge	137 683	79	137 604
Flood	-	89 691	(89 691)
Heavy equipment	179 509	233 699	(54 190)
Levee & Ditch maintenance	24 428	315 827	(291 399)
Pump Stations	638 767	2 053 575	(1 414 808)
Shop	114 940	197 453	(82 513)
Payroll taxes and benefits	93 968	75 186	18 782
Material and pipe sales	40 523	68 820	(28 297)
<i>Debt Service</i>			-
Principal	32 316	33 738	(1 422)
Interest	12 254	61 993	(49 739)
<i>Capital Outlay</i>	150 000	230 322	(80 322)
Total Charges to Appropriations	<u>1 891 498</u>	<u>4 114 509</u>	<u>(2 223 011)</u>
Budgetary Fund Balance, October 31, 2010	\$ <u>(2 064 692)</u>	\$ <u>(2 850 045)</u>	\$ <u>3 660 669</u>

The accompanying notes are an integral part of these financial statements.