

Hikurangi Swamp Working Group Meeting 4/12/14

	Topic/Owner	Information
1	Last Meeting	Minutes
2	Operations/Maintenance	<ol style="list-style-type: none"> 1. Monthly Overview from Hydrotech 2. Pump Availability 3. Pump Rewind 4. Power Usage 5. Pump Operation
3	Finances and Annual report	Hydrotech Report Review OPEX 2014/15 CAPEX LTP 2015-2025 Annual Report
4	14-15 Drain Clearing	Drain Clearing Progress
5	Buildings Maintenance	Building Maintenance Progress
6	2014/15 Capex	Stopbank Adjustments Progress
7	Station Access	Training and Trouble Shooting Guide
8	Berm Land	Grazing Licenes and Flow Restrictions
9	Ratings	Ratings Map
10	Environmental	Living Water Possible Wetland Rejuvenation Locations Pump Levels Fish Passes
11	Future Objectives	Letter to MPI Short / Medium / Long Term Objectives
12	AOB	

Operations and Maintenance – Overview of HydroTech's September Report

- A storm at the end of August lead to river levels rising, with minor flow over the spillways into the pockets. Pumps were operated over the first week of September with no further pasture damage
- Only one incident was recorded; the loss of the Otonga main switch, leaving the station without power which luckily occurred at the end of the storm event. Switch was temporarily by-passed to allow power restoration at the station and new switch sourced

Operations and Maintenance – Overview of HydroTech's October Report

- Some rain squalls passed through but no significant amount of rain was delivered
- Some maintenance and routine inspections were undertaken
- Rat damaged cables were replaced at Otonga and contactor replaced at Ngararatunua due to overheating
- Preparations/checks made for installing the rewound Pleugers

Operations/Maintenance - Pump Availability over September & October

Station	~1.1 m ³ /s Pumps			~ 4.1 m ³ /s Pumps		Station Capacity (m ³ /s)
	A	B	C	D	E	
Otonga* ¹	Flygt (17%)	Flygt (17%)		Pleuger (65%)		6.3
Te Mata	Pleuger (17%)	Flygt (17%)		KSB (65%)		6.3
Mountain	Pleuger (50%)	KSB (50%)				2.2
Tanekaha	McKewen (50%)	Pleuger (50%)				2.2
Junction	Pleuger (100%)					1.1
Ngararatunua	Pleuger (11%)	Pleuger (11%)* ²		Pleuger (39%)	Pleuger (39%)	10.4
Okarika	Pleuger (10%)	Pleuger (10%)	Pleuger (10%)* ³	Pleuger (35%)	Pleuger (35%)	11.5

*¹ Otonga Pump Station without power for 2 days

*² Pump B at Ngararatunua re-installed on 14th November 2014

*³ Pump C at Okarika installation begun 2nd December 2014

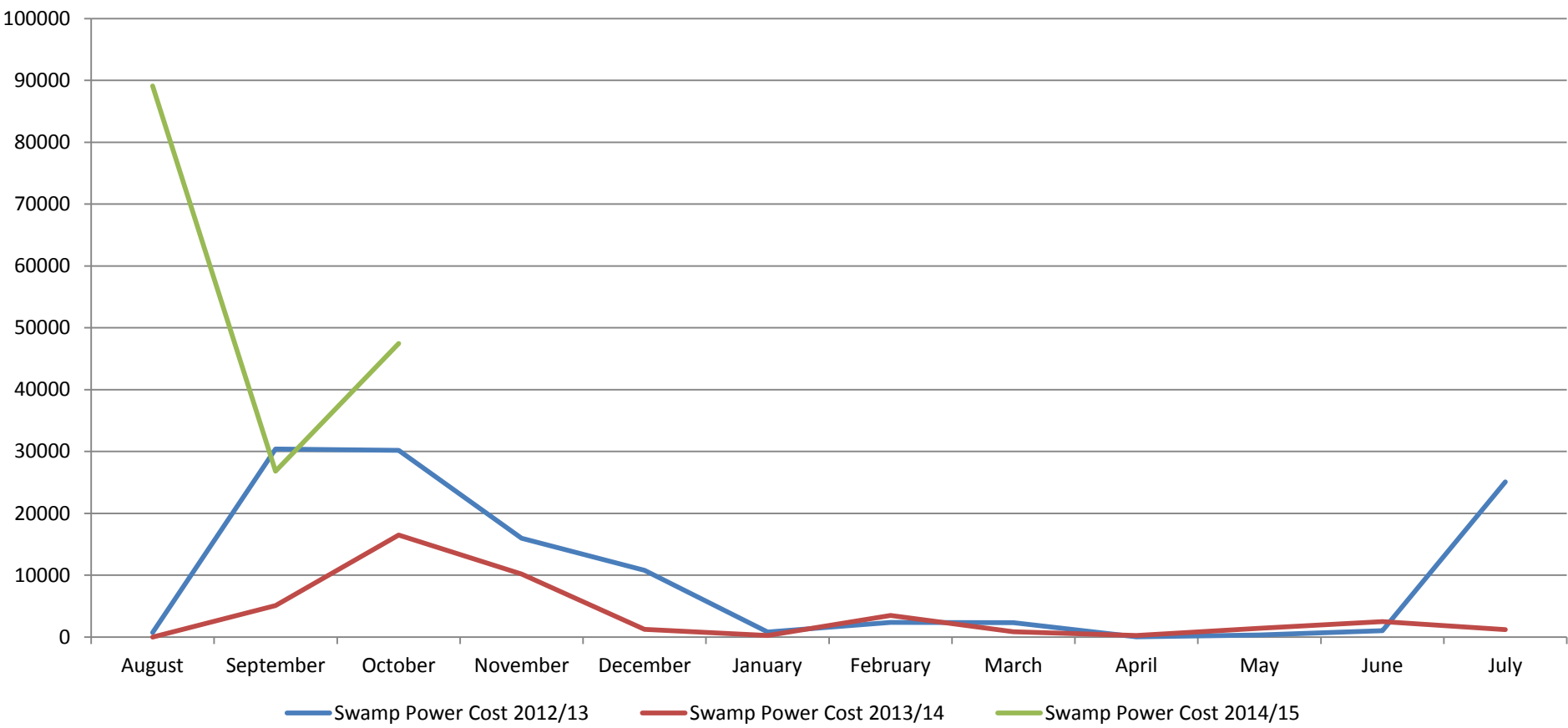
Operations/Maintenance - Pump Re-wind Update

- We have one large Pleuger in storage at SAAW
- Testing on the other small Pleuger has been completed, wire arriving from Germany
- Small Pleuger installed at Ngararatunua, other small Pleuger going in at Okarika this week



Operations/Maintenance - Power Usage

	Swamp Power Cost		
	2012/13	2013/14	2014/15
August	730	0	89095
September	30404	5083	26787
October	30179	16498	47467
November	15947	10183	
December	10773	1217	
January	781	243	
February	2374	3479	
March	2293	833	
April	18	246	
May	331	1412	
June	997	2503	
July	25065	1178	



HydroTech **September** Report Review – Pump Hours Run

Pump	Pocket						
	Junction	Te Mata	Tanekaha	Mountain	Otonga	Ngararatunua	Okarika
A	242	281	220	166	374	258	277
B		353	175	303	281	0	308
C							0
D		187			249	229	203
E						125	162

All pumps were available at month end, apart from pump C at Okarika and pump B at Ngararatunua.

HydroTech **October** Report Review – Pump Hours Run

Pump	Pocket						
	Junction	Te Mata	Tanekaha	Mountain	Otonga	Ngararatunua	Okarika
A	0	43	5	40	0	35	46
B		9	0	0	54	0	60
C							0
D		0			0	24	0
E						0	0

Pump hour distribution indicates that the flows were low, with only the smaller pumps operating

HydroTech September Report Review - Finances

Inspection	Maintenance	Environmental	Flood Attendance	Drain Clearing
\$2,638.23	\$1,393.76	-	\$2,565.11	-

Maintenance – screen fastenings and installation, sourcing of wiring diagram for new Te Mata switchboard, Otonga power failure attendance and replace power cable to pump

Flood Attendance – 18 separate invoice lines for each station visited, also includes excavator hire

HydroTech October Report Review - Finances

Inspection	Maintenance	Environmental	Flood Attendance	Drain Clearing
\$2,638.24	\$8,146.69		\$1,032.28	

Maintenance

- Annual inspections underway (pump down bays, clean & inspect pumps, drain & replace glycol, check for leaks)
- Replace warped floodgate
- Install new fixing bolts to allow safe access into pump bays
- Replace flood gate winch wire
- Pump removal to replace worn seals
- Replace rodent damaged cables

Flood Attendance – 4 separate invoice lines for wood and debris removal from pump stations, spillways and stopbanks (inc. burn-off)

Finances – OPEX 2014/15

Account Description	2013/14 Actuals Full Year	2014/15 Actuals YTD	2014/15 Forecast	2014/15 Budget Full Year
Insurance Recoveries	(69,715)	(7,934)	(7,934)	0
Other Rentals Received	(45,255)	(26,270)	(53,593)	(41,555)
General Miscellaneous	0	287	0	0
Telephone and Other Communication	0	1,020	680	0
Electricity Supply Costs	61,604	165,250	220,000	180,000
Water Rights Paid NRC Consent	1,205	86	1,586	2,000
Payments to Ext. Contractors	164,759	42,171	170,000	190,000
Legal Fees	18,954	0	5,000	10,000
Engineering Fees	5,466	6,333	20,000	30,000
Other Professional Fees	2,652	3,640	5,000	5,000
Infrastructure & Services	69,195	0	0	0
Plant & Equip Maintenance	24,740	50,530	100,000	100,000
Total	233,605	235,112	460,738	475,445

Draft CAPEX (2015-2025)

LTP Public submission's next year

Long Term Plan CAPEX	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Project Description	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Level Sensor Renewals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ -
Renewals (excluding pumps)	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000	\$ -
Stop/Control Bank Renewals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -

Funded - \$600k capital over 10 years:

Level sensor renewals in year 7

\$300k over 10 years for minor renewals – eg electrical supplies

Stop bank/control works – may need to adjust spillways after 5 events or top up stop banks

Not Funded

No new pumps. Proposal is to maintain existing equipment with spares.

No gravity discharge gates – No quick way to let out water after major events



WHANGAREI
DISTRICT COUNCIL

2013-2014 Annual Report



How we performed

6.1 Council will provide a reliable and sustainable flood protection scheme which is managed to mitigate flooding within the Hikurangi Swamp Scheme area to an acceptable level.

Performance Measure	Result
<p>6.1.1 Floods will be managed in accordance with the Scheme design.</p> <p>(Target: 0 ha significant pasture damage from defined storm events*)</p> <p><i>(New measure in 2012-2013. No result held for 2011-2012.)</i></p> <p>Achieved</p>	<p>0 ha (2012-13: 0 ha)</p>
<p>6.1.2 No infringement or abatement notices issued by Northland Regional Council in relation to the scheme consent.</p> <p>(Target: 0 infringement or abatement notices issued)</p> <p><i>(New measure in 2012-2013. No result held for 2011-2012.)</i></p> <p>Achieved</p>	<p>0 infringement or abatement notices issued (2012-13: 0)</p>

**Significant pasture damage is when pasture needs to be re-sown. For the purposes of this measure, a storm event is limited to an event of the magnitude that has an up to 3.5 year average recurrence interval (ARI).*

What it cost

Annual Plan 2013-14 \$000	Flood Protection and Control Works Funding Impact Statement	Actual 2013-14 \$000	LTP Year 2 2013-14 \$000	Variance to LTP 2013-14 \$000	LTP Year 1 2012-13 \$000
Sources of Operating Funding					
-	General rates, uniform annual general charges, rates penalties	-	-	-	-
(655)	Targeted rates (other than a targeted rate for water supply)	(673)	(654)	(19)	(523)
-	Subsidies and grants for operating purposes	-	-	-	-
(43)	Fees, charges and targeted rates for water supply	(94)	(66)	(28)	(64)
-	Internal charges and overheads recovered	-	-	-	-
-	Local authorities fuel tax, fines, infringement fees and other receipts	(70)	-	(70)	-
(636)	Total Operating Funding	(837)	(721)	(116)	(588)
Applications of Operating Funding					
635	Payments to staff and suppliers	442	645	(204)	619
179	Finance Costs	77	144	(67)	114
-	Internal charges and overheads applied	-	-	-	-
-	Other operating funding applications	-	-	-	-
814	Total Applications of Operating Funding	519	789	(270)	733
115	(Surplus) / Deficit of Operating Funding	(318)	68	(386)	145
Sources of Capital Funding					
-	Subsidies and grants for capital expenditure	-	-	-	-
-	Development and financial contributions	-	-	-	-
(636)	(Increase) / decrease in debt	318	(222)	540	(586)
-	Gross proceeds from sale of assets	-	-	-	-
-	Other dedicated capital funding	-	-	-	-
-	Lump sum contributions	-	-	-	-
(636)	Total Sources of Capital Funding	318	(222)	540	(586)
Applications of Capital Funding					
Capital expenditure					
-	to meet additional demand	-	-	-	-
-	to improve levels of service	-	-	-	-
521	to replace existing assets	-	154	(154)	441
-	Increase / (decrease) in reserves	-	-	-	-
-	Increase / (decrease) of investments	-	-	-	-
521	Total Applications of Capital Funding	-	154	(154)	441
(115)	(Surplus) / Deficit of Capital Funding	318	(68)	386	(145)
-	Funding Balance	-	-	-	-

14-15 Drain Clearing Progress

- Ngararatunua pocket completed
- Presently in Okarika pocket
- Continue to work clock-wise around the swamp
- Forecast completion end of February
- Still awaiting dates from the helicopter spraying

14-15 Drain Clearing Progress



Buildings Maintenance

Pump Station	Total Cost
Junction	\$1,560
Te Mata	\$1,035
Otonga	\$1,240
Tanekaha	\$1,310
Mountain	\$1,535
Ngararatunua	\$1,240
Okarika	\$1,260
	\$9,180

Building's Maintenance



2014/15 Capex - Stopbank Adjustments

- Initial sequence of works;
 1. **Mangahahuru Left A (aggregate)**
 2. **Mangahahuru Right A**
 3. **Okarika Right D**
 4. **Tanekaha Right E (a) (aggregate)**
 5. **Tanekaha Right E (b)**
 6. **Tanekaha Right E (c) and Te Mata Right E**
- **Forecast completion date (weather dependant) is end of April**

Mangahahuru Left A (aggregate)



Access to stations?

Hikurangi Swamp Pumping Station Operators Manual

Three Golden Rules

1. Never use the main isolator or individual pump isolators to switch a pump on or off
 2. Never go inside a panel
 3. Never force a pump to run if there is insufficient water in the bay
-
1. Never use the main isolator or individual pump isolators to switch a pump on or off - Switching the main isolator on or off when a pump is operating/set to operate, causes arcing between the contacts and carbon build up. Overtime this can build up and eventually cause an electrical fire.



Photograph of the main isolating switch at Otonga Pumping Station

Berm Land - Grazing Licences

- A number of Hikurangi Swamp Grazing licences renewals are due
- Request for variation on fertilizer loading rates. What is working group opinion?

“Top-dress the pasture on the land with a minimum of 250 kg/ha superphosphate annually and the equivalent of 2000 kg/ha of lime at some time during the five year term of the Licence.”

- Term of license. Request to change to 1 year. Considered not possible as it was a renewal of a previous 5 year term license.

Berm Land – Flow Restrictions

- Visit still to be undertaken

Ratings map

- See pin-ups

Living Water

DOC/Fonterra partnership

Proposed Riparian Planting Project

Short talk by Tim Brandenburg

Environmental

- Possible Wetland Rejuvenation Locations
- Pump Levels
- Fish Passes

Letter to MPI

20 October 2014

Dear Nathan,

Hikurangi Floodplains

As Whangarei District Councillor and chair of the Hikurangi Swamp Flood Management Scheme Working Group I am aware that the Ministry of Primary Industries (MPI) is looking at investing in our community to promote economic growth and develop options to assist in flood and environmental management on the Hikurangi floodplain. For this I am grateful. What concerns me however is that to date we are lead to believe you have only spoken to a small group of farmers that do not represent the interests of the wider community.

We wish to bring to your attention that Council has actively engaged with the community for many years through committees and working groups. In 2012 the Hikurangi Working Group was established.

The Group has the aim of enabling community input into management of the Hikurangi flood management scheme. The group includes representatives from each of the seven pockets, two representatives from upstream catchments, hapu, NRC, Fonterra and an observation seat for DoC. It is chaired by WDC as it owns the \$35M of assets and takes ultimate responsibility for the resource consent that permits operation of the scheme. A copy of the Group's term of reference is attached.

This group has been very active in addressing issues that arise in operation of the scheme. With input from this group, targeted rate changes were made in 2012 to enable recovery of debt, waterways have been protected from stock within the scheme, new pumps have been installed, and long term strategic plans have been promoted to consider operation of the scheme with changing weather patterns and environmental pressures.

As you will see from the attached email from members of the group there is good cohesion between farmers and key stakeholders and a willingness to work together.

Given the Group's representation and support it is imperative that it be involved in any long term plans that affect the Hikurangi Floodplain. We would welcome the opportunity to meet with yourself or your representative to discuss the future of the Hikurangi Plains. In this respect if you could contact myself or Cindy at the district office to arrange a meeting, that would be appreciated.

Yours sincerely,

Crichton Christie

WDC Councillor and Chair of Hikurangi Swamp Working Group

Short Term Objectives (Page 1 of 2)

- To meet the terms of the resource consent (\$350k for stop bank levelling) – Ongoing, due for completion this summer
- Survey the berm land to understand the height variation/ restrictions down through the swamp – UAV survey quote rejected, site visit proposed
- Address the issue with the large trees/ significant undergrowth in the berm land to the immediate SW of Otonga PS – UAV survey quote rejected, site visit proposed
- Assess the restrictive influence of the old road formation below the Jordan Valley Bridge – UAV survey quote rejected, site visit proposed
- Assess the condition and understand the possibility of clearing restrictions on the Wairua River downstream of the Matarua Bridge – completed

Short Term Objectives (Page 2 of 2)

- Assess the channel profile (presently pools and riffles) between the Jordan valley Bridge and Matarau Bridge in the Wairua River
- Consider the possibility of trading off ox-bow within the berm land with ox-bows on private land on the pocket-side of the stopbanks to aid smooth flow through the scheme whilst maintaining the environmental balance.
- Lock down the date at which the scheme becomes debt free
- Investigate external sources of funding for environmental improvements within the pockets

AOB