ORKUSTOFNUN

Vatnamælingar

Vatnafar á Ófeigsfjarðarheiði og Langadalsströnd

Rennslislíkön og hlutvatnasvið

Stefanía Guðrún Halldórsdóttir

Unnið fyrir Auðlindadeild Orkustofnunar

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Útdráttur:
Greint er frá aðlögun HBV-rennslislíkans af Hvalá í Ófeigsfirði og Þverá á Langadalsströnd að hlutvatnasviðum á hálendi Ófeigsfjarðarheiðar og Langadalsstrandar. Hlutvatnasviðin eru á vatnasviðum Bæjardalsár, Hvannadalsár, Hafnardalsár, Blævardalsár og Hraundalsár á Langadalsströnd, Selár í Steingrímsfirði, Eyvindarfjarðarár, Húsár og Reykjafjarðarár sem hafa afrennsli af Ófeigsfjarðarheiði. Rennslisraðir voru bornar saman við rennslismælingar sem gerðar hafa verið á svæðinu. Reiknaðar rennslisraðir spanna vatnsárin 1956-2001.

Lykilorð:
Rennslislíkön, HBV-líkan, afrennsli, vatnafar, hlutvatnasvið,Vestfirðir, Hvalá, Þverá á Langadalsströnd,Bæjardalsá, Hvannadalsá, Hafnardalsá, Blævardalsá, Hraundalsá, Langadalsströnd, Selá í Steingrímsfirði, Eyvindarfjarðará, Húsá, Reykjafjarðará, Ófeigsfjarðarheiði

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Við gerð HBV-líkana var ekki stuðst við rennslisgögn sem talin eru ótrygg vegna t.d. ísatruflana. Verkefnið var unnið af Vatnamælingum Orkustofnunar fyrir Auðlindadeild Orkustofnunar.

1.1 HBV-líkön af hlutvatnasviðum

Þegar HBV-líkani er beitt á hlutvatnasvið er notað líkan af nærliggjandi vatnasviði, þar sem til eru rennslisgögn sem líkanið hefur verið lagað að. Notast er við líkön fyrir aðliggjandi mæli eða mæla, þegar rennsliseiginleikar eru yfirfærðir og látnir gilda fyrir nálæg svæði utan þeirra.

Hæðardreifingu og stærð vatnasviðs er breytt innan líkansins. Að öðru leyti er stuðst við sömu stuðlaskrá og sömu veðurgögn. Stuðlaskrárnar sem notaðar voru í þessu verkefni eru í viðauka skýrslunnar.

Við ákvörðun á hlutvatnasviðum á Ófeigsfjarðarheiði og Langadalsströnd var gengið út frá rennslismælingum sem gerðar voru í ágúst 1999. Hnit mælistaða voru sett inn í landfræðileg upplýsingakerfi, og hæðardreifing og stærð vatnasviða fundin með hæðarlíkani frá Landmælingum Íslands (The Defense Mapping Agency, 1986) og með handvirkri hnitun af kortum Orkustofnunar sem eru í mælikvarðanum 1:20 000 (Orkustofnun, 1962). Á mynd 1.1 eru hnit rennslismælistaða merkt inn sem punktar.

1.2 Rennslismælingar

Til þess að finna út hvaða líkan kæmi best út fyrir hvert vatnasvið var stuðst við rennslismælingar. Hér er vert að taka fram að þessar mælingar eru einu gögnin um mælt rennsli af hlutvatnasviðunum, og hefði án þeirra ekki verið hægt að bera saman mælt og reiknað rennsli.

Dagana 4.-11. ágúst 1999 var farin umfangsmikil mælingaferð um Vestfirði. Bæði var mælt á hálendi og láglendi. Veður var mjög stöðugt dagana á undan og meðan á ferðinni stóð, en ekki hafði rignt á Vestfjörðum í nokkurn tíma, svo að mælingarnar má túlka sem ástand sem hefur varað í einhvern tíma og er sambærilegt yfir stórt svæði. Þessar mælingar gefa frekar lága niðurstöðu miðað við önnur ár ef bornar eru saman rennslismælingar á láglendi og gögn úr vatnshæðarmælum, en eru þó notaðar hér til þess að meta trúverðugleika HBV-líkana af hlutvatnasviðum Ófeigfjarðarheiðar. Frekari upplýsingar um þessar rennslismælingar eru í greinargerð um rennslismælingar á Vestfjörðum (Stefanía G. Halldórsdóttir o.fl. 1999).

1.3 Uppbygging skýrslunnar

Í 2. kafla skýrslunnar er fjallað um HBV-líkanið og kynntar eru miklvægustu forsendur varðandi meðhöndlun úrkomu og hitastigs í líkaninu.
Kaflar 3 og 4 eru tileinkaðir HBV-rennslislíkönum sem gerð voru af rennsli við vatnshæðarmæla í Þverá og Hvalá. Þar er að finna töflur sem sýna vatnsjöfnuð og fylgni mælinga og líkans. Í dálkunum undir fyrirsögninni „Vatnsjöfnuður“ eru

borin saman meðaltöl mælds og reiknaðs rennslis á þeim tímabilum innan viðkomandi vatnsárs sem mælingar á rennsli eru fyrirliggjandi (oft eru eyður í mæligögnum). Í töflunum eru fylgnisstuðlarnir R2 og R2log einnig settir fram, en þeir segja til um hversu vel líkönin ná rennslisferlinu. Vert er að geta þess að þeir segja ekki mikið um vatnsjöfnuð.

	Vatnsjöfnuður			Fylgnistuðlar	
Vatnsár	Mælt [m3/s]	Reikn. [m3/s]	hlfl mism.	R2	R2log
1976/77	2.02	2.11	0.04	0.48	0.09
1977/78	2.13	2.63	0.23	0.41	0.80
1978/79	2.00	1.93	-0.04	0.60	0.61
1979/80	2.13	2.32	0.09	0.56	0.59
1980/81	2.10	2.31	0.10	0.53	0.75
1981/82	3.32	3.89	0.17	0.64	0.80
1982/83	3.48	4.02	0.16	0.68	0.78

Tafla 1.1 Tafla sem sýnir vatnsjöfnuð og fylgni raunverulegra mælinga og líkans.

Súlurit sem sýnd eru í köflum um vatnasvið vatnshæðarmæla og hlutvatnasviða sýna meðalrennsli vatnsára, en þar sem veðurgögn fyrir allt árið 2001 lágu ekki fyrir, eru líkönin aðeins keyrð til 30. júní 2001. Því má gera ráð fyrir að tölur vegna vatnsársins 2000/01 breytist þegar frekari veðurgögn liggja fyrir.

Í köflum 5-6 er fjallað um hlutvatnasviðin, þar sem sýnd er hæðardreifing og mælt og reiknað rennsli borin saman.

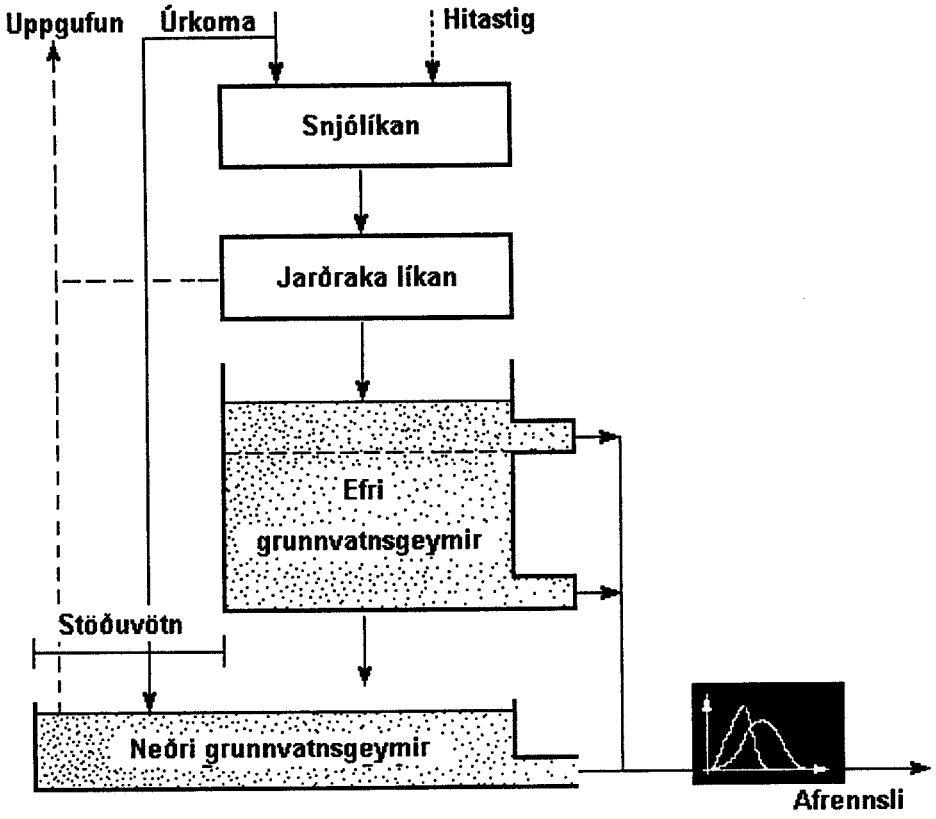
Í 7. kafla skýrslunar eru niðurstöður útreikninganna dregnar saman. Aftast í skýrslunni er viðauki sem inniheldur afrennsliskort af Ófeigfjarðarheiði og Langadalsströnd auk stuðlaskránna fyrir hvert líkan um sig.

2 HBV-rennslislíkanið

Með HBV (Hydrologiska Byråns Vattenbalansavdelning) –rennslislíkani eru veðurþættir (hiti, úrkoma) notaðir til að herma eftir rennsli á ákveðnum mælistað yfir tiltekið tímabil. Líkanið er aðlagað mældu rennsli á tímabili þar sem til eru samhliða veður- og rennslisgögn. Með HBV-líkani er hægt að segja til um rennsli annars staðar á vatnasviðinu þar sem mælingar vantar. Einnig er hægt að áætla rennsli árinnar aftur í tímann á viðkomandi stað, fylla í eyður í gögnum og bæta mat á ístruflunum, og skapa grundvöll fyrir mati á afrennsli á nálægum vatnasviðum. HBV-líkanið hefur enn fremur verið notað til þess að spá fyrir um áhrif veðurfarsbreytinga á vatnafar, t.d. hækkunar hitastigs af völdum aukins magns gróðurhúsalofttegunda í andrúmsloftinu (Sælthun, 1996).

2.1 Uppbygging HBV-líkansins

HBV-líkanið skiptist í fjóra meginhluta: snjólíkan, jarðrakalíkan, efri grunnvatnsgeymi og neðri grunnvatnsgeymi, sbr. mynd 2.1. Mikilvægustu inntaksgögnin í HBV-líkanið eru sólarhringsgildi úrkomu og hitastigs.

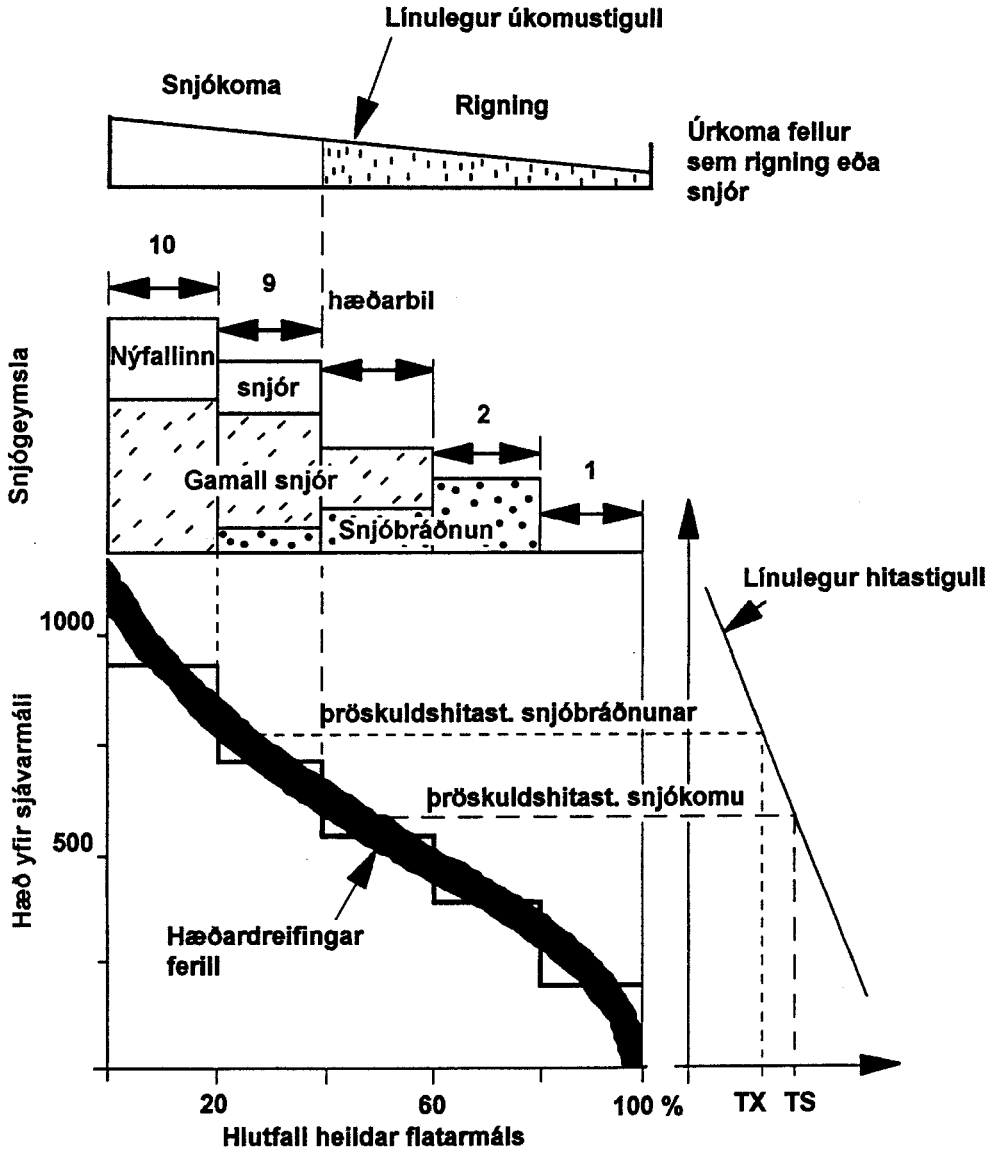


Mynd 2.1 Uppbygging HBV-líkansins (Killingtveit, Á., o.fl., 1995).

Vatnasviði sem er til athugunar er skipt niður í hæðarbil og er hinum fjórum hlutum líkansins beitt á hvert hæðarbil um sig.

Í snjólíkaninu er snjósöfnun og bráðnun reiknuð út, en það fer eftir hitastigi hvort úrkoma er talin falla sem snjór eða rigning. Hitastigið á hverju hæðarbili ræðst af

hitastigi á viðmiðunarveðurstöðvum auk meðalhæðar þess yfir sjávarmáli. Í veðrahvolfinu lækkar hiti að meðaltali með hæð um 0,6°C á hverja 100 metra, sem upp er farið. Þetta er þó breytilegt, og fer einkum eftir rakastigi og blöndun loftsins vegna vinds (Tveit, 1994). HBV-líkanið gerir ráð fyrir línulegum hitastigli, og gefur möguleika á að taka tillit til árstíðabundinna sveiflna í hitastigli. Ef hitastig á tilteknu hæðarbili er lægra en þröskuldshiti snjókomu (TS) fellur úrkoman sem snjór annars rigning, sbr. mynd 2.2. Snjóbráðnun á sér stað ef hitastig er hærra en þröskuldshiti snjóbráðnunar (TX).



Mynd 2.2 Uppbygging snjólíkansins (Killingtveit, Å., o.fl, 1990).

Í líkaninu ræðst úrkoman á hverju hæðarbili af úrkomu á viðmiðunarveðurstöð og meðalhæð viðkomandi hæðarbils. Á Íslandi fellur úrkoma einkum þegar vindur stendur af hafi, sér í lagi í suðlægum áttum. Rakt og tiltölulega hlýtt loft berst yfir ströndina og er þvingað upp þegar það mætir hækkun í landslaginu. Við það kólnar

loftið, raki þéttist og úrkoma fellur. Við þessar aðstæður vex úrkoma með hæð, í vissum tilfellum allt upp í nokkra tugi prósenta fyrir hverja 100 m hækkun. Í HBV-líkaninu er gert ráð fyrir að þessi úrkomuaukning sé einfalt línuleg sbr. mynd 2.2 eða samsett úr tvemur línubútum.

Rigningarvatn og snjóbráð berst úr snjólíkaninu niður í jarðrakalíkanið sem reiknar út rakamettunarstig jarðvegsins, og út frá því uppgufun og leka til efri grunnvatnsgeymis. Efri grunnvatnsgeymirinn er notaður til að líkja eftir afrennsli af yfirborði vatnasviðs og leka til neðra grunnvatnsgeymis. Neðri grunnvatnsgeymir, sem einnig tekur til stöðuvatna, stjórnar grunnrennslinu í líkaninu (Sælthun, 1996).

2.2 Stuðlar notaðir í HBV-líkaninu

HBV-líkanið notar yfir 100 óháða stuðla, sem allir lýsa mismunandi vatnafræðilegum eiginleikum vatnasviðs, til þess að breyta úrkomu í afrennsli. Nokkrir stuðlanna eru ákvarðaðir út frá kortum af svæðinu, t.d. hæðardreifing og jökulhlutfall, en gildi flestra þeirra er ákvarðað með kerfisbundnum ágiskunum og endurteknum samanburði á rennslismælingum og niðurstöðum HBV-líkans fyrir eitthvert tiltekið tímabil. Tafla 2.1 sýnir yfirlit yfir nokkra mikilvægustu stuðlana.

Stuðull	Hlutverk	Gildissvið á Glámu	Eining
TX	þröskuldsgildi snjókomu	0.1 – 1.2	°C
TS	þröskuldsgildi snjóbráðnunar	-0.9 – -0.2	°C
CX	gráðudaga stuðull	2.5 – 4.8	mm/°C·dag
PKORR	leiðréttingarstuðull fyrir úrkomu	0.58 – 1.16	1
SKORR	leiðréttingarstuðull fyrir snjókomu	1.06 – 1.30	1
TTGRAD	hitastigull, dagar án úrkomu	-0.65 – -0.55	°C / 100 m
TVGRAD	hitastigull, dagar með úrkomu	-0.54 – -0.50	°C / 100 m
PGRAD	úrkomustigull, neðan H1	10% – 79%	1 / 100 m
PGRAD1	úrkomustigull, ofan H1	4% – 22%	1 / 100 m
GRAD	Hæð H1, þar sem brot verður í úrkomustigli	400 – 1000	m y.s.
UZL	þröskuldsgildi fyrir afrennsli á yfirborði	30 – 70	mm
KUZ1	geymisstuðull, efri grunnvatnsgeymir	0.30 – 0.99	1/dag
KUZ	geymisstuðull, efri grunnvatnsgeymir	0.06 – 0.25	1/dag
PERC	leki til neðra grunnvatnsgeymis	0.8 – 8.5	mm/dag
KLZ	geymisstuðull, neðri grunnvatnsgeymir	0.001 – 0.020	1/dag

Tafla 2.1 Yfirlit yfir nokkra mikilvæga stuðla í HBV-líkani

Mikilvægustu stuðlarnir eru þeir sem stjórna úrkomu og hitastigi, þeir sem stjórna bráðnun og þeir sem breyta (seinka) afrennslinu í líkaninu. Margir fleiri stuðlar hafa áhrif á fylgni reiknaðs og mælds rennslis, t.d stuðlar sem lýsa jarðvegsraka, og uppgufun. Aðlögun líkansins að nýju svæði er fólgin í því að breyta stuðlunum hvað eftir annað og prófa sig þannig áfram.

Þegar HBV-líkanið er notað til þess að spá fyrir um dreifingu afrennslis með hæð innan vatnasviðs hafa stuðlar sem stjórna úrkomudreifingu í líkaninu afgerandi

áhrif á niðurstöðuna. Úrkomuleiðréttingarstuðullinn PKORR er stilltur þannig að meðalúrkoma við sjávarmál í líkaninu af viðkomandi vatnasviði verður sambærileg við mælda meðalúrkomu á veðurstöð í nágrenni vatnasviðsins. Úrkomustiglarnir PGRAD og PGRAD1 eru stilltir þannig að samanlagt afrennsli skv. líkaninu verði jafnt mældu afrennsli, þ.e. vatnsjöfnuður stenst.

Stuðlarnir TTGRAD og TVGRAD stýra hitabreytingu með hæð. Þannig segir stuðullinn TTGRAD til um hversu mikið kólnar á hverja 100 metra þá daga sem engin úrkoma fellur. TVGRAD segir hins vegar til um hversu mikið kólnar á hverja 100 metra á úrkomudögum. Einnig eru stuðlar sem svo aftur leiðrétta þessa hitabreytingu eftir mánuði, með tilliti til TTGRAD og TVGRAD.

2.3 Hvernig líkanið er prófað

Útkoman úr HBV-líkaninu er reiknað rennsli, og eru gæði þess samanborið við mælt rennsli metin 1) með s.k. fylgnistuðlum, 2) með samanburði á línuritum með mældu og reiknuðu rennsli og 3) með samanburði á vatnsmagni (vatnsjöfnuði) skv. mælingum og líkani.

Fylgnistuðlar eru handhæg aðferð til að meta fylgni mælds og reiknaðs rennslis með einni tölu. Fylgnistuðullinn R2 er skilgreindur á eftirfarandi hátt:

$$R2 \equiv \frac{\sum (Q_0 - \bar{Q}_0)^2 - \sum (Q_S - Q_0)^2}{\sum (Q_0 - \bar{Q}_0)^2}$$

þar sem Q_0 er mælt rennsli
$\bar{Q}_0$ er mælt meðalrennsli
Q_S er rennsli samkvæmt líkani

(Nash og Sutcliffe, 1970).

R2 er næmur fyrir því að mæld og reiknuð hágildi séu svipuð og sýnir því hvort líkanið fylgi vel toppunum í rennslinu, þ.e. hárennslinu. Fylgnistuðullinn R2log er skilgreindur hliðstætt R2 nema miðað er við lógaritma af rennslinu. Hann sýnir því betur en R2 hversu vel líkanið fylgir lágrennslinu (grunnrennsli) (Sælthun, 1995). Við aðlögun líkans að rennslismælingum er reynt að láta fylgnistuðlana R2 og R2log ná hærra gildi en 0.60.

Vatnsjöfnuður er skilgreindur sem mismunur reiknaðs og mælds rennslis. Hann er neikvæður sýni líkanið of lítið rennsli miðað við mælingarnar á tilteknu tímabili, en jákvæður ef rennslið er of mikið. Vatnsjöfnuður er einungis reiknaður út fyrir þau tímabil þar sem tiltækar eru mælingar á rennsli. Hlutfallslegur vatnsjöfnuður miðast við mælt rennsli, þ.e.

$$\textit{hlutfallslegur vatnsjöfnuður} \equiv \frac{Q_{reiknað} - Q_{mælt}}{Q_{mælt}}$$

2.4 Veðurgögn

Sólarhringsgildi úrkomu og hitastigs eru nauðsynleg inntaksgögn í HBV-líkanið. Notast var við úrkomumælingar frá fjórum og hitamælingar frá þrem veðurstöðvum, þ.e. veðurstöðvunum á Galtarvita(U+H), Æðey(U+H), á Gjögri(U+H), og á Hrauni á Skaga(U). Eyður í gögnunum voru fylltar með hjálp línulegrar aðhvarfsgreiningar.

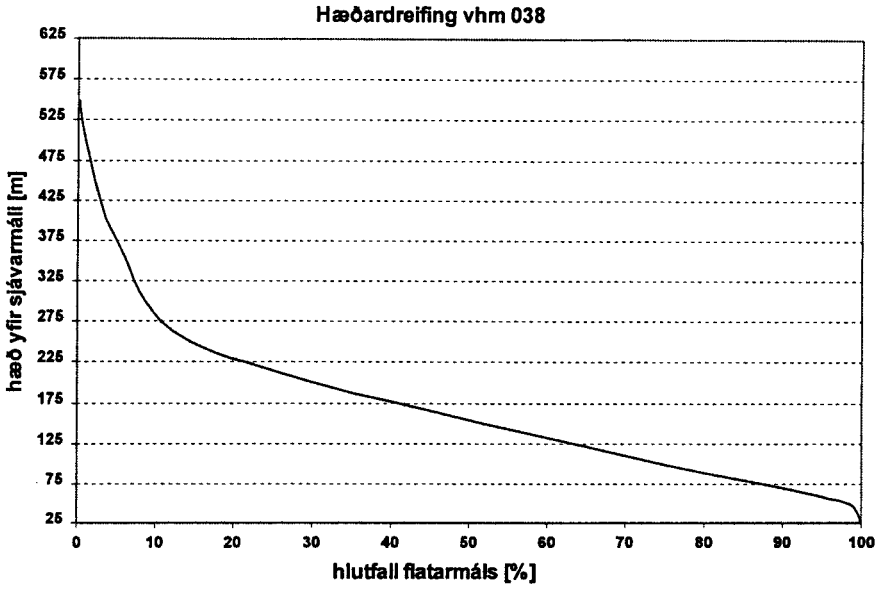
Tafla 2.2 sýnir yfirlit yfir vægi veðurstöðva í líkönum.

Veðurstöð	Hvalá	Þverá
Úrkomustöð		
Galtarviti		25%
Æðey		50%
Gjögur	85%	25%
Hraun á Skaga	15%	
Hitastöð		
Galtarviti		30%
Æðey		70%
Gjögur	100%	

Tafla 2.2 Vægi veðurstöðva.

3 Þverá

Vatnamælingar hófu rekstur vhm 38 í Þverá 1947. Mælirinn er í 25 m.y.s. og er flatarmál vatnasviðsins um 42,7 km^2, og er hæðardreifing vatnasviðsins teiknuð á mynd 3.1.



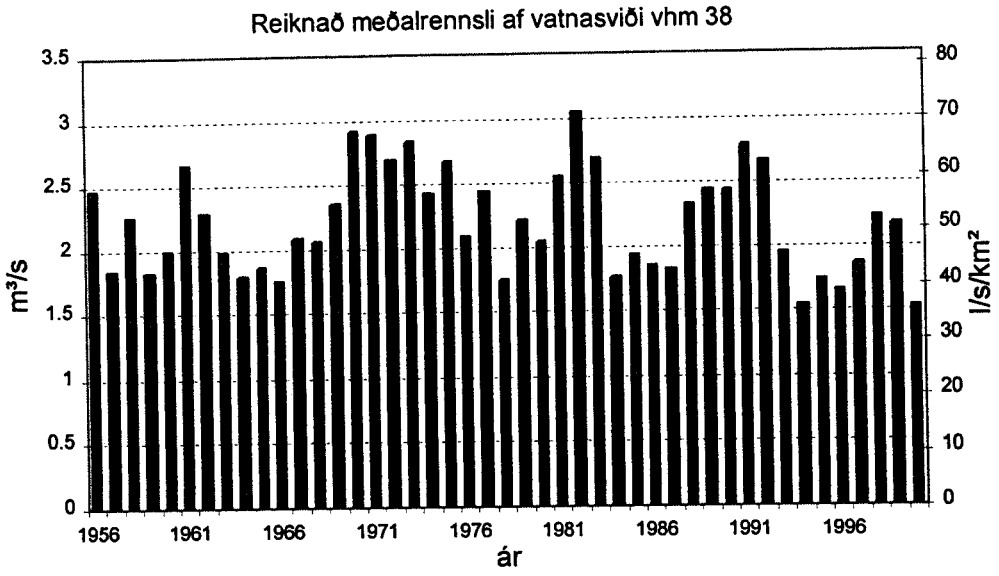
Mynd 3.1 Hæðardreifing vatnasviðs vhm 38.

Við gerð HBV rennslislíkans af vhm 38 var stuðst við rennslisgögn frá tímabilinu 1.9.1976 til 31.8.1983. Gögnin eru almennt nokkuð góð, en samt er eitthvað um eyður í þeim vegna ísatruflana eða annars. Tafla 3.1 sýnir yfirlit yfir fylgnistuðla og vatnsjöfnuð á aðlögunartímabilinu. Í dálkunum undir fyrirsögninni „Vatnsjöfnuður" eru borin saman meðaltöl mælds og reiknaðs rennslis á þeim tímabilum innan viðkomandi vatnsárs sem mælingar á rennsli eru fyrirliggjandi (oft eru eyður í mæligögnum).

	Vatnsjöfnuður			Fylgnistuðlar	
Vatnsár	Mælt [m3/s]	Reikn. [m3/s]	hlfl mism.	R2	R2log
1976/77	2.02	2.11	0.04	0.48	0.09
1977/78	2.13	2.63	0.23	0.41	0.80
1978/79	2.00	1.93	-0.04	0.60	0.61
1979/80	2.13	2.32	0.09	0.56	0.59
1980/81	2.10	2.31	0.10	0.53	0.75
1981/82	3.32	3.89	0.17	0.64	0.80
1982/83	3.48	4.02	0.16	0.68	0.78

Tafla 3.1 Yfirlit yfir vatnsjöfnuð og fylgni.

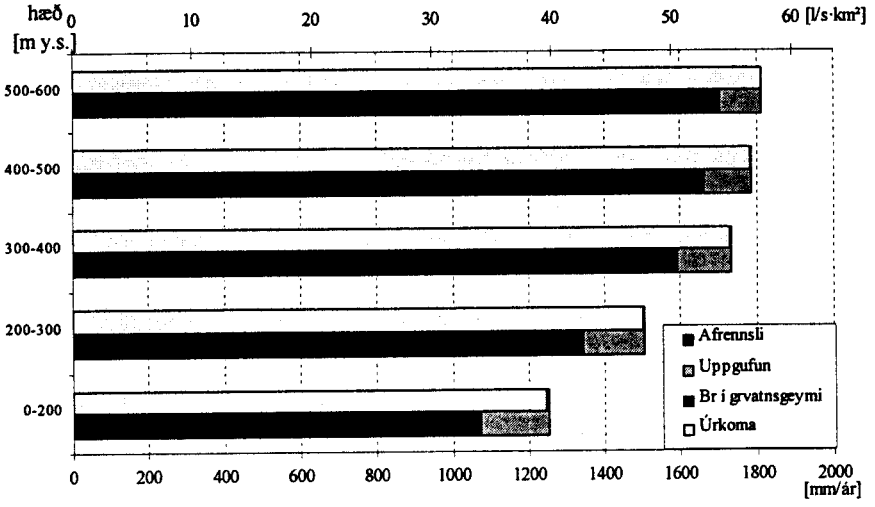
Mynd 3.2 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 3.2 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 2,2 m^3/s eða 51,6 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83 með 71 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1966/67 með 41,2 $l/s \cdot km^2$ meðalafrennsli.

Vatnasviði vhm 38 var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 3.3 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.

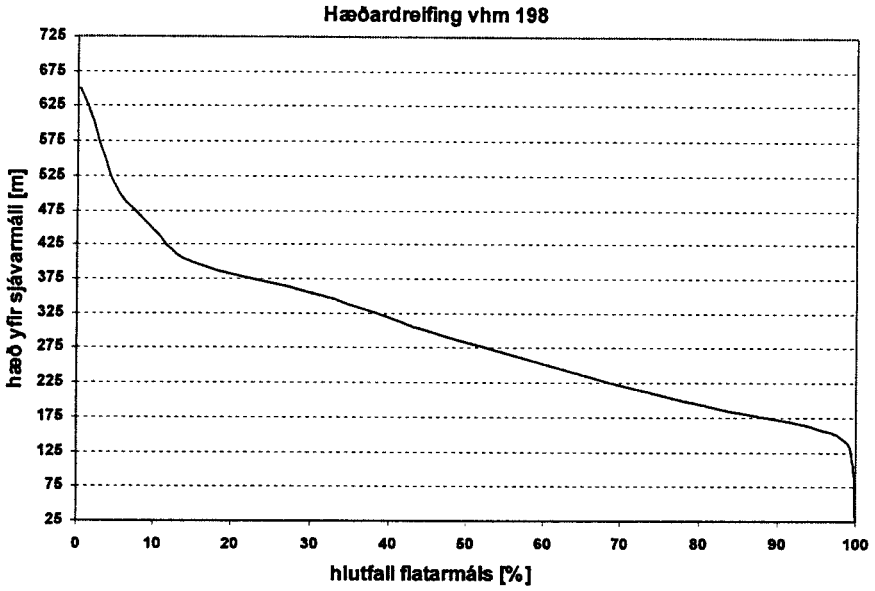


Mynd 3.3 Vatnsjöfnuður á hæðarbilum vatnasviðs vhm 38.

Skv. líkaninu vex úrkoma um rúmlega 22 % við hverja 100 m hæðaraukningu á neðstu hæðarbilunum, en ofar dregur úr vextinum.

4 Hvalá

Vatnamælingar hófu rekstur vhm 198 í Hvalá 1976. Mælirinn er í 25 m y.s. og er flatarmál vatnasviðsins um 178,3 km^2. Hæðardreifing vatnasviðsins er teiknuð á mynd 4.1.



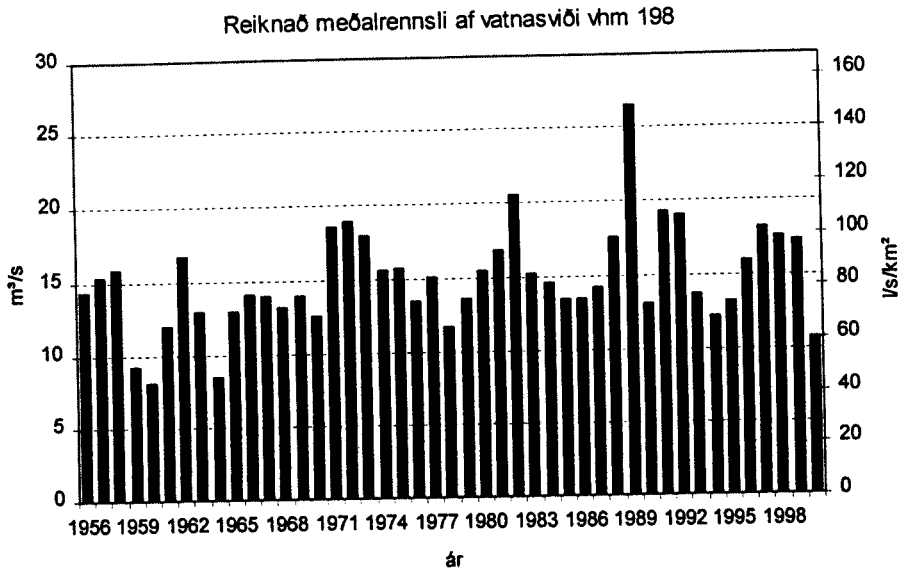
Mynd 4.1 Hæðardreifing vatnasviðs vhm 198.

Við gerð HBV rennslislíkans af vhm 198 var stuðst við rennslisgögn frá tímabilinu 1.9.1976 til 31.8.1983. Mikið er um eyður í gögnunum og þá sérstaklega yfir vetrarmánuðina, aðallega vegna ísatruflana. Tafla 4.1 sýnir yfirlit yfir fylgnistuðla og vatnsjöfnuð á aðlögunartímabilinu. Í dálkunum undir fyrirsögninni „Vatnsjöfnuður" eru borin saman meðaltöl mælds og reiknaðs rennslis á þeim tímabilum innan viðkomandi vatnsárs sem mælingar á rennsli eru fyrirliggjandi (oft eru eyður í mæligögnum).

	Vatnsjöfnuður			Fylgnistuðlar	
Vatnsár	Mælt [m3/s]	Reikn. [m3/s]	hlfl mism.	R2	R2log
1976/77	17.49	20.44	0.17	0.67	0.68
1977/78	22.11	23.48	0.06	0.65	0.70
1978/79	19.34	16.89	-0.13	0.42	0.73
1979/80	23.14	19.01	-0.18	0.26	0.11
1980/81	19.99	27.37	0.37	0.48	0.42
1981/82	36.28	32.95	-0.09	0.48	0.57
1982/83	33.77	39.32	0.16	0.77	0.68

Tafla 4.1 Yfirlit yfir vatnsjöfnuð og fylgni.

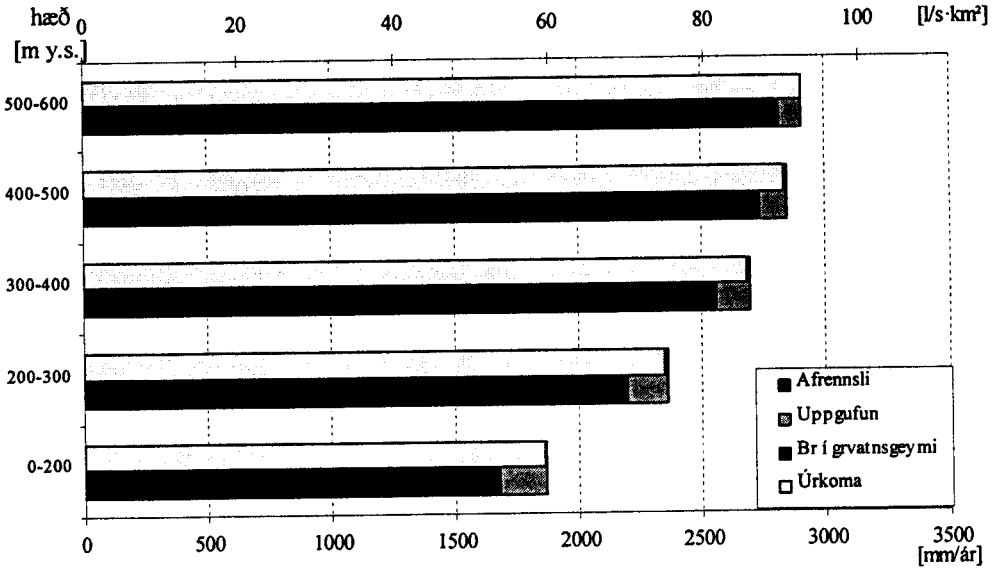
Mynd 4.2 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01, en það er fundið út frá heilum rennslisröðum skv líkani.



Mynd 4.2 Meðalrennsli vatnsáranna 1956/57 til 2000/01skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 14.9 m^3/s eða 83.6 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1989/90 með 148.5 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 45.6 $l/s/km^2$ meðalafrennsli.

Vatnasviði vhm 198 var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 198 keyrt á hverju þessara hæðarbila. Á mynd 4.3 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 4.3 Vatnsjöfnuður á hæðarbilum vatnasviðs vhm 38.

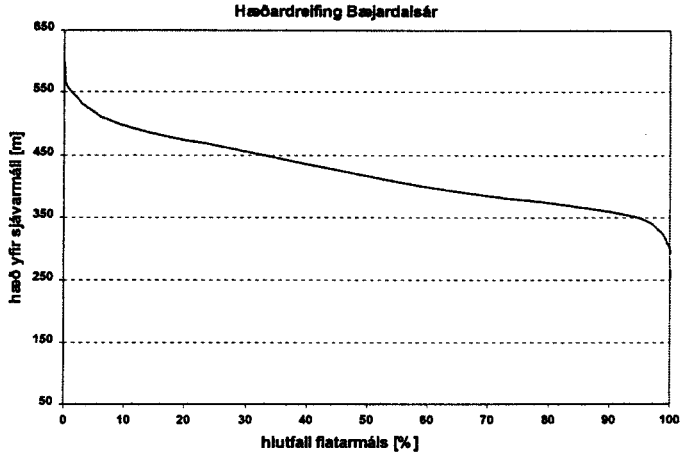
Skv. líkaninu vex úrkoma um rúmlega 26% við hverja 100 m hæðaraukningu á neðstu hæðarbilunum, en ofar dregur úr vextinum.

5 Hlutvatnasvið á Langadalsströnd, auk Selár í Steingrímsfirði

Líkan af vhm 38 var notað til að finna afrennsli af vatnasviðum Bæjardalsár, Hvannadalsár, Hafnardalsár, Blævardalsár og Hraundalsár á Langadalsströnd. Bæði líkan af Þverá og Hvalá voru prófuð á vatnasviði Selár í Steingrímsfirði og kom í ljós eftir samanburð á mældu og reiknuðu rennsli að líkan Þverár átti þar betur við.

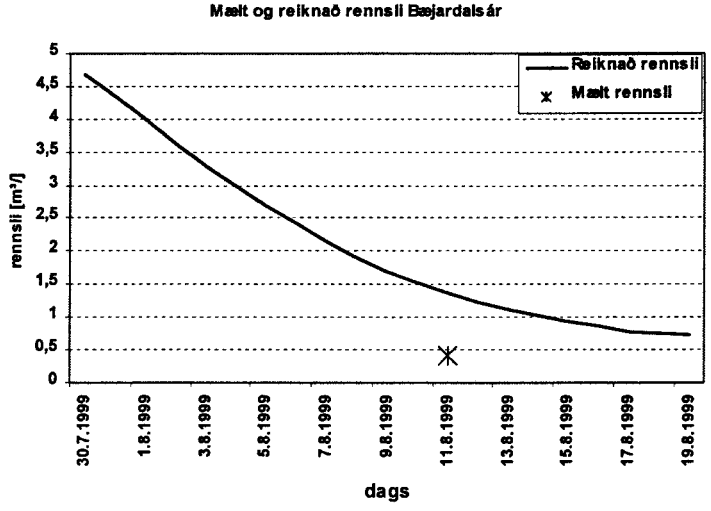
5.1 Bæjardalsá

Stærð vatnasviðs Bæjardalsár er 38,81 km² og er hæðardreifing þess sýnd á mynd 5.1.



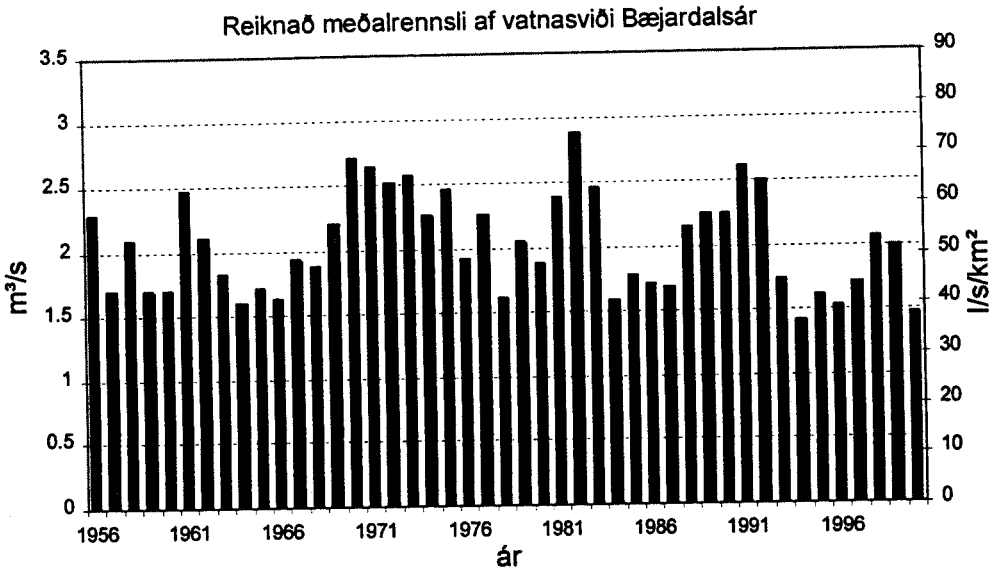
Mynd 5.1 Hæðardreifing vatnasviðs Bæjardalsár.

Mynd 5.2 sýnir samanburð á mældu og reiknuðu rennsli Bæjardalsár.



Mynd 5.2 Samanburður á mældu og reiknuðu rennsli.

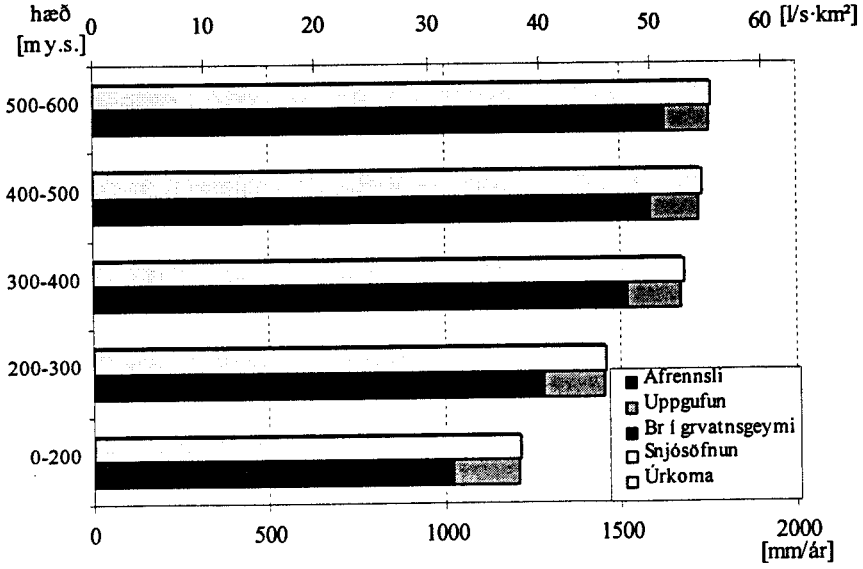
Mynd 5.3 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.3 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 2 m^3/s eða 52 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83 með 74 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1994/95 með 37 $l/s \cdot km^2$ meðalafrennsli.

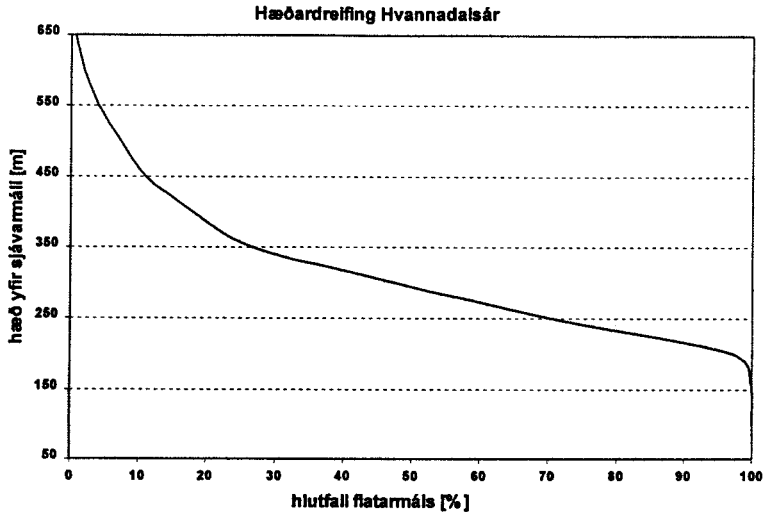
Vatnasviði Bæjardalsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.4 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 5.4 Vatnsjöfnuður á hæðarbilum vatnasviðs Bæjardalsár.

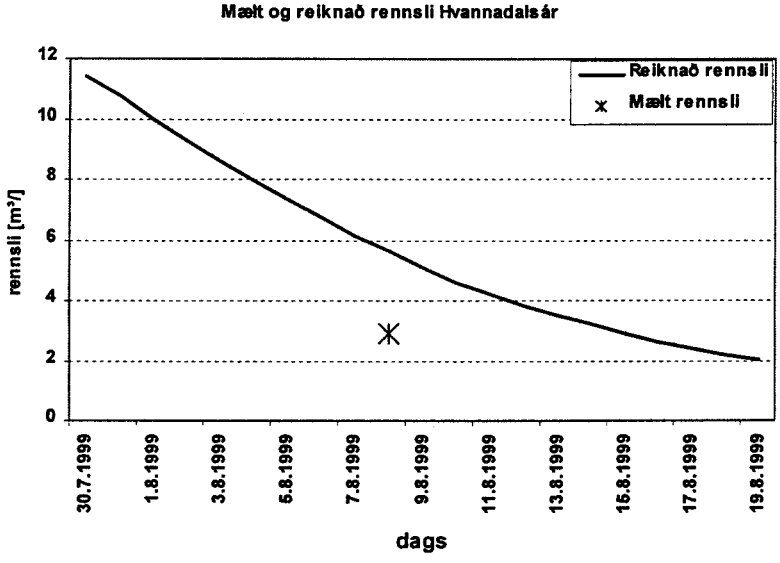
5.2 Hvannadalsá

Stærð vatnasviðs Hvannadalsár er 83,12 km² og er hæðardreifing þess sýnd á mynd 5.2.



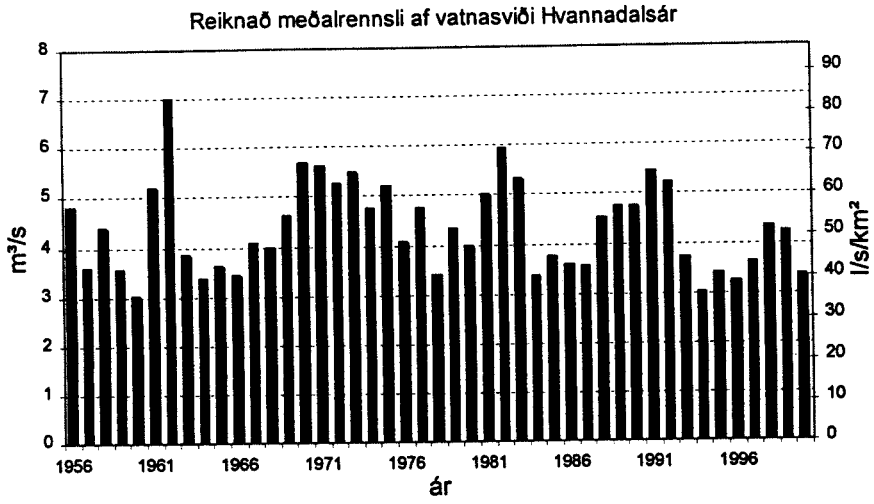
Mynd 5.5 Hæðardreifing vatnasviðs Hvannadalsár.

Mynd 5.6 sýnir samanburð á mældu og reiknuðu rennsli Hvannadalsár.



Mynd 5.6 Samanburður á mældu og reiknuðu rennsli.

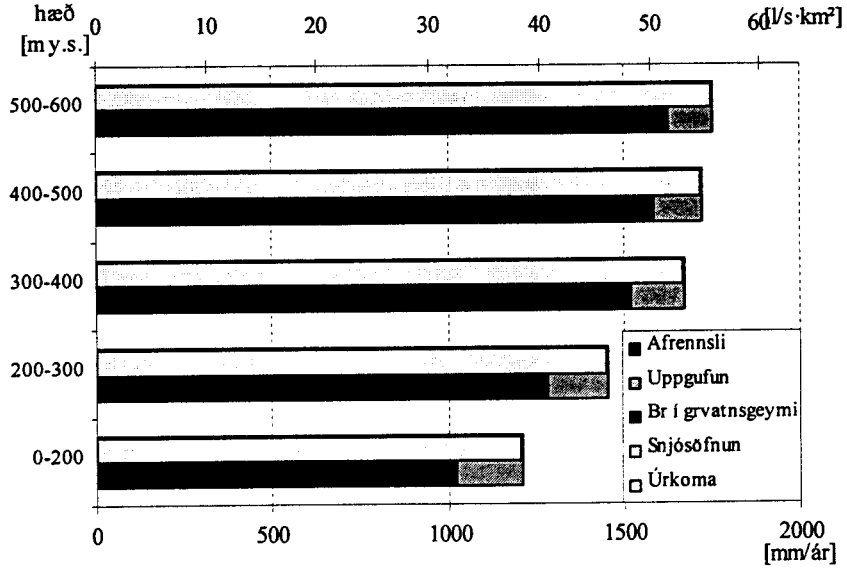
Mynd 5.7 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.7 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 4,3 m^3/s eða 51 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1962/63 með 84 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 36 $l/s \cdot km^2$ meðalafrennsli.

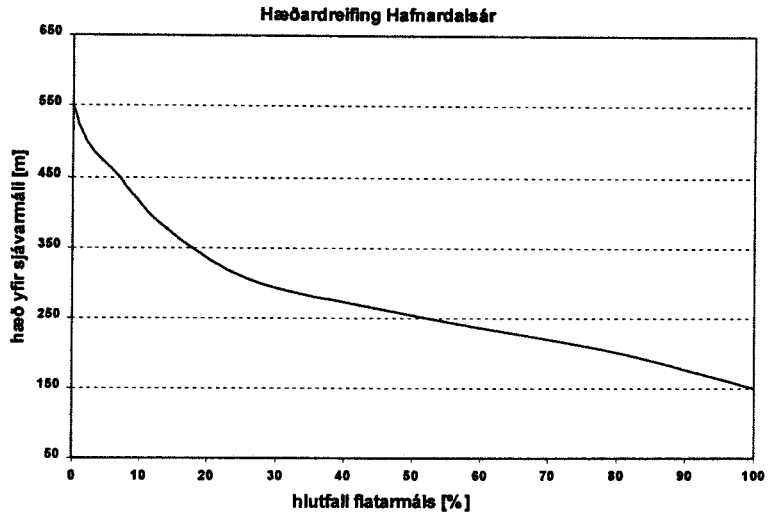
Vatnasviði Hvannadalsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.8 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 5.8 Vatnsjöfnuður á hæðarbilum vatnasviðs Hvannadalsár.

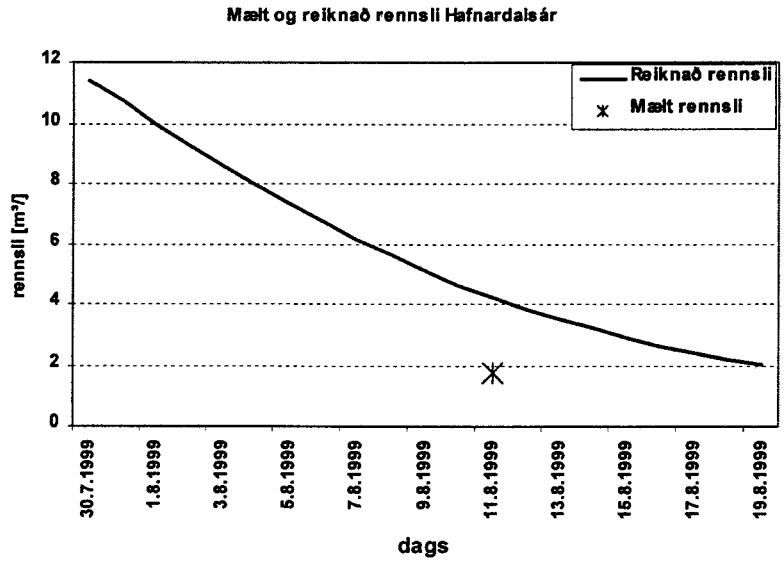
5.3 Hafnardalsá

Stærð vatnasviðs Hafnardalsár er 37,85 km² og er hæðardreifing þess sýnd á mynd 5.3.



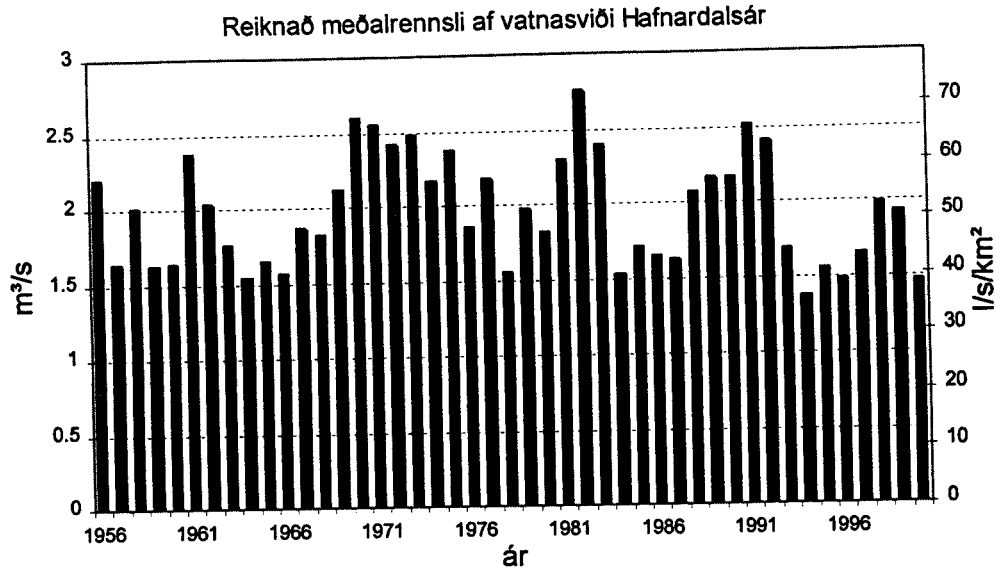
Mynd 5.9 Hæðardreifing vatnasviðs Hafnardalsár.

Mynd 5.10 sýnir samanburð á mældu og reiknuðu rennsli Hafnardalsár.



Mynd 5.10 Samanburður á mældu og reiknuðu rennsli.

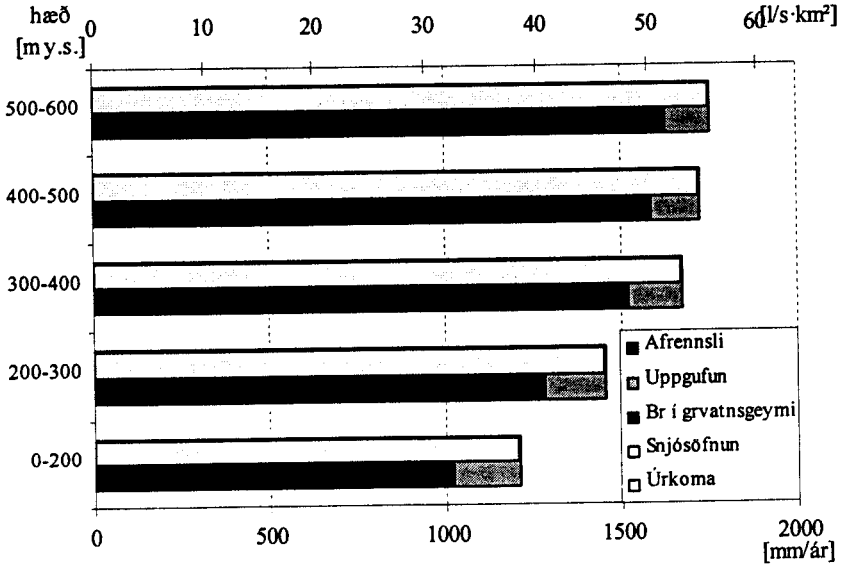
Mynd 5.11 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.11 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 2 m^3/s eða 52 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83 með 72,5 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1994/95 með 36 $l/s \cdot km^2$ meðalafrennsli.

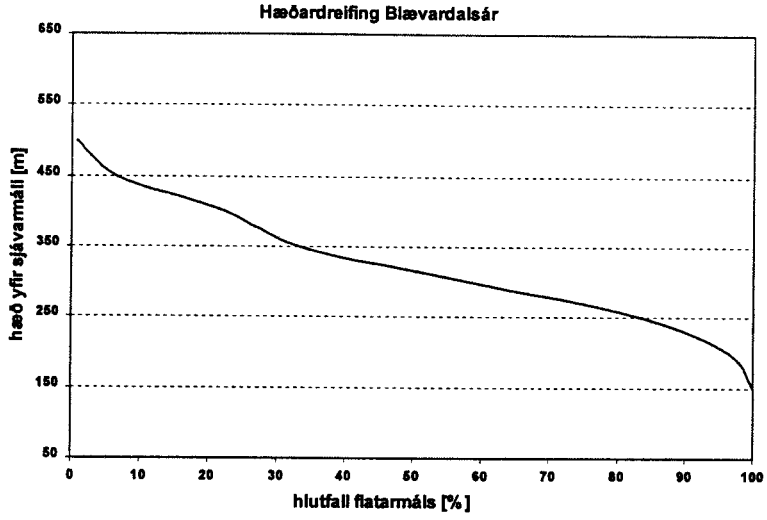
Vatnasviði Hafnardalsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.12 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 5.12 Vatnsjöfnuður á hæðarbilum vatnasviðs Hafnardalsár.

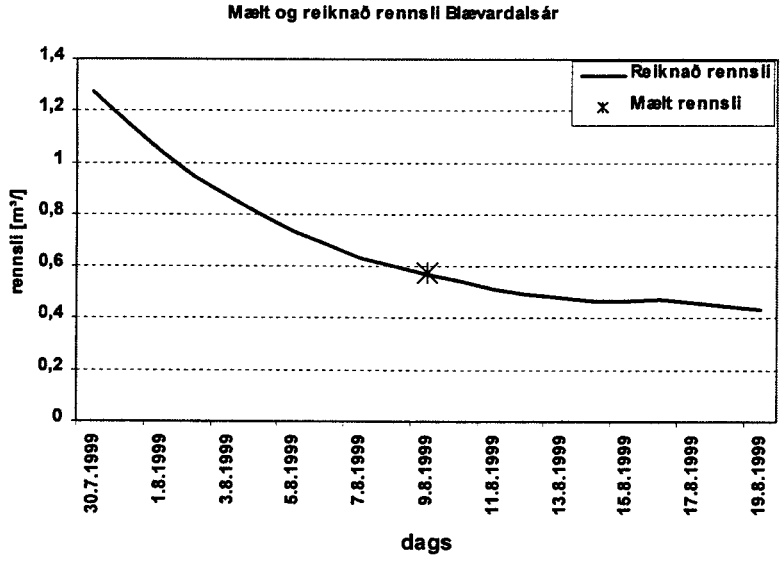
5.4 Blævardalsá

Stærð vatnasviðs Blævardalsár er 29,19 km² og er hæðardreifing þess sýnd á mynd 5.1.



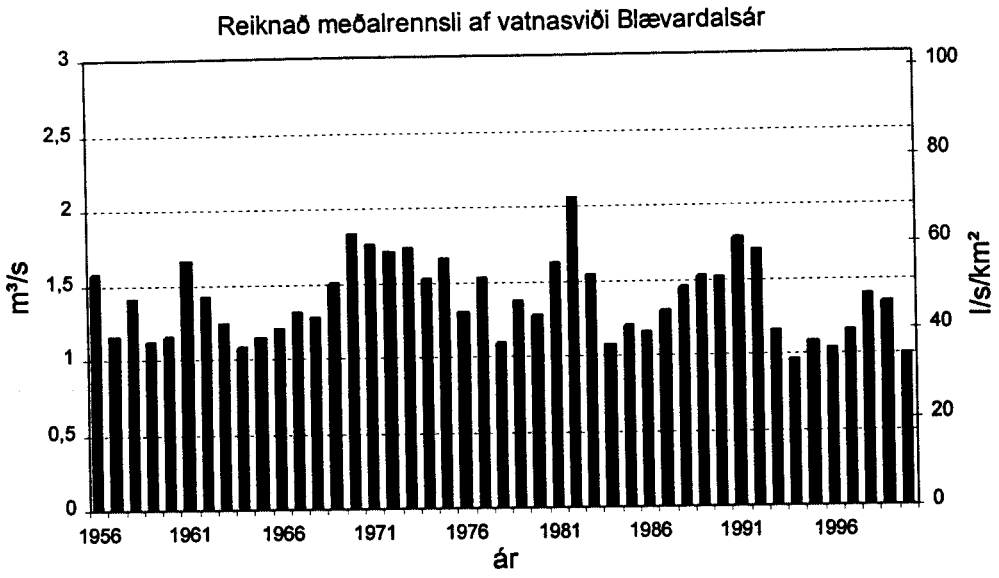
Mynd 5.13 Hæðardreifing vatnasviðs Blævardalsár.

Mynd 5.14 sýnir samanburð á mældu og reiknuðu rennsli Blævardalsár.



Mynd 5.14 Samanburður á mældu og reiknuðu rennsli.

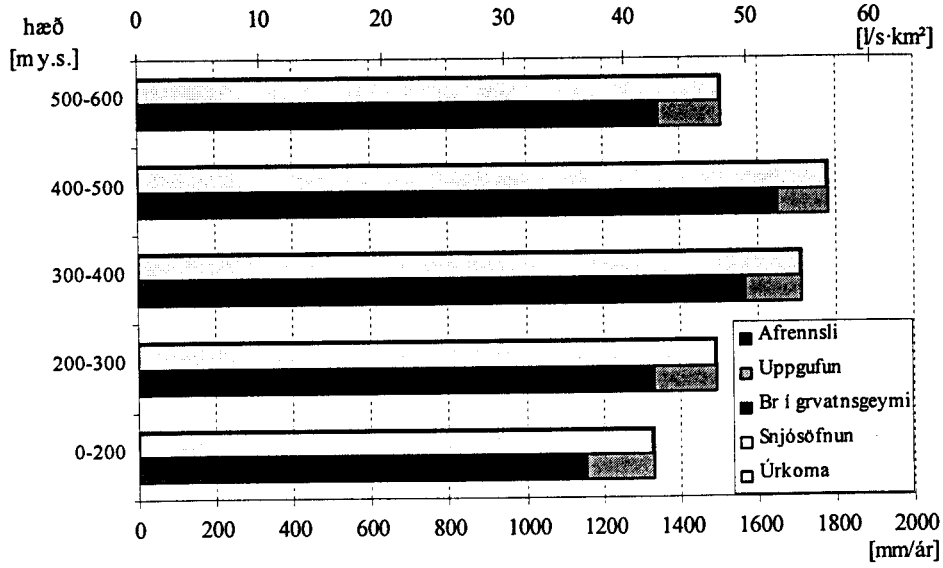
Mynd 5.15 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.15 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 1,4 m^3/s eða 47 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83 með 70,6 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1994/95 með 33 $l/s \cdot km^2$ meðalafrennsli.

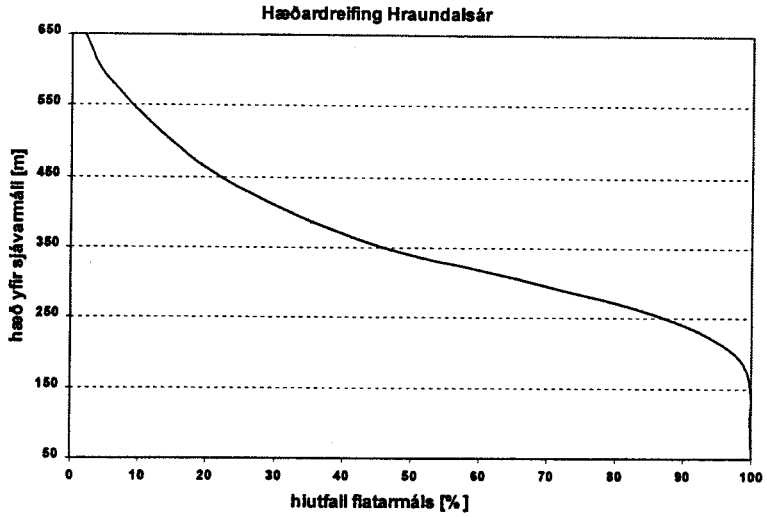
Vatnasviði Blævardalsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.16 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 5.16 Vatnsjöfnuður á hæðarbilum vatnasviðs Blævardalsár.

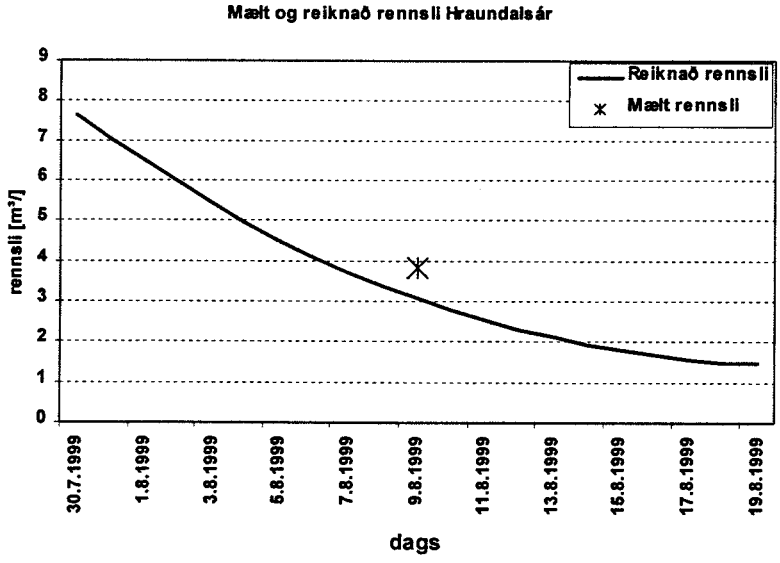
5.5 Hraundalsá

Stærð vatnasviðs Hraundalsár er 75,88 km² og er hæðardreifing þess sýnd á mynd 5.1.



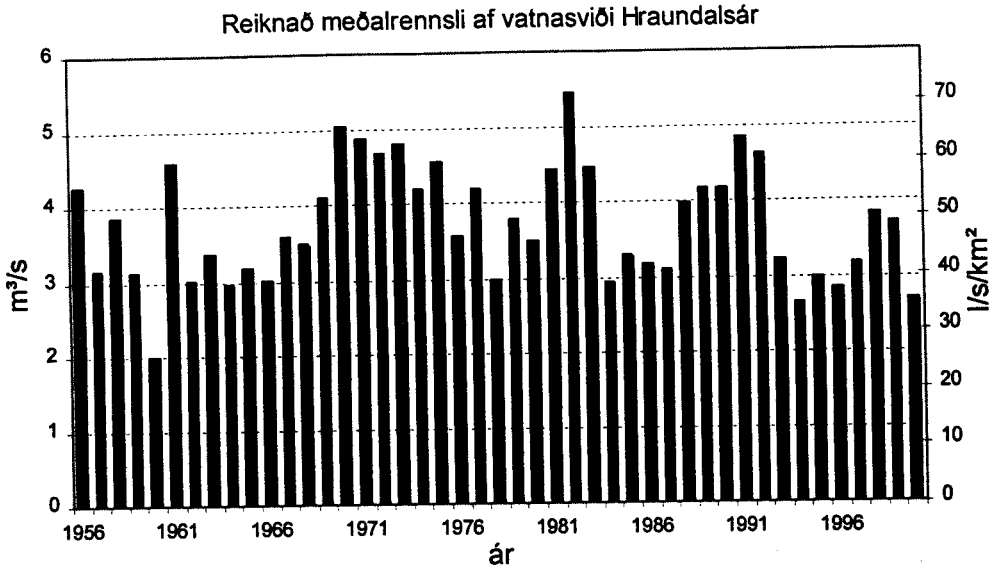
Mynd 5.17 Hæðardreifing vatnasviðs Hraundalsár.

Mynd 5.18 sýnir samanburð á mældu og reiknuðu rennsli Hraundalsár.



Mynd 5.18 Samanburður á mældu og reiknuðu rennsli.

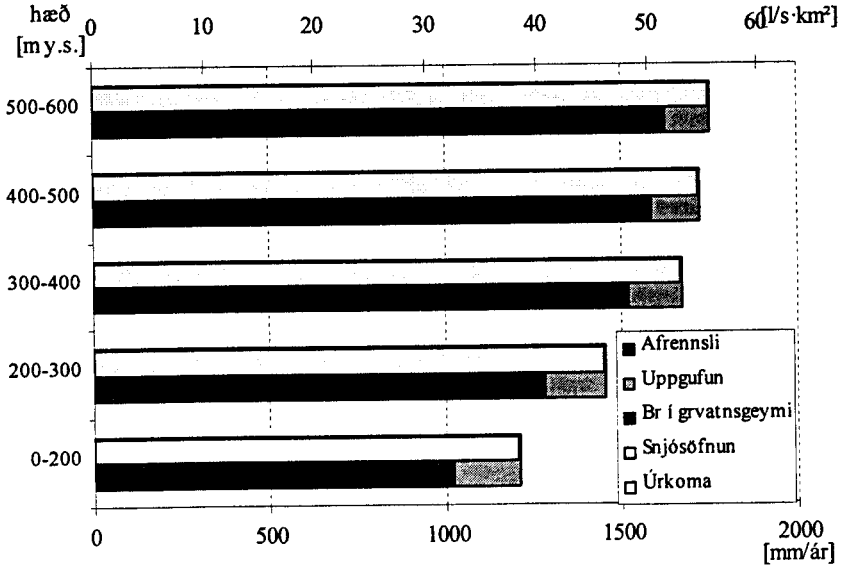
Mynd 5.19 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.19 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 3,8 m^3/s eða 50 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83með 71,6 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 26 $l/s \cdot km^2$ meðalafrennsli.

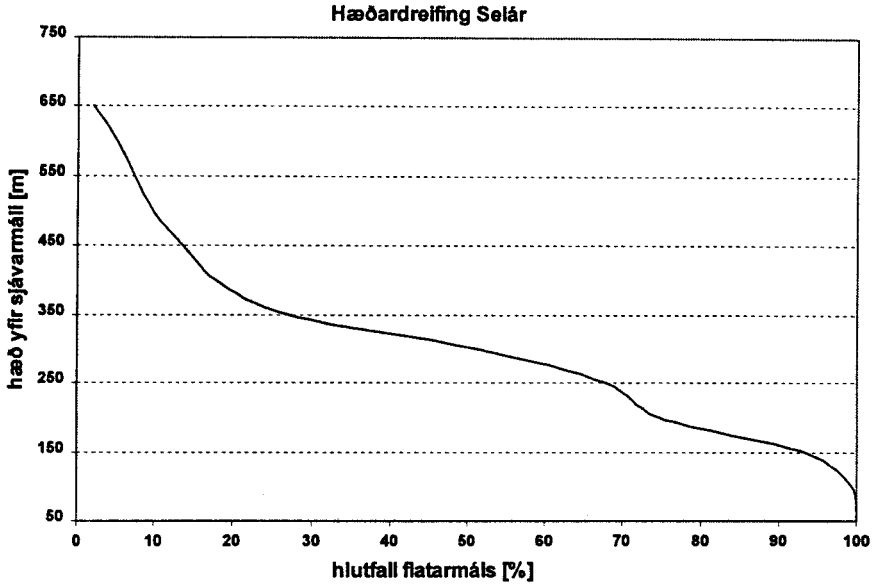
Vatnasviði Hraundalsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.20 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 5.20 Vatnsjöfnuður á hæðarbilum vatnasviðs Hraundalsár.

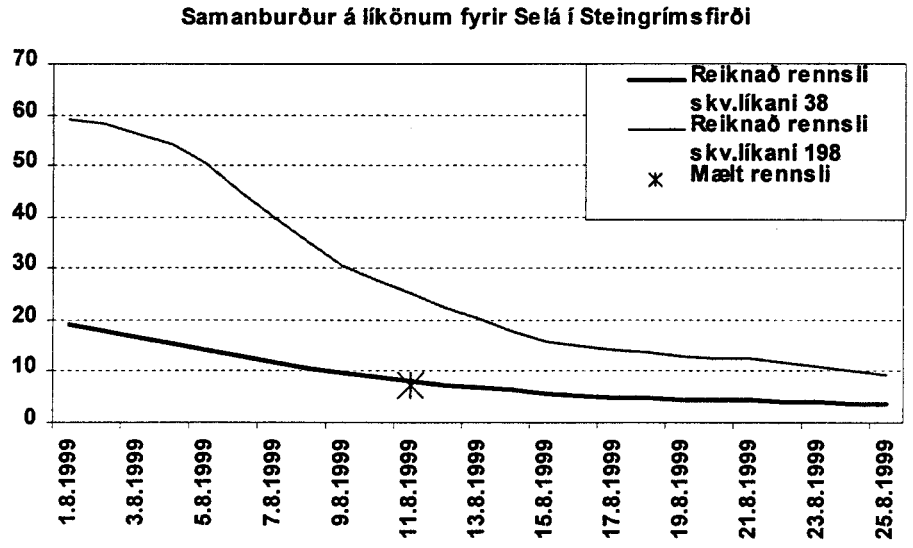
5.6 Selá í Steingrímsfirði

Stærð vatnasviðs Selár er 203,58 km² og er hæðardreifing þess sýnd á mynd 5.21.



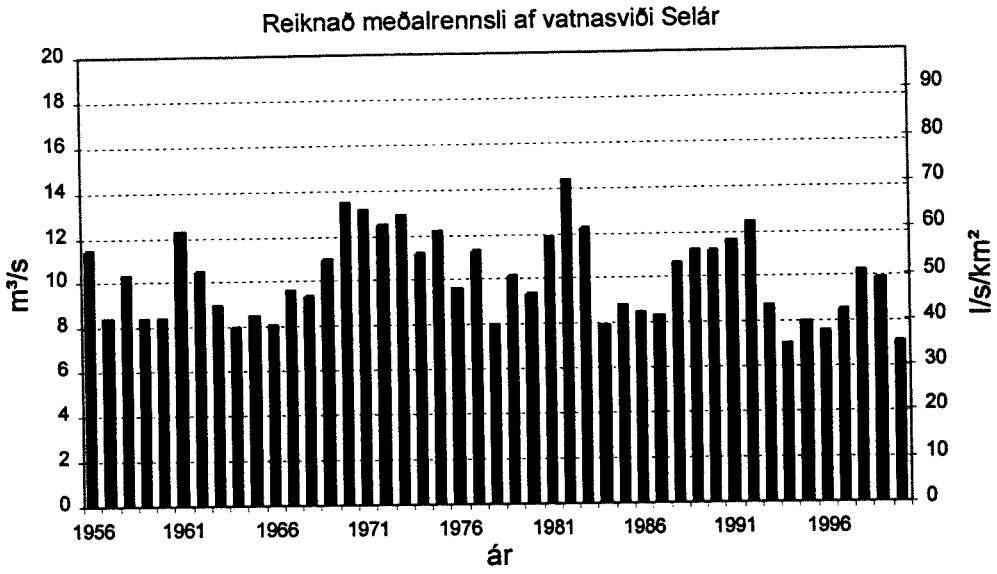
Mynd 5.22 Hæðardreifing vatnasviðs Selár.

Mynd 5.23 sýnir samanburð á mældu og reiknuðu rennsli Selár.



Mynd 5.23 Samanburður á mældu og reiknuðu rennsli.

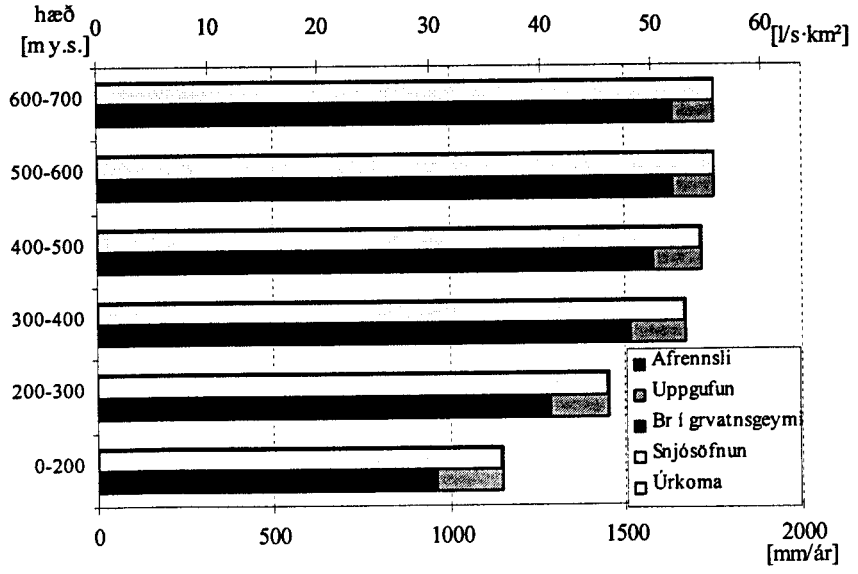
Mynd 5.24 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 5.24 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 10 m^3/s eða 50 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1982/83með 71 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1994/95 með 35 $l/s \cdot km^2$ meðalafrennsli.

Vatnasviði Selár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 5.25 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



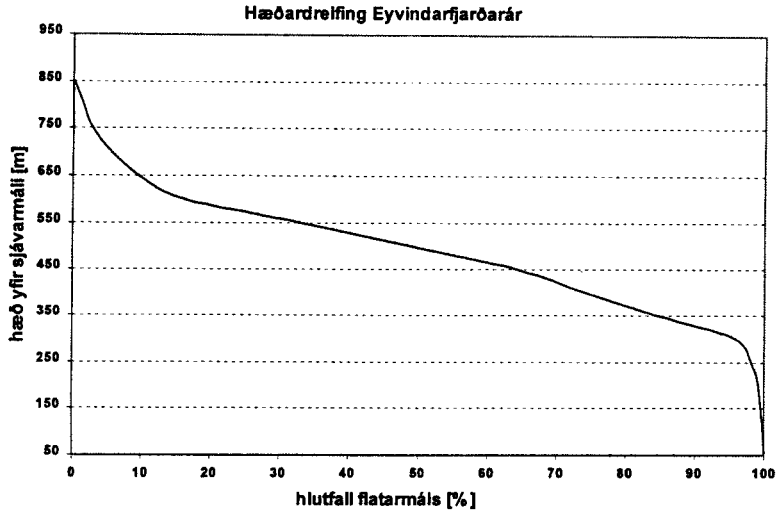
Mynd 5.25 Vatnsjöfnuður á hæðarbilum vatnasviðs Selár.

6 Hlutvatnasvið á Ófeigsfjarðarheiði

Líkan 198 var notað fyrir vatnasvið Eyvindarfjarðarár, Húsár og Reykjafjarðarár.

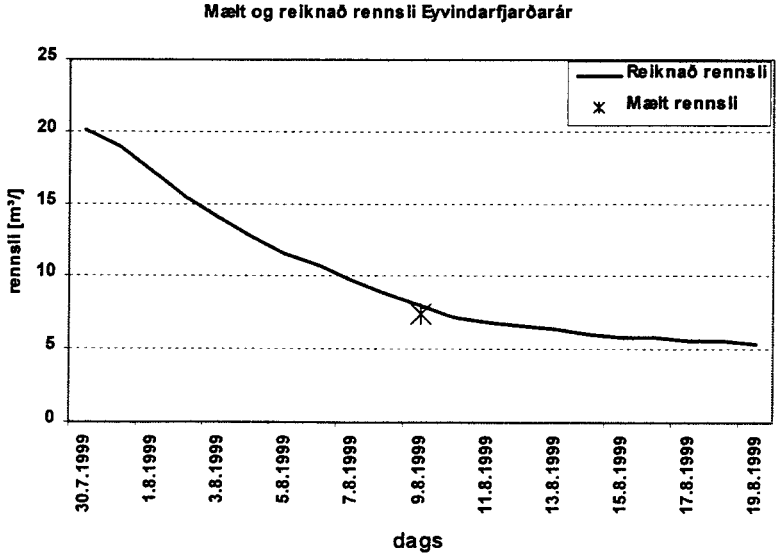
6.1 Eyvindarfjarðará

Vatnasvið Eyvindarfjarðarár er 78 km² og sýnir mynd 6.1 sýnir hæðardreifingu vatnasviðsins.



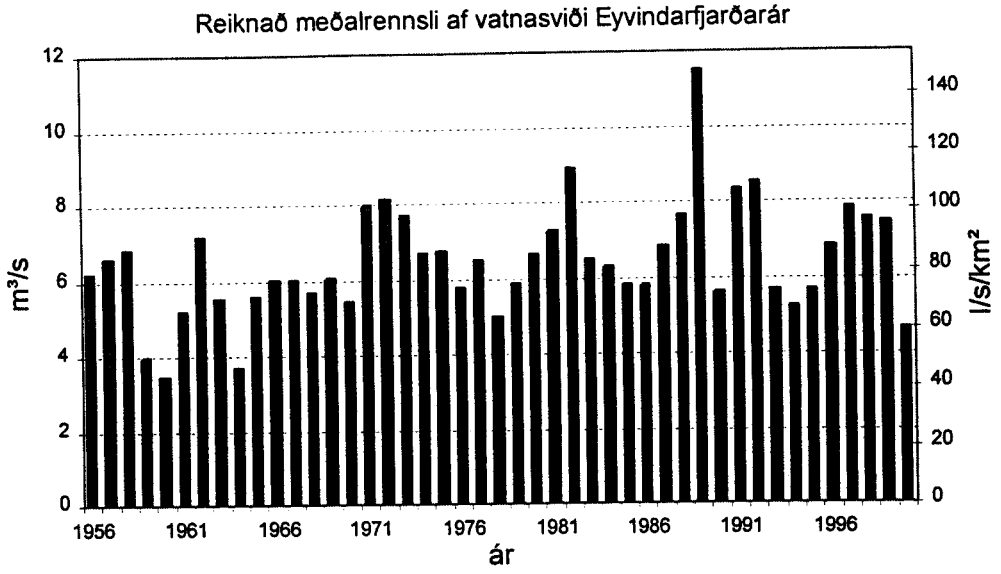
Mynd 6.1 Hæðardreifing vatnasviðs Eyvindarfjarðarár.

Mynd 6.2 sýnir samanburð á mældu og reiknuðu rennsli Eyvindarfjarðarár.



Mynd 6.2 Samanburður á mældu og reiknuðu rennsli.

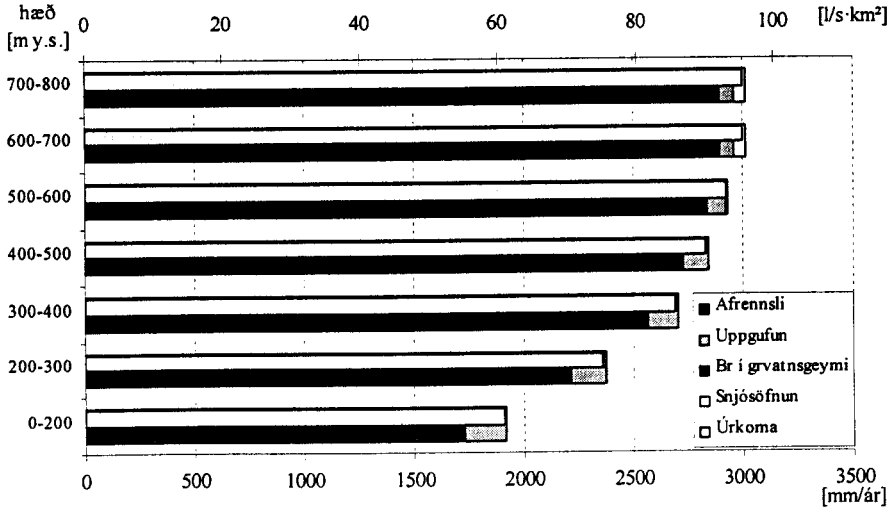
Mynd 6.3 sýnir meðalrennsli vatnsáranna 1955/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv. líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 6.3 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 6,5 m^3/s eða 83 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1989/90 með 145 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 44 $l/s/km^2$ meðalafrennsli.

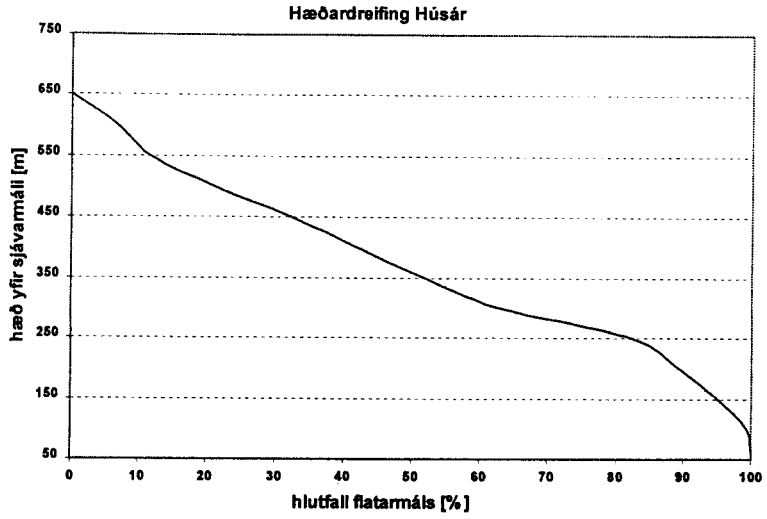
Vatnasviði Eyvindarfjarðarár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 6.4 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 6.4 Vatnsjöfnuður á hæðarbilum vatnasviðs Bæjardalsár.

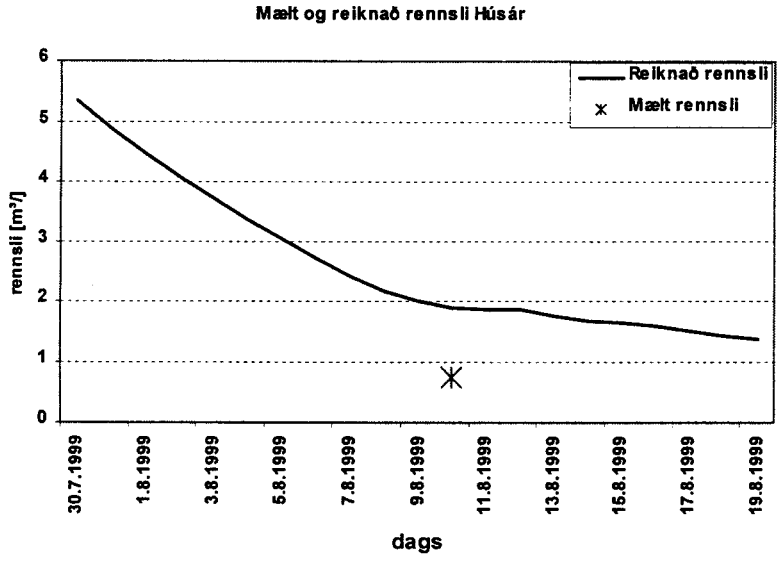
6.2 Húsá

Vatnasvið Húsár er 32 km² og sýnir mynd 6.5 sýnir hæðardreifingu vatnasviðsins.



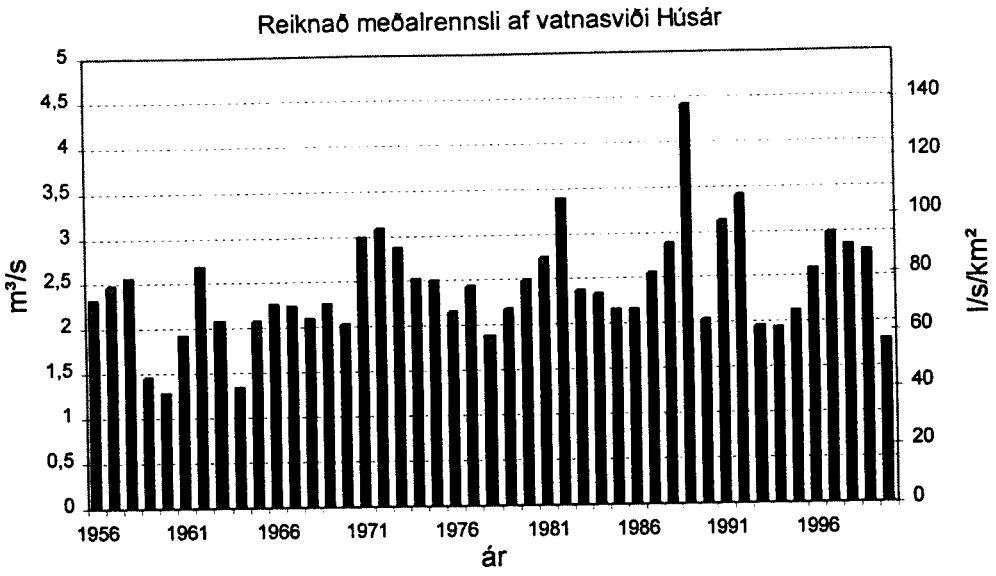
Mynd 6.5 Hæðardreifing vatnasviðs Húsár.

Mynd 6.6 sýnir samanburð á mældu og reiknuðu rennsli Húsár.



Mynd 6.6 Samanburður á mældu og reiknuðu rennsli.

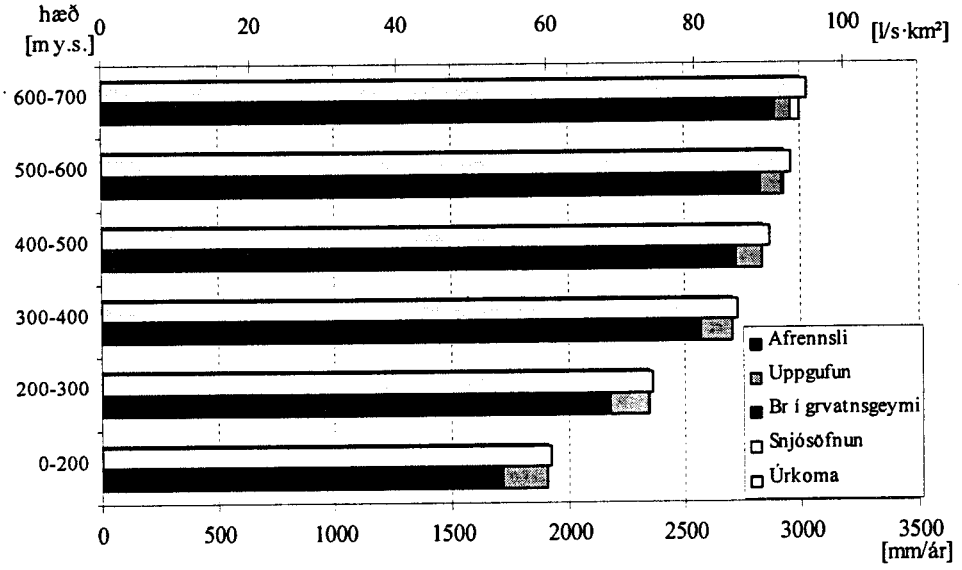
Mynd 6.7 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 6.7 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 2,4 m^3/s eða 75,6 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1989/90 með 137 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 40 $l/s/km^2$ meðalafrennsli.

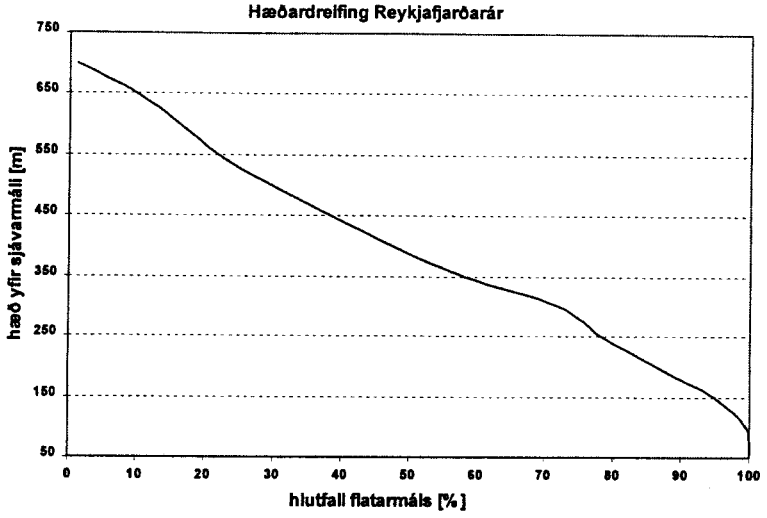
Vatnasviði Húsár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 6.7 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 6.7 Vatnsjöfnuður á hæðarbilum vatnasviðs Húsár.

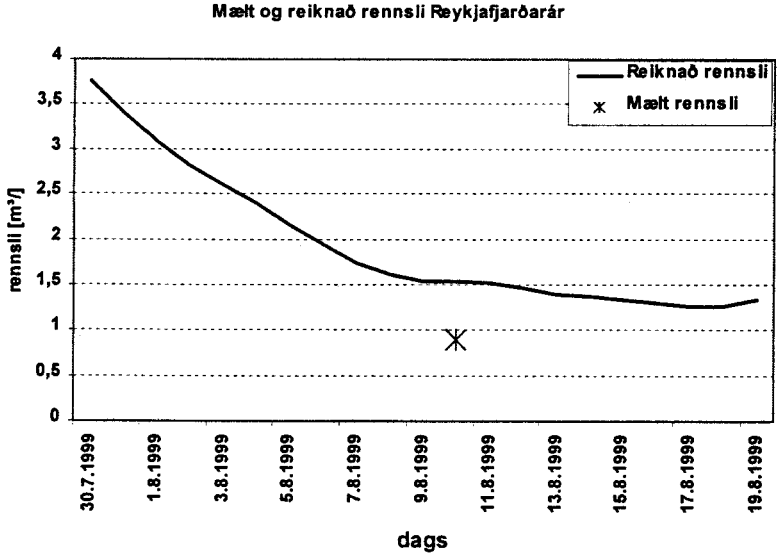
6.3 Reykjafjarðará

Stærð vatnasviðs Reykjafjarðarár er 20,57 km² og er hæðardreifing þess sýnd á mynd 4.1.



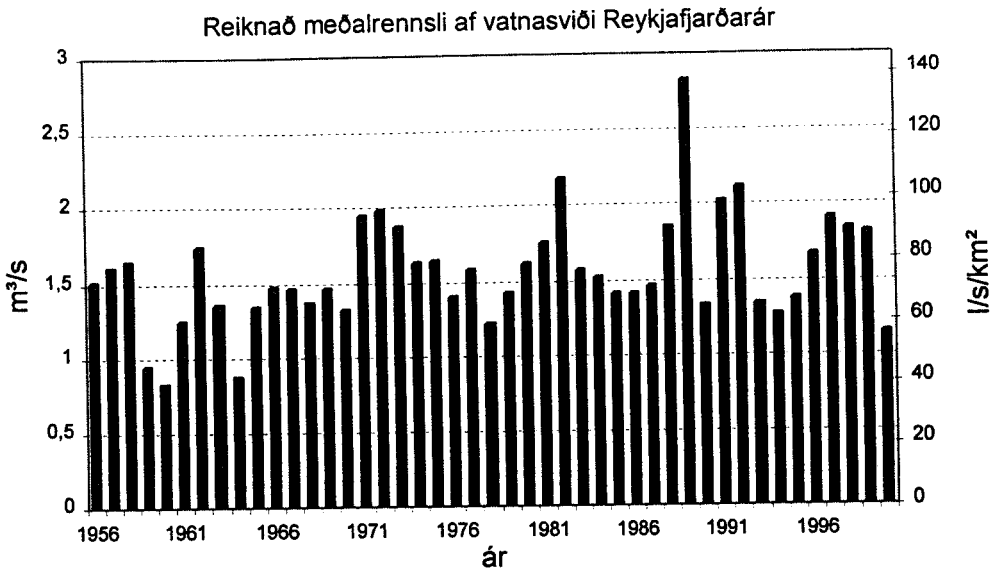
Mynd 6.8 Hæðardreifing vatnasviðs Reykjafjarðarár.

Mynd 6.9 sýnir samanburð á mældu og reiknuðu rennsli Reykjafjarðarár.



Mynd 6.9 Samanburður á mældu og reiknuðu rennsli.

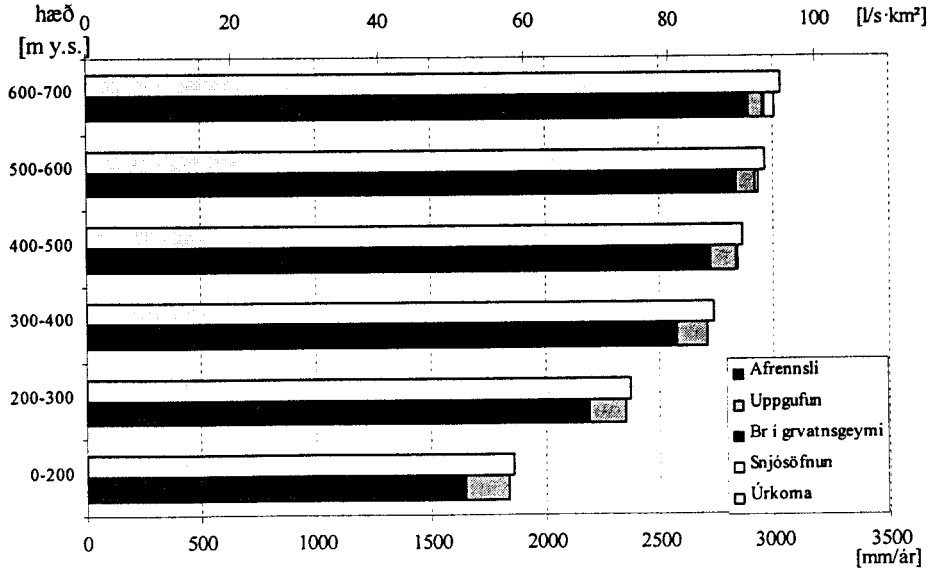
Mynd 6.10 sýnir meðalrennsli vatnsáranna 1956/57 til 2000/01 skv. líkani, en það er fundið út frá heilum rennslisröðum skv líkani fyrir tímabilið 1.9.1956 til 30.6.2001.



Mynd 6.10 Meðalrennsli vatnsáranna 1961/62 til 1998/99 skv. líkani.

Meðalrennsli á tímabilinu skv. HBV líkaninu er 1,6 m^3/s eða 76 $l/s/km^2$. Vatnsmestu árin eru vatnsárin 1989/90 með 137,7 $l/s \cdot km^2$, en hið vatnsminnsta er árið 1960/61 með 40,6 $l/s \cdot km^2$ meðalafrennsli.

Vatnasviði Reykjafjarðarár var nú skipt upp í sjö 100 - 200 m hæðarbil og HBV líkanið af vhm 38 keyrt á hverju þessara hæðarbila. Á mynd 6.11 sést meðal árlegur vatnsjöfnuður tímabilsins 1.9.1956 - 30.6.2001 á vatnasviðinu.



Mynd 6.11 Vatnsjöfnuður á hæðarbilum vatnasviðs Reykjafjarðarár.

7 Niðurstöður

Rennslismælingar voru notaðar til þess að bera saman mælt og reiknað rennsli. Með þessu fékkst mynd af því hvort líkön sem gerð voru af rennsli við vatnshæðarmæla í Þverá á Langadalsströnd og Hvalá ættu vel við nærliggjandi hlutvatnasvið. Það er ljóst að ein mæling fyrir hvert vatnasvið er of lítið til þess að hægt sé að fá góða mynd af rennsli af hlutvatnasviðum, en að svo stöddu eru ekki tiltækar fleiri mælingar. Þegar fleiri rennslismælingar af hlutvatnasviðum liggja fyrir er nauðsynlegt að endurskoða líkönin, og einnig er ástæða til að hvetja til endurskoðunar gagna úr vhm 38 og 198, og endurskoða líkön af rennsli við mælana þegar þau liggja fyrir.

Einnig er ástæða til að hvetja til samfelldra mælinga á hálendi Ófeigsfjarðarheiðar og Langadalsstrandar, bæði á afrennsli og grunnvatni, til að hægt sé að ná betri árangri í mati á afrennsli af svæðinu.

Afrennsliskortið í viðauka I sýnir reiknað meðalafrennsli vatnsáranna 1956/57 til 2000/01 skv. HBV-líkönum.

8 Heimildir

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Veðurstofa Íslands. Gagnasafn með sólarhringsgildum veðurþátta, afrit varðveitt á Vatnamælingum Orkustofnunar.

Viðauki I

Afrennsliskort

Viðauki II

Staðsetning HBV rennslisraða

Hlutvatnasvið	gagnaslóð
Þverá	/os/sgh/vmgogn/rennsli/99038
Hvalá	/os/sgh/vmgogn/rennsli/99198
Bæjardalsá	/os/sgh/vmgogn/rennsli/20005
Hvannadalsá	/os/sgh/vmgogn/rennsli/20014
Hafnardalsá	/os/sgh/vmgogn/rennsli/10363
Blævardalsá	/os/sgh/vmgogn/rennsli/20003
Hraundalsá	/os/sgh/vmgogn/rennsli/20008
Selá í Steingrímsfirði	/os/sgh/vmgogn/rennsli/20024
Eyvindarfjarðará	/os/sgh/vmgogn/rennsli/20007
Húsá	/os/sgh/vmgogn/rennsli/20013
Reykjafjarðará	/os/sgh/vmgogn/rennsli/20022

Viðauki III

Stuðlaskrár

Hlutvatnasvið

Stuðlaskrá fyrir Þverá. (skrá /os/sgh/vmgogn/HBVparam/param.38):

```
START  2V038
  2    0           4      PNO        Number of precipitation stations
  2    0  Galtarv.250      PID1       Identification for precip station 1
  2    0         20.      PHOH1      Altitude precip station 1
  2    0         .25      PWGT1      Weight precipitation station 1
  2    0  Æðey.260         PID2
  2    0         05.      PHOH2
  2    0         .50       PWGT2
  2    0  Gjögur.290       PID3
  2    0         05.      PHOH3
  2    0         .25       PWGT3
  2    0  Hraun á Sk.352 PID1       Identification for precip station 1
  2    0         03.      PHOH1      Altitude precip station 1
  2    0         .0      PWGT1     Weight precipitation station 1
  2    0           3      TNO        Number of temperature stations
  2    0  Galtarv.250     TID1       Identification for temp station 1
  2    0         20.      THOH1      Altitude temp station 1
  2    0         .30       TWGT1      Weight temp station 1
  2    0  Æðey.260         TID2
  2    0         05.      THOH2
  2    0         .70      TWGT2
  2    0  Gjögur.290       TID3
  2    0         05.      THOH3
  2    0         0.0      TWGT3
  2    0           1      QNO        Number of discharge stations
  2    0  vhm038           QID        Identification for discharge station
  2    0          1.0     QWGT       Scaling factor for discharge
  2    0        42.79     AREAL      Catchment area                          [km2]
  2    4        0.000     MAGDEL     Regulation reservoirs                   [1]
  2    5       25.000     HYPSO ( 1,1), low point                 [m]
  2    6      300.000     HYPSO ( 2,1)
  2    7      380.000     HYPSO ( 3,1)
  2    8      412.000     HYPSO ( 4,1)
  2    9      431.000     HYPSO ( 5,1)
  2   10      440.000     HYPSO ( 6,1)
  2   11      458.000     HYPSO ( 7,1)
  2   12      472.000     HYPSO ( 8,1)
  2   13      518.000     HYPSO ( 9,1)
  2   14      600.000     HYPSO (10,1)
  2   15      700.000     HYPSO (11,1), high point
  2   16        0.000     HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17        0.100    HYPSO ( 2,2)
  2   18        0.200     HYPSO ( 3,2)
  2   19        0.300     HYPSO ( 4,2)
  2   20        0.400     HYPSO ( 5,2)
  2   21        0.500     HYPSO ( 6,2)
  2   22        0.600     HYPSO ( 7,2)
  2   23        0.700     HYPSO ( 8,2)
  2   24        0.800     HYPSO ( 9,2)
  2   25        0.900     HYPSO (10,2)
  2   26        1.000     HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27        0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG       Day no for conversion of glacier snow to ice
  2   40        1.20      TX         Threshold temperature for snow/precip.          [C]
  2   41       -0.20      TS         Threshold temperature fo no melt                [C]
  2   42        3.00      CX         Melt index                              [mm/deg/day]
  2   43       0.050      CFR        Refreeze efficiency                             [1]
  2   44        0.08       LV         Max rel. water content in snow                 [1]
  2   45        1.10      PKORR      Precipitaion correction for rain                [1]
  2   46        1.40      SKORR      Additional precipitation corection for snow at gauge [1]
  2   47        365.0     GRADALT    Altitude for change in prec. grad.              [m]
  2   48        0.04      PGRAD1     Precipitation gradient above GRADALT            [1]
  2   49        0.02      CALB       Ageing factor for albedo                    [1/day]
  2   50        0.00      CRAD       Radiation melt component                        [1]
  2   51        1.00      CONV       Convection melt component                       [1]
  2   52        0.0       COND       Condensation melt component                     [1]
  2   60         1.20     CEVPL      lake evapotranspiration adjustment fact         [1]
  2   61         0.5      ERED       evapotranspiration red. during interception     [1]
  2   62        30.0      ICEDAY     Lake temperature time constant                  [d]
  2   63       -0.60      TTGRAD     Temperature gradient for days without precip [deg/100 m]
  2   64       -0.60      TVGRAD     Temperature gradient for days with precip    [deg/100 m]
  2   65        0.22      PGRAD      Precipitation altitude gradient              [1/100 m]
  2   66        1.50      CBRE       Melt increase on glacier ice                    [1]
  2   67        0.70      EP         EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP         EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP         EP( 3)
  2   70        1.00      EP         EP( 4)
  2   71        1.30      EP         EP( 5)
  2   72        1.40      EP         EP( 6)
  2   73        1.30      EP         EP( 7)
  2   74        1.10      EP         EP( 8)
  2   75        1.00      EP         EP( 9)
  2   76        0.90      EP         EP(10)
```

```
2   77        0.70     EP         EP(11)
2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
2   79      150.00     FC         Maximum soil water content               [mm]
2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL      [1]
2   81        1.00     BETA       Non-linearity in soil water zone         [1]
2   82        2.00     INFMAX     maximum infiltration capacity            [mm/day]
2   83
2   84
2   85        0.13      KUZ2      Quick time constant upper zone           [1/day]
2   86       10.00     UZ1        Threshold quick runoff                   [mm]
2   87        0.05     KUZ1       Slow time constant upper zone            [1/day]
2   88        1.70     PERC       Percolation to lower zone                [mm/day]
2   89        0.02     KLZ        Time constant lower zone                 [1/day]
2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
2   91        0.00     ROUT       (2), Routing constant (rating curve const)
2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
2   95        0.00     DECAY      (1), Feedback constant
2   96        0.00     DECAY      (2), Feedback constant
2   97        0.00     DECAY      (3), Feedback constant
2   98        0.30     CE         Evapotranspiration constant              [mm/deg/day]
2   99        0.0      DRAW       "draw up" constant                       [mm/day]
2  100       65.9      LAT        Latitude                                 [deg]
2  101       -0.40     TGRAD(1)   Temperature gradient Jan                 [deg/100m]
2  102       -0.40     TGRAD(2)   Temperature gradient Feb                 [deg/100m]
2  103       -0.50     TGRAD(3)   Temperature gradient Mar                 [deg/100m]
2  104       -0.55     TGRAD(4)   Temperature gradient Apr                 [deg/100m]
2  105       -0.55     TGRAD(5)   Temperature gradient May                 [deg/100m]
2  106       -0.50     TGRAD(6)   Temperature gradient Jun                 [deg/100m]
2  107       -0.50     TGRAD(7)   Temperature gradient Jul                 [deg/100m]
2  108       -0.50     TGRAD(8)   Temperature gradient Aug                 [deg/100m]
2  109       -0.50     TGRAD(9)   Temperature gradient Sep                 [deg/100m]
2  110       -0.50     TGRAD(10)  Temperature gradient Oct                 [deg/100m]
2  111       -0.50     TGRAD(11)  Temperature gradient Nov                 [deg/100m]
2  112       -0.47     TGRAD(12)  Temperature gradient Dec                 [deg/100m]
2  113       40.0      SPDIST     Uniformly distributed snow acc           [mm]
2  114      120.0      SMINI      Inital soil moisture content             [mm]
2  115        0.0       UZINI      Initial upper zone content             [mm]
2  116       30.0      LZINI      Initial lower zone content               [mm]
2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1                [1]
2  124        0.0      LAKE(1)    Lake area,         zone 1                [1]
2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2                [1]
2  128        0.0      LAKE(2)    Lake area,         zone 2                [1]
2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3                [1]
2  132        0.0      LAKE(3)    Lake area,         zone 3                [1]
2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4                [1]
2  136        0.0      LAKE(4)    Lake area,         zone 4                [1]
2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5                [1]
2  140        0.0      LAKE(5)    Lake area,         zone 5                [1]
2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6                [1]
2  144        0.0      LAKE(6)    Lake area,         zone 6                [1]
2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7                [1]
2  148        0.0      LAKE(7)    Lake area,         zone 7                [1]
2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8                [1]
2  152        0.0      LAKE(8)    Lake area,         zone 8                [1]
2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9                [1]
2  156        0.0      LAKE(9)    Lake area,         zone 9                [1]
2  157          4      VEGT(1,10) Vegetation type 1, zone 10
2  158          0      VEGT(2,10) Vegetation type 2, zone 10
2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10               [1]
2  160        0.0      LAKE(10)   Lake area,         zone 10               [1]
FINIS
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Stuðlaskrá fyrir Hvalá. (skrá /os/sgh/vmgogn/HBVparam/param.198):

```
START  2V198
  2    0           4      PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0          .0      PWGT2
  2    0  Gjöður.290      PID3
  2    0         05.      PHOH3
  2    0         .85       PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .15      PWGT1     Weight precipitation station 1
  2    0           3      TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0          .0      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0          .0     TWGT2
  2    0  Gjöður.290      TID3
  2    0         05.      THOH3
  2    0         1.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm198          QID       Identification for discharge station
  2    0         1.0      QWGT      Scaling factor for discharge
  2    0      178.27       AREAL     Catchment area                          [km2]
  2    4       0.000       MAGDEL    Regulation reservoirs                   [1]
  2    5      50.000       HYPSO ( 1,1), low point                 [m]
  2    6     280.000       HYPSO ( 2,1)
  2    7     330.000       HYPSO ( 3,1)
  2    8     365.000       HYPSO ( 4,1)
  2    9     410.000       HYPSO ( 5,1)
  2   10     445.000       HYPSO ( 6,1)
  2   11     480.000       HYPSO ( 7,1)
  2   12     512.000       HYPSO ( 8,1)
  2   13     540.000       HYPSO ( 9,1)
  2   14     570.000       HYPSO (10,1)
  2   15     650.000       HYPSO (11,1), high point
  2   16       0.000       HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17       0.100 .     HYPSO ( 2,2)
  2   18       0.200       HYPSO ( 3,2)
  2   19       0.300       HYPSO ( 4,2)
  2   20       0.400       HYPSO ( 5,2)
  2   21       0.500       HYPSO ( 6,2)
  2   22       0.600       HYPSO ( 7,2)
  2   23       0.700       HYPSO ( 8,2)
  2   24       0.800       HYPSO ( 9,2)
  2   25       0.900       HYPSO (10,2)
  2   26       1.000       HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27       0.000       BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28       0.000
  2   29       0.000
  2   30       0.000
  2   31       0.000
  2   32       0.000
  2   33       0.000
  2   34       0.000
  2   35       0.000
  2   36       0.000
  2   37       0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39     270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40       1.10      TX        Threshold temperature for snow/precip.          [C]
  2   41      -0.40      TS        Threshold temperature fo no melt                [C]
  2   42       7.80      CX        Melt index                              [mm/deg/day]
  2   43      0.050      CFR       Refreeze efficiency                             [1]
  2   44      0.08        LV        Max rel. water content in snow                 [1]
  2   45       1.50      PKORR     Precipitaion correction for rain                [1]
  2   46       1.80      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47       365.0     GRADALT   Altitude for change in prec. grad.              [m]
  2   48       0.06      PGRAD1    Precipitation gradient above GRADALT            [1]
  2   49       0.02      CALB      Ageing factor for albedo                    [1/day]
  2   50       0.00      CRAD      Radiation melt component                        [1]
  2   51       1.00      CONV      Convection melt component                       [1]
  2   52       0.0       COND      Condensation melt component                     [1]
  2   60        1.20     CEVPL     lake evapotranspiration adjustment fact         [1]
  2   61        0.5      ERED      evapotranspiration red. during interception     [1]
  2   62       30.0      ICEDAY    Lake temperature time constant                  [d]
  2   63      -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64      -0.80      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65       0.26      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66       1.50      CBRE      Melt increase on glacier ice                    [1]
  2   67       0.70      EP        EP( 1), Pot evapotranspiration, Jan     [mm/day] or [1]
  2   68       0.70      EP        EP( 2), Pot evapotranspiration, Feb     [mm/day] or [1]
  2   69       0.70      EP        EP( 3)
  2   70       1.00      EP        EP( 4)
  2   71       1.30      EP        EP( 5)
  2   72       1.40      EP        EP( 6)
  2   73       1.30      EP        EP( 7)
  2   74       1.10      EP        EP( 8)
  2   75       1.00      EP        EP( 9)
  2   76       0.90      EP        EP(10)
```

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 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content              [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
 2   81        1.00     BETA       Non-linearity in soil water zone        [1]
 2   82        2.00     INFMAX     maximum infiltration capacity           [mm/day]
 2   83
 2   84
 2   85        0.20      KUZ2       Quick time constant upper zone          [1/day]
 2   86       30.00     UZ1        Threshold quick runoff                  [mm]
 2   87        0.20     KUZ1       Slow time constant upper zone           [1/day]
 2   88        1.70     PERC       Percolation to lower zone               [mm/day]
 2   89        0.01     KLZ        Time constant lower zone                [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                      [mm/day]
 2  100       66.2      LAT        Latitude                                [deg]
 2  101      -0.40      TGRAD(1)   Temperature gradient Jan                [deg/100m]
 2  102      -0.40      TGRAD(2)   Temperature gradient Feb                [deg/100m]
 2  103      -0.50      TGRAD(3)   Temperature gradient Mar                [deg/100m]
 2  104      -0.55      TGRAD(4)   Temperature gradient Apr                [deg/100m]
 2  105      -0.55      TGRAD(5)   Temperature gradient May                [deg/100m]
 2  106      -0.50      TGRAD(6)   Temperature gradient Jun                [deg/100m]
 2  107      -0.50      TGRAD(7)   Temperature gradient Jul                [deg/100m]
 2  108      -0.50      TGRAD(8)   Temperature gradient Aug                [deg/100m]
 2  109      -0.50      TGRAD(9)   Temperature gradient Sep                [deg/100m]
 2  110      -0.50      TGRAD(10)  Temperature gradient Oct                [deg/100m]
 2  111      -0.50      TGRAD(11)  Temperature gradient Nov                [deg/100m]
 2  112      -0.47      TGRAD(12)  Temperature gradient Dec                [deg/100m]
 2  113       40.0      SPDIST     Uniformly distributed snow acc          [mm]
 2  114      120.0      SMINI      Inital soil moisture content            [mm]
 2  115        0.0       UZINI      Initial upper zone content              [mm]
 2  116       30.0      LZINI      Initial lower zone content              [mm]
 2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
 2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
 2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1               [1]
 2  124        0.0      LAKE(1)    Lake area,         zone 1               [1]
 2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
 2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
 2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2               [1]
 2  128        0.0      LAKE(2)    Lake area,         zone 2               [1]
 2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
 2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
 2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3               [1]
 2  132        0.0      LAKE(3)    Lake area,         zone 3               [1]
 2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
 2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
 2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4               [1]
 2  136        0.0      LAKE(4)    Lake area,         zone 4               [1]
 2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
 2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
 2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5               [1]
 2  140        0.0      LAKE(5)    Lake area,         zone 5               [1]
 2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
 2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
 2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6               [1]
 2  144        0.0      LAKE(6)    Lake area,         zone 6               [1]
 2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
 2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
 2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7               [1]
 2  148        0.0      LAKE(7)    Lake area,         zone 7               [1]
 2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
 2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
 2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8               [1]
 2  152        0.0      LAKE(8)    Lake area,         zone 8               [1]
 2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
 2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
 2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9               [1]
 2  156        0.0      LAKE(9)    Lake area,         zone 9               [1]
 2  157          4      VEGT(1,10) Vegetation type 1, zone 10
 2  158          0      VEGT(2,10) Vegetation type 2, zone 10
 2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10              [1]
 2  160        0.0      LAKE(10)   Lake area,         zone 10              [1]
FINIS
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Stuðlaskrá fyrir Bæjardalsá (skrá /os/sgh/vmgogn/HBVparam/param.baejard):

```
START  2V038
  2    0            4     PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0         .25      PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0         .50       PWGT2
  2    0  Gjðgur.290       PID3
  2    0         05.      PHOH3
  2    0         .25       PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .0      PWGT1     Weight precipitation station 1
  2    0           3      TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0         .30       TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0         .70      TWGT2
  2    0  Gjðgur.290       TID3
  2    0         05.      THOH3
  2    0         0.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm038          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0        38.81     AREAL     Catchment area                          [km2]
  2    4        0.000     MAGDEL    Regulation reservoirs                   [1]
  2    5      250.000     HYPSO ( 1,1), low point                [m]
  2    6      300.000     HYPSO ( 2,1)
  2    7      350.000     HYPSO ( 3,1)
  2    8      400.000     HYPSO ( 4,1)
  2    9      450.000     HYPSO ( 5,1)
  2   10      500.000     HYPSO ( 6,1)
  2   11      550.000     HYPSO ( 7,1)
  2   12      600.000     HYPSO ( 8,1)
  2   13      750.000     HYPSO ( 9,1)
  2   14      800.000     HYPSO (10,1)
  2   15      850.000     HYPSO (11,1), high point
  2   16        0.000     HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17        0.011     HYPSO ( 2,2)
  2   18        0.090     HYPSO ( 3,2)
  2   19        0.329     HYPSO ( 4,2)
  2   20        0.591     HYPSO ( 5,2)
  2   21        0.949     HYPSO ( 6,2)
  2   22        0.999     HYPSO ( 7,2)
  2   23        1.000     HYPSO ( 8,2)
  2   24        1.000     HYPSO ( 9,2)
  2   25        1.000     HYPSO (10,2)
  2   26        1.000     HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27        0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40        1.20      TX        Threshold temperature for snow/precip.          [C]
  2   41       -0.20      TS        Threshold temperature fo no melt                [C]
  2   42        3.00      CX        Melt index                              [mm/deg/day]
  2   43       0.050      CFR       Refreeze efficiency                             [1]
  2   44        0.08       LV        Max rel. water content in snow                 [1]
  2   45        1.10      PKORR     Precipitaion correction for rain                [1]
  2   46        1.40      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47        365.0     GRADALT   Altitude for change in prec. grad.              [m]
  2   48        0.04      PGRAD1    Precipitation gradient above GRADALT            [1]
  2   49        0.02      CALB      Ageing factor for albedo                    [1/day]
  2   50        0.00      CRAD      Radiation melt component                        [1]
  2   51        1.00      CONV      Convection melt component                       [1]
  2   52        0.0       COND      Condensation melt component                     [1]
  2   60         1.20     CEVPL     lake evapotranspiration adjustment fact         [1]
  2   61         0.5      ERED      evapotranspiration red. during interception     [1]
  2   62        30.0      ICEDAY    Lake temperature time constant                  [d]
  2   63       -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64       -0.60      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65        0.22      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66        1.50      CBRE      Melt increase on glacier ice                    [1]
  2   67        0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP        EP( 3)
  2   70        1.00      EP        EP( 4)
  2   71        1.30      EP        EP( 5)
  2   72        1.40      EP        EP( 6)
  2   73        1.30      EP        EP( 7)
  2   74        1.10      EP        EP( 8)
  2   75        1.00      EP        EP( 9)
  2   76        0.90      EP        EP(10)
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2   77        0.70     EP         EP(11)
2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec    [mm/day] or [1]
2   79      150.00     FC         Maximum soil water content              [mm]
2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
2   81        1.00     BETA       Non-linearity in soil water zone        [1]
2   82        2.00     INFMAX     maximum infiltration capacity           [mm/day]
2   83
2   84
2   85        0.13      KUZ2       Quick time constant upper zone          [1/day]
2   86       10.00     UZ1        Threshold quick runoff                  [mm]
2   87        0.05     KUZ1       Slow time constant upper zone           [1/day]
2   88        1.70     PERC       Percolation to lower zone               [mm/day]
2   89        0.02     KLZ        Time constant lower zone                [1/day]
2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
2   91        0.00     ROUT       (2), Routing constant (rating curve const)
2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
2   95        0.00     DECAY      (1), Feedback constant
2   96        0.00     DECAY      (2), Feedback constant
2   97        0.00     DECAY      (3), Feedback constant
2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
2   99        0.0      DRAW       "draw up" constant                      [mm/day]
2  100       65.9      LAT        Latitude                                [deg]
2  101      -0.40     TGRAD(1)   Temperature gradient Jan                [deg/100m]
2  102      -0.40     TGRAD(2)   Temperature gradient Feb                [deg/100m]
2  103      -0.50     TGRAD(3)   Temperature gradient Mar                [deg/100m]
2  104      -0.55     TGRAD(4)   Temperature gradient Apr                [deg/100m]
2  105      -0.55     TGRAD(5)   Temperature gradient May                [deg/100m]
2  106      -0.50     TGRAD(6)   Temperature gradient Jun                [deg/100m]
2  107      -0.50     TGRAD(7)   Temperature gradient Jul                [deg/100m]
2  108      -0.50     TGRAD(8)   Temperature gradient Aug                [deg/100m]
2  109      -0.50     TGRAD(9)   Temperature gradient Sep                [deg/100m]
2  110      -0.50     TGRAD(10)  Temperature gradient Oct                [deg/100m]
2  111      -0.50     TGRAD(11)  Temperature gradient Nov                [deg/100m]
2  112      -0.47     TGRAD(12)  Temperature gradient Dec                [deg/100m]
2  113       40.0     SPDIST     Uniformly distributed snow acc          [mm]
2  114      120.0     SMINI      Inital soil moisture content            [mm]
2  115        0.0      UZINI      Initial upper zone content              [mm]
2  116       30.0     LZINI      Initial lower zone content              [mm]
2  121          4     VEGT(1,1)  Vegetation type 1, zone 1
2  122          0     VEGT(2,1)  Vegetation type 2, zone 1
2  123        0.0     VEGA(1)    Vegetation 2 area, zone 1               [1]
2  124        0.0     LAKE(1)    Lake area,         zone 1               [1]
2  125          4     VEGT(1,2)  Vegetation type 1, zone 2
2  126          0     VEGT(2,2)  Vegetation type 2, zone 2
2  127        0.0     VEGA(2)    Vegetation 2 area, zone 2               [1]
2  128        0.0     LAKE(2)    Lake area,         zone 2               [1]
2  129          4     VEGT(1,3)  Vegetation type 1, zone 3
2  130          0     VEGT(2,3)  Vegetation type 2, zone 3
2  131        0.0     VEGA(3)    Vegetation 2 area, zone 3               [1]
2  132        0.0     LAKE(3)    Lake area,         zone 3               [1]
2  133          4     VEGT(1,4)  Vegetation type 1, zone 4
2  134          0     VEGT(2,4)  Vegetation type 2, zone 4
2  135        0.0     VEGA(4)    Vegetation 2 area, zone 4               [1]
2  136        0.0     LAKE(4)    Lake area,         zone 4               [1]
2  137          4     VEGT(1,5)  Vegetation type 1, zone 5
2  138          0     VEGT(2,5)  Vegetation type 2, zone 5
2  139        0.0     VEGA(5)    Vegetation 2 area, zone 5               [1]
2  140        0.0     LAKE(5)    Lake area,         zone 5               [1]
2  141          4     VEGT(1,6)  Vegetation type 1, zone 6
2  142          0     VEGT(2,6)  Vegetation type 2, zone 6
2  143        0.0     VEGA(6)    Vegetation 2 area, zone 6               [1]
2  144        0.0     LAKE(6)    Lake area,         zone 6               [1]
2  145          4     VEGT(1,7)  Vegetation type 1, zone 7
2  146          0     VEGT(2,7)  Vegetation type 2, zone 7
2  147        0.0     VEGA(7)    Vegetation 2 area, zone 7               [1]
2  148        0.0     LAKE(7)    Lake area,         zone 7               [1]
2  149          4     VEGT(1,8)  Vegetation type 1, zone 8
2  150          0     VEGT(2,8)  Vegetation type 2, zone 8
2  151        0.0     VEGA(8)    Vegetation 2 area, zone 8               [1]
2  152        0.0     LAKE(8)    Lake area,         zone 8               [1]
2  153          4     VEGT(1,9)  Vegetation type 1, zone 9
2  154          0     VEGT(2,9)  Vegetation type 2, zone 9
2  155        0.0     VEGA(9)    Vegetation 2 area, zone 9               [1]
2  156        0.0     LAKE(9)    Lake area,         zone 9               [1]
2  157          4     VEGT(1,10) Vegetation type 1, zone 10
2  158          0     VEGT(2,10) Vegetation type 2, zone 10
2  159        0.0     VEGA(10)   Vegetation 2 area, zone 10              [1]
2  160        0.0     LAKE(10)   Lake area,         zone 10              [1]
FINIS
```

Stuðlaskrá fyrir Hvannadalsá. (skrá /os/sgh/vmgogn/HBVparam/param.hvannad):

```
START  2V038
  2     0            4      PNO        Number of precipitation stations
  2     0  Galtarv.250      PID1       Identification for precip station 1
  2     0          20.      PHOH1      Altitude precip station 1
  2     0          .25      PWGT1      Weight precipitation station 1
  2     0  Æðey.260         PID2
  2     0          05.      PHOH2
  2     0          .50       PWGT2
  2     0  Gjögur.290       PID3
  2     0          05.      PHOH3
  2     0          .25       PWGT3
  2     0  Hraun á Sk.352 PID1       Identification for precip station 1
  2     0          03.      PHOH1      Altitude precip station 1
  2     0          .0      PWGT1     Weight precipitation station 1
  2     0           3       TNO       Number of temperature stations
  2     0  Galtarv.250      TID1       Identification for temp station 1
  2     0          20.      THOH1      Altitude temp station 1
  2     0          .30       TWGT1      Weight temp station 1
  2     0  Æðey.260         TID2
  2     0          05.      THOH2
  2     0          .70      TWGT2
  2     0  Gjögur.290       TID3
  2     0          05.      THOH3
  2     0          0.0      TWGT3
  2     0           1       QNO        Number of discharge stations
  2     0  vhm038           QID        Identification for discharge station
  2     0          1.0      QWGT       Scaling factor for discharge
  2     0        83.12      AREAL      Catchment area                    -       [km2]
  2     4        0.000      MAGDEL     Regulation reservoirs                     [1]
  2     5      100.000      HYPSO ( 1,1), low point                [m]
  2     6      150.000      HYPSO ( 2,1)
  2     7      200.000      HYPSO ( 3,1)
  2     8      250.000      HYPSO ( 4,1)
  2     9      300.000      HYPSO ( 5,1)
  2    10      350.000      HYPSO ( 6,1)
  2    11      400.000      HYPSO ( 7,1)
  2    12      450.000      HYPSO ( 8,1)
  2    13      500.000      HYPSO ( 9,1)
  2    14      600.000      HYPSO (10,1)
  2    15      650.000      HYPSO (11,1), high point
  2    16        0.000      HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2    17        0.091     HYPSO ( 2,2)
  2    18        0.040      HYPSO ( 3,2)
  2    19        0.073      HYPSO ( 4,2)
  2    20        0.109      HYPSO ( 5,2)
  2    21        0.179      HYPSO ( 6,2)
  2    22        0.269      HYPSO ( 7,2)
  2    23        0.475      HYPSO ( 8,2)
  2    24        0.704      HYPSO ( 9,2)
  2    25        0.999      HYPSO (10,2)
  2    26        1.000      HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2    27        0.000      BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2    28        0.000
  2    29        0.000
  2    30        0.000
  2    31        0.000
  2    32        0.000
  2    33        0.000
  2    34        0.000
  2    35        0.000
  2    36        0.000
  2    37        0.000      BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2    39      270.0        NDAG       Day no for conversion of glacier snow to ice
  2    40        1.20       TX         Threshold temperature for snow/precip.            [C]
  2    41       -0.20       TS         Threshold temperature fo no melt                  [C]
  2    42        3.00       CX         Melt index                              [mm/deg/day]
  2    43       0.050       CFR        Refreeze efficiency                               [1]
  2    44        0.08        LV         Max rel. water content in snow                    [1]
  2    45        1.10       PKORR      Precipitaion correction for rain                  [1]
  2    46        1.40       SKORR      Additional precipitation corection for snow at gauge [1]
  2    47        365.0      GRADALT    Altitude for change in prec. grad.                [m]
  2    48        0.04       PGRAD1     Precipitation gradient above GRADALT              [1]
  2    49        0.02       CALB       Ageing factor for albedo                  [1/day]
  2    50        0.00       CRAD       Radiation melt component                          [1]
  2    51        1.00       CONV       Convection melt component                         [1]
  2    52        0.0        COND       Condensation melt component                       [1]
  2    60         1.20      CEVPL      lake evapotranspiration adjustment fact           [1]
  2    61         0.5       ERED       evapotranspiration red. during interception       [1]
  2    62        30.0       ICEDAY     Lake temperature time constant                    [d]
  2    63       -0.60       TTGRAD     Temperature gradient for days without precip [deg/100 m]
  2    64       -0.60       TVGRAD     Temperature gradient for days with precip    [deg/100 m]
  2    65        0.22       PGRAD      Precipitation altitude gradient                   [1/100 m]
  2    66        1.50       CBRE       Melt increase on glacier ice                      [1]
  2    67        0.70       EP         EP( 1), Pot evapotranspiration, Jan     [mm/day] or [1]
  2    68        0.70       EP         EP( 2), Pot evapotranspiration, Feb     [mm/day] or [1]
  2    69        0.70       EP         EP( 3)
  2    70        1.00       EP         EP( 4)
  2    71        1.30       EP         EP( 5)
  2    72        1.40       EP         EP( 6)
  2    73        1.30       EP         EP( 7)
  2    74        1.10       EP         EP( 8)
  2    75        1.00       EP         EP( 9)
  2    76        0.90       EP         EP(10)
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 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content              [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
 2   81        1.00     BETA       Non-linearity in soil water zone        [1]
 2   82        2.00     INFMAX     maximum infiltration capacity           [mm/day]
 2   83
 2   84
 2   85        0.13      KUZ2       Quick time constant upper zone          [1/day]
 2   86       10.00     UZ1        Threshold quick runoff                  [mm]
 2   87        0.05     KUZ1       Slow time constant upper zone           [1/day]
 2   88        1.70     PERC       Percolation to lower zone               [mm/day]
 2   89        0.02     KLZ        Time constant lower zone                [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                      [mm/day]
 2  100       65.9      LAT        Latitude                                [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan                [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb                [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar                [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr                [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May                [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun                [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul                [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug                [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep                [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct                [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov                [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec                [deg/100m]
 2  113       40.0      SPDIST     Uniformly distributed snow acc          [mm]
 2  114      120.0      SMINI      Inital soil moisture content            [mm]
 2  115        0.0       UZINI      Initial upper zone content              [mm]
 2  116       30.0      LZINI      Initial lower zone content              [mm]
 2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
 2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
 2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1               [1]
 2  124        0.0      LAKE(1)    Lake area,         zone 1               [1]
 2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
 2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
 2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2               [1]
 2  128        0.0      LAKE(2)    Lake area,         zone 2               [1]
 2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
 2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
 2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3               [1]
 2  132        0.0      LAKE(3)    Lake area,         zone 3               [1]
 2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
 2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
 2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4               [1]
 2  136        0.0      LAKE(4)    Lake area,         zone 4               [1]
 2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
 2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
 2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5               [1]
 2  140        0.0      LAKE(5)    Lake area,         zone 5               [1]
 2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
 2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
 2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6               [1]
 2  144        0.0      LAKE(6)    Lake area,         zone 6               [1]
 2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
 2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
 2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7               [1]
 2  148        0.0      LAKE(7)    Lake area,         zone 7               [1]
 2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
 2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
 2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8               [1]
 2  152        0.0      LAKE(8)    Lake area,         zone 8               [1]
 2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
 2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
 2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9               [1]
 2  156        0.0      LAKE(9)    Lake area,         zone 9               [1]
 2  157          4      VEGT(1,10) Vegetation type 1, zone 10
 2  158          0      VEGT(2,10) Vegetation type 2, zone 10
 2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10              [1]
 2  160        0.0      LAKE(10)   Lake area,         zone 10              [1]
FINIS
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Stuðlaskrá fyrir Hafnardalsá (skrá /os/sgh/vmgogn/HBVparam/param.hafnard):

```
START  2V038
  2    0            4      PNO        Number of precipitation stations
  2    0  Galtarv.250      PID1       Identification for precip station 1
  2    0         20.       PHOH1      Altitude precip station 1
  2    0         .25       PWGT1      Weight precipitation station 1
  2    0  Æðey.260         PID2
  2    0         05.       PHOH2
  2    0         .50        PWGT2
  2    0  Gjðgur.290       PID3
  2    0         05.       PHOH3
  2    0         .25        PWGT3
  2    0  Hraun á Sk.352 PID1       Identification for precip station 1
  2    0         03.       PHOH1      Altitude precip station 1
  2    0         .0      PWGT1     Weight precipitation station 1
  2    0           3       TNO        Number of temperature stations
  2    0  Galtarv.250      TID1       Identification for temp station 1
  2    0         20.       THOH1      Altitude temp station 1
  2    0         .30        TWGT1      Weight temp station 1
  2    0  Æðey.260         TID2
  2    0         05.       THOH2
  2    0         .70       TWGT2
  2    0  Gjðgur.290       TID3
  2    0         05.       THOH3
  2    0         0.0       TWGT3
  2    0           1       QNO        Number of discharge stations
  2    0  vhm038           QID        Identification for discharge station
  2    0          1.0      QWGT       Scaling factor for discharge
  2    0        37.85      AREAL      Catchment area                          [km2]
  2    4        0.000      MAGDEL     Regulation reservoirs                   [1]
  2    5      150.000      HYPSO ( 1,1), low point                 [m]
  2    6      200.000      HYPSO ( 2,1)
  2    7      250.000      HYPSO ( 3,1)
  2    8      300.000      HYPSO ( 4,1)
  2    9      350.000      HYPSO ( 5,1)
  2   10      400.000      HYPSO ( 6,1)
  2   11      450.000      HYPSO ( 7,1)
  2   12      500.000      HYPSO ( 8,1)
  2   13      550.000      HYPSO ( 9,1)
  2   14      600.000      HYPSO (10,1)
  2   15      700.000      HYPSO (11,1), high point
  2   16        0.000      HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17        0.021    HYPSO ( 2,2)
  2   18        0.070      HYPSO ( 3,2)
  2   19        0.113      HYPSO ( 4,2)
  2   20        0.177      HYPSO ( 5,2)
  2   21        0.277      HYPSO ( 6,2)
  2   22        0.523      HYPSO ( 7,2)
  2   23        0.809      HYPSO ( 8,2)
  2   24        1.000      HYPSO ( 9,2)
  2   25        1.000      HYPSO (10,2)
  2   26        1.000      HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27        0.000      BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000      BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0        NDAG       Day no for conversion of glacier snow to ice
  2   40        1.20       TX         Threshold temperature for snow/precip.          [C]
  2   41       -0.20       TS         Threshold temperature fo no melt              [C]
  2   42        3.00       CX         Melt index                                [mm/deg/day]
  2   43       0.050       CFR        Refreeze efficiency                           [1]
  2   44        0.08        LV         Max rel. water content in snow               [1]
  2   45        1.10       PKORR      Precipitaion correction for rain              [1]
  2   46        1.40       SKORR      Additional precipitation corection for snow at gauge [1]
  2   47        365.0      GRADALT    Altitude for change in prec. grad.            [m]
  2   48        0.04       PGRAD1     Precipitation gradient above GRADALT          [1]
  2   49        0.02       CALB       Ageing factor for albedo                    [1/day]
  2   50        0.00       CRAD       Radiation melt component                      [1]
  2   51        1.00       CONV       Convection melt component                     [1]
  2   52        0.0        COND       Condensation melt component                   [1]
  2   60         1.20      CEVPL      lake evapotranspiration adjustment fact       [1]
  2   61         0.5       ERED       evapotranspiration red. during interception   [1]
  2   62        30.0       ICEDAY     Lake temperature time constant                [d]
  2   63       -0.60       TTGRAD     Temperature gradient for days without precip [deg/100 m]
  2   64       -0.60       TVGRAD     Temperature gradient for days with precip    [deg/100 m]
  2   65        0.22       PGRAD      Precipitation altitude gradient              [1/100 m]
  2   66        1.50       CBRE       Melt increase on glacier ice                  [1]
  2   67        0.70       EP         EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70       EP         EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70       EP         EP( 3)
  2   70        1.00       EP         EP( 4)
  2   71        1.30       EP         EP( 5)
  2   72        1.40       EP         EP( 6)
  2   73        1.30       EP         EP( 7)
  2   74        1.10       EP         EP( 8)
  2   75        1.00       EP         EP( 9)
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 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content              [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
 2   81        1.00     BETA       Non-linearity in soil water zone        [1]
 2   82        2.00    INFMAX     maximum infiltration capacity           [mm/day]
 2   83
 2   84
 2   85        0.13      KUZ2       Quick time constant upper zone         [1/day]
 2   86       10.00     UZ1        Threshold quick runoff                  [mm]
 2   87        0.05     KUZ1       Slow time constant upper zone           [1/day]
 2   88        1.70     PERC       Percolation to lower zone               [mm/day]
 2   89        0.02     KLZ        Time constant lower zone                [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                      [mm/day]
 2  100       65.9      LAT        Latitude                                [deg]
 2  101      -0.40      TGRAD(1)   Temperature gradient Jan                [deg/100m]
 2  102      -0.40      TGRAD(2)   Temperature gradient Feb                [deg/100m]
 2  103      -0.50      TGRAD(3)   Temperature gradient Mar                [deg/100m]
 2  104      -0.55      TGRAD(4)   Temperature gradient Apr                [deg/100m]
 2  105      -0.55      TGRAD(5)   Temperature gradient May                [deg/100m]
 2  106      -0.50      TGRAD(6)   Temperature gradient Jun                [deg/100m]
 2  107      -0.50      TGRAD(7)   Temperature gradient Jul                [deg/100m]
 2  108      -0.50      TGRAD(8)   Temperature gradient Aug                [deg/100m]
 2  109      -0.50      TGRAD(9)   Temperature gradient Sep                [deg/100m]
 2  110      -0.50      TGRAD(10)  Temperature gradient Oct                [deg/100m]
 2  111      -0.50      TGRAD(11)  Temperature gradient Nov                [deg/100m]
 2  112      -0.47      TGRAD(12)  Temperature gradient Dec                [deg/100m]
 2  113       40.0      SPDIST     Uniformly distributed snow acc          [mm]
 2  114      120.0      SMINI      Inital soil moisture content            [mm]
 2  115        0.0       UZINI      Initial upper zone content             [mm]
 2  116       30.0      LZINI      Initial lower zone content              [mm]
 2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
 2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
 2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1               [1]
 2  124        0.0      LAKE(1)    Lake area,         zone 1               [1]
 2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
 2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
 2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2               [1]
 2  128        0.0      LAKE(2)    Lake area,         zone 2               [1]
 2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
 2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
 2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3               [1]
 2  132        0.0      LAKE(3)    Lake area,         zone 3               [1]
 2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
 2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
 2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4               [1]
 2  136        0.0      LAKE(4)    Lake area,         zone 4               [1]
 2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
 2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
 2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5               [1]
 2  140        0.0      LAKE(5)    Lake area,         zone 5               [1]
 2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
 2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
 2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6               [1]
 2  144        0.0      LAKE(6)    Lake area,         zone 6               [1]
 2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
 2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
 2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7               [1]
 2  148        0.0      LAKE(7)    Lake area,         zone 7               [1]
 2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
 2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
 2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8               [1]
 2  152        0.0      LAKE(8)    Lake area,         zone 8               [1]
 2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
 2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
 2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9               [1]
 2  156        0.0      LAKE(9)    Lake area,         zone 9               [1]
 2  157          4      VEGT(1,10) Vegetation type 1, zone 10
 2  158          0      VEGT(2,10) Vegetation type 2, zone 10
 2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10              [1]
 2  160        0.0      LAKE(10)   Lake area,         zone 10              [1]
FINIS
```

Stuðlaskrá fyrir Blævardalsá (skrá /os/sgh/vmgogn/HBVparam/param.blaevard):

```
START  2V038
  2    0            4     PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0          20.     PHOH1     Altitude precip station 1
  2    0          .25     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0          05.     PHOH2
  2    0          .50      PWGT2
  2    0  Gjögur.290      PID3
  2    0          05.     PHOH3
  2    0          .25      PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0          03.     PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0             3    TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0          20.     THOH1     Altitude temp station 1
  2    0          .30      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0          05.     THOH2
  2    0          .70     TWGT2
  2    0  Gjögur.290      TID3
  2    0          05.     THOH3
  2    0          0.0     TWGT3
  2    0            1     QNO       Number of discharge stations
  2    0  vhm038          QID       Identification for discharge station
  2    0           1.0    QWGT      Scaling factor for discharge
  2    0         29.19    AREAL     Catchment area                    [km2]
  2    4         0.000    MAGDEL    Regulation reservoirs             [1]
  2    5       150.000    HYPSO ( 1,1), low point             [m]
  2    6       200.000    HYPSO ( 2,1)
  2    7       250.000    HYPSO ( 3,1)
  2    8       300.000    HYPSO ( 4,1)
  2    9       350.000    HYPSO ( 5,1)
  2   10       400.000    HYPSO ( 6,1)
  2   11       450.000    HYPSO ( 7,1)
  2   12       500.000    HYPSO ( 8,1)
  2   13       600.000    HYPSO ( 9,1)
  2   14       650.000    HYPSO (10,1)
  2   15       700.000    HYPSO (11,1), high point
  2   16         0.008    HYPSO ( 1,2), Part of total area below HYPSO(1,1) = 0
  2   17         0.066    HYPSO ( 2,2)
  2   18         0.224    HYPSO ( 3,2)
  2   19         0.334    HYPSO ( 4,2)
  2   20         0.583    HYPSO ( 5,2)
  2   21         0.835    HYPSO ( 6,2)
  2   22         0.965    HYPSO ( 7,2)
  2   23         1.000    HYPSO ( 8,2)
  2   24         1.000    HYPSO ( 9,2)
  2   25         1.000    HYPSO (10,2)
  2   26         1.000    HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27         0.000    BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28         0.000
  2   29         0.000
  2   30         0.000
  2   31         0.000
  2   32         0.000
  2   33         0.000
  2   34         0.000
  2   35         0.000
  2   36         0.000
  2   37         0.000    BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39       270.0      NDAG      Day no for conversion of glacier snow to ice
  2   40         1.20     TX        Threshold temperature for snow/precip.          [C]
  2   41        -0.20     TS        Threshold temperature fo no melt                [C]
  2   42         3.00     CX        Melt index                              [mm/deg/day]
  2   43        0.050     CFR       Refreeze efficiency                             [1]
  2   44        0.08       LV        Max rel. water content in snow                 [1]
  2   45         1.10     PKORR     Precipitaion correction for rain                [1]
  2   46         1.40     SKORR     Additional precipitation corection for snow at gauge [1]
  2   47         365.0    GRADALT   Altitude for change in prec. grad.              [m]
  2   48         0.04     PGRAD1    Precipitation gradient above GRADALT            [1]
  2   49         0.02     CALB      Ageing factor for albedo                  [1/day]
  2   50         0.00     CRAD      Radiation melt component                        [1]
  2   51         1.00     CONV      Convection melt component                       [1]
  2   52         0.0      COND      Condensation melt component                     [1]
  2   60          1.20    CEVPL     lake evapotranspiration adjustment fact         [1]
  2   61          0.5     ERED      evapotranspiration red. during interception     [1]
  2   62         30.0     ICEDAY    Lake temperature time constant                  [d]
  2   63        -0.60     TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64        -0.60     TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65         0.22     PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66         1.50     CBRE      Melt increase on glacier ice                    [1]
  2   67         0.70     EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68         0.70     EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69         0.70     EP        EP( 3)
  2   70         1.00     EP        EP( 4)
  2   71         1.30     EP        EP( 5)
  2   72         1.40     EP        EP( 6)
  2   73         1.30     EP        EP( 7)
  2   74         1.10     EP        EP( 8)
  2   75         1.00     EP        EP( 9)
```

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 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec    [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content             [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL    [1]
 2   81        1.00     BETA       Non-linearity in soil water zone       [1]
 2   82        2.00    INFMAX     maximum infiltration capacity          [mm/day]
 2   83
 2   84
 2   85        0.13      KUZ2       Quick time constant upper zone        [1/day]
 2   86       10.00     UZ1        Threshold quick runoff                 [mm]
 2   87        0.05     KUZ1       Slow time constant upper zone          [1/day]
 2   88        1.70     PERC       Percolation to lower zone              [mm/day]
 2   89        0.02     KLZ        Time constant lower zone               [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant            [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                     [mm/day]
 2  100       65.9      LAT        Latitude                               [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan               [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb               [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar               [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr               [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May               [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun               [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul               [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug               [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep               [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct               [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov               [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec               [deg/100m]
 2  113        40.0     SPDIST     Uniformly distributed snow acc         [mm]
 2  114       120.0     SMINI      Inital soil moisture content           [mm]
 2  115         0.0      UZINI      Initial upper zone content            [mm]
 2  116        30.0     LZINI      Initial lower zone content             [mm]
 2  121           4     VEGT(1,1)  Vegetation type 1, zone 1
 2  122           0     VEGT(2,1)  Vegetation type 2, zone 1
 2  123         0.0     VEGA(1)    Vegetation 2 area, zone 1              [1]
 2  124         0.0     LAKE(1)    Lake area,         zone 1              [1]
 2  125           4     VEGT(1,2)  Vegetation type 1, zone 2
 2  126           0     VEGT(2,2)  Vegetation type 2, zone 2
 2  127         0.0     VEGA(2)    Vegetation 2 area, zone 2              [1]
 2  128         0.0     LAKE(2)    Lake area,         zone 2              [1]
 2  129           4     VEGT(1,3)  Vegetation type 1, zone 3
 2  130           0     VEGT(2,3)  Vegetation type 2, zone 3
 2  131         0.0     VEGA(3)    Vegetation 2 area, zone 3              [1]
 2  132         0.0     LAKE(3)    Lake area,         zone 3              [1]
 2  133           4     VEGT(1,4)  Vegetation type 1, zone 4
 2  134           0     VEGT(2,4)  Vegetation type 2, zone 4
 2  135         0.0     VEGA(4)    Vegetation 2 area, zone 4              [1]
 2  136         0.0     LAKE(4)    Lake area,         zone 4              [1]
 2  137           4     VEGT(1,5)  Vegetation type 1, zone 5
 2  138           0     VEGT(2,5)  Vegetation type 2, zone 5
 2  139         0.0     VEGA(5)    Vegetation 2 area, zone 5              [1]
 2  140         0.0     LAKE(5)    Lake area,         zone 5              [1]
 2  141           4     VEGT(1,6)  Vegetation type 1, zone 6
 2  142           0     VEGT(2,6)  Vegetation type 2, zone 6
 2  143         0.0     VEGA(6)    Vegetation 2 area, zone 6              [1]
 2  144         0.0     LAKE(6)    Lake area,         zone 6              [1]
 2  145           4     VEGT(1,7)  Vegetation type 1, zone 7
 2  146           0     VEGT(2,7)  Vegetation type 2, zone 7
 2  147         0.0     VEGA(7)    Vegetation 2 area, zone 7              [1]
 2  148         0.0     LAKE(7)    Lake area,         zone 7              [1]
 2  149           4     VEGT(1,8)  Vegetation type 1, zone 8
 2  150           0     VEGT(2,8)  Vegetation type 2, zone 8
 2  151         0.0     VEGA(8)    Vegetation 2 area, zone 8              [1]
 2  152         0.0     LAKE(8)    Lake area,         zone 8              [1]
 2  153           4     VEGT(1,9)  Vegetation type 1, zone 9
 2  154           0     VEGT(2,9)  Vegetation type 2, zone 9
 2  155         0.0     VEGA(9)    Vegetation 2 area, zone 9              [1]
 2  156         0.0     LAKE(9)    Lake area,         zone 9              [1]
 2  157           4     VEGT(1,10) Vegetation type 1, zone 10
 2  158           0     VEGT(2,10) Vegetation type 2, zone 10
 2  159         0.0     VEGA(10)   Vegetation 2 area, zone 10             [1]
 2  160         0.0     LAKE(10)   Lake area,         zone 10             [1]
FINIS
```

Stuðlaskrá fyrir hlutvatnasvið Hraundalsár (skrá /os/sgh/vmgogn/HBVparam/param.hraund):

```
START  2V038
  2    0           4      PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0         .25      PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0         .50       PWGT2
  2    0  Gjðgur.290      PID3
  2    0         05.      PHOH3
  2    0         .25       PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .0     PWGT1     Weight precipitation station 1
  2    0           3      TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0         .30       TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0         .70      TWGT2
  2    0  Gjðgur.290      TID3
  2    0         05.      THOH3
  2    0         0.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm038          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0        75.88     AREAL     Catchment area                          [km2]
  2    4        0.000     MAGDEL    Regulation reservoirs                   [1]
  2    5       50.000     HYPSO ( 1,1), low point                 [m]
  2    6      100.000     HYPSO ( 2,1)
  2    7      150.000     HYPSO ( 3,1)
  2    8      200.000     HYPSO ( 4,1)
  2    9      250.000     HYPSO ( 5,1)
  2   10      300.000     HYPSO ( 6,1)
  2   11      350.000     HYPSO ( 7,1)
  2   12      400.000     HYPSO ( 8,1)
  2   13      500.000     HYPSO ( 9,1)
  2   14      600.000     HYPSO (10,1)
  2   15      700.000     HYPSO (11,1), high point
  2   16        0.000     HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17        0.020    HYPSO ( 2,2)
  2   18        0.045     HYPSO ( 3,2)
  2   19        0.091     HYPSO ( 4,2)
  2   20        0.149     HYPSO ( 5,2)
  2   21        0.220     HYPSO ( 6,2)
  2   22        0.323     HYPSO ( 7,2)
  2   23        0.460     HYPSO ( 8,2)
  2   24        0.872     HYPSO ( 9,2)
  2   25        0.998     HYPSO (10,2)
  2   26        1.000     HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27        0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40        1.20      TX        Threshold temperature for snow/precip.          [C]
  2   41       -0.20      TS        Threshold temperature fo no melt              [C]
  2   42        3.00      CX        Melt index                          [mm/deg/day]
  2   43       0.050      CFR       Refreeze efficiency                           [1]
  2   44       0.08        LV        Max rel. water content in snow               [1]
  2   45        1.10      PKORR     Precipitaion correction for rain              [1]
  2   46        1.40      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47        365.0     GRADALT   Altitude for change in prec. grad.            [m]
  2   48        0.04      PGRAD1    Precipitation gradient above GRADALT          [1]
  2   49        0.02      CALB      Ageing factor for albedo                   [1/day]
  2   50        0.00      CRAD      Radiation melt component                      [1]
  2   51        1.00      CONV      Convection melt component                     [1]
  2   52        0.0       COND      Condensation melt component                   [1]
  2   60         1.20     CEVPL     lake evapotranspiration adjustment fact       [1]
  2   61         0.5      ERED      evapotranspiration red. during interception   [1]
  2   62        30.0      ICEDAY    Lake temperature time constant                [d]
  2   63       -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64       -0.60      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65        0.22      PGRAD     Precipitation altitude gradient             [1/100 m]
  2   66        1.50      CBRE      Melt increase on glacier ice                  [1]
  2   67        0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP        EP( 3)
  2   70        1.00      EP        EP( 4)
  2   71        1.30      EP        EP( 5)
  2   72        1.40      EP        EP( 6)
  2   73        1.30      EP        EP( 7)
  2   74        1.10      EP        EP( 8)
  2   75        1.00      EP        EP( 9)
```

```
 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content              [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
 2   81        1.00     BETA       Non-linearity in soil water zone        [1]
 2   82        2.00     INFMAX     maximum infiltration capacity           [mm/day]
 2   83
 2   84
 2   85        0.13      KUZ2       Quick time constant upper zone          [1/day]
 2   86       10.00     UZ1        Threshold quick runoff                  [mm]
 2   87        0.05     KUZ1       Slow time constant upper zone           [1/day]
 2   88        1.70     PERC       Percolation to lower zone               [mm/day]
 2   89        0.02     KLZ        Time constant lower zone                [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                      [mm/day]
 2  100       65.9      LAT        Latitude                                [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan                [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb                [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar                [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr                [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May                [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun                [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul                [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug                [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep                [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct                [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov                [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec                [deg/100m]
 2  113        40.0     SPDIST     Uniformly distributed snow acc          [mm]
 2  114       120.0     SMINI      Inital soil moisture content            [mm]
 2  115         0.0      UZINI      Initial upper zone content              [mm]
 2  116        30.0     LZINI      Initial lower zone content              [mm]
 2  121           4     VEGT(1,1)  Vegetation type 1, zone 1
 2  122           0     VEGT(2,1)  Vegetation type 2, zone 1
 2  123         0.0     VEGA(1)    Vegetation 2 area, zone 1               [1]
 2  124         0.0     LAKE(1)    Lake area,         zone 1               [1]
 2  125           4     VEGT(1,2)  Vegetation type 1, zone 2
 2  126           0     VEGT(2,2)  Vegetation type 2, zone 2
 2  127         0.0     VEGA(2)    Vegetation 2 area, zone 2               [1]
 2  128         0.0     LAKE(2)    Lake area,         zone 2               [1]
 2  129           4     VEGT(1,3)  Vegetation type 1, zone 3
 2  130           0     VEGT(2,3)  Vegetation type 2, zone 3
 2  131         0.0     VEGA(3)    Vegetation 2 area, zone 3               [1]
 2  132         0.0     LAKE(3)    Lake area,         zone 3               [1]
 2  133           4     VEGT(1,4)  Vegetation type 1, zone 4
 2  134           0     VEGT(2,4)  Vegetation type 2, zone 4
 2  135         0.0     VEGA(4)    Vegetation 2 area, zone 4               [1]
 2  136         0.0     LAKE(4)    Lake area,         zone 4               [1]
 2  137           4     VEGT(1,5)  Vegetation type 1, zone 5
 2  138           0     VEGT(2,5)  Vegetation type 2, zone 5
 2  139         0.0     VEGA(5)    Vegetation 2 area, zone 5               [1]
 2  140         0.0     LAKE(5)    Lake area,         zone 5               [1]
 2  141           4     VEGT(1,6)  Vegetation type 1, zone 6
 2  142           0     VEGT(2,6)  Vegetation type 2, zone 6
 2  143         0.0     VEGA(6)    Vegetation 2 area, zone 6               [1]
 2  144         0.0     LAKE(6)    Lake area,         zone 6               [1]
 2  145           4     VEGT(1,7)  Vegetation type 1, zone 7
 2  146           0     VEGT(2,7)  Vegetation type 2, zone 7
 2  147         0.0     VEGA(7)    Vegetation 2 area, zone 7               [1]
 2  148         0.0     LAKE(7)    Lake area,         zone 7               [1]
 2  149           4     VEGT(1,8)  Vegetation type 1, zone 8
 2  150           0     VEGT(2,8)  Vegetation type 2, zone 8
 2  151         0.0     VEGA(8)    Vegetation 2 area, zone 8               [1]
 2  152         0.0     LAKE(8)    Lake area,         zone 8               [1]
 2  153           4     VEGT(1,9)  Vegetation type 1, zone 9
 2  154           0     VEGT(2,9)  Vegetation type 2, zone 9
 2  155         0.0     VEGA(9)    Vegetation 2 area, zone 9               [1]
 2  156         0.0     LAKE(9)    Lake area,         zone 9               [1]
 2  157           4     VEGT(1,10) Vegetation type 1, zone 10
 2  158           0     VEGT(2,10) Vegetation type 2, zone 10
 2  159         0.0     VEGA(10)   Vegetation 2 area, zone 10              [1]
 2  160         0.0     LAKE(10)   Lake area,         zone 10              [1]
FINIS
```

Stuðlaskrá fyrir Selá. (skrá /os/sgh/vmgogn/HBVparam/param.sela):

```
START  2V038
  2    0            4     PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0          .0      PWGT2
  2    0  Gjögur.290      PID3
  2    0         05.      PHOH3
  2    0          .85      PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0          .15     PWGT1     Weight precipitation station 1
  2    0            3     TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0          .0      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0          .0     TWGT2
  2    0  Gjögur.290      TID3
  2    0         05.      THOH3
  2    0         1.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm038          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0       203.58     AREAL     Catchment area                    [km2]
  2    4        0.000     MAGDEL    Regulation reservoirs             [1]
  2    5       45.000     HYPSO ( 1,1), low point              [m]
  2    6      100.000     HYPSO ( 2,1)
  2    7      200.000     HYPSO ( 3,1)
  2    8      300.000     HYPSO ( 4,1)
  2    9      350.000     HYPSO ( 5,1)
  2   10      400.000     HYPSO ( 6,1)
  2   11      450.000     HYPSO ( 7,1)
  2   12      500.000     HYPSO ( 8,1)
  2   13      550.000     HYPSO ( 9,1)
  2   14      600.000     HYPSO (10,1)
  2   15      650.000     HYPSO (11,1), high point
  2   16        0.000     HYPSO ( 1,2), Part of total area below HYPSO(1,1) = 0
  2   17        0.050     HYPSO ( 2,2)
  2   18        0.097     HYPSO ( 3,2)
  2   19        0.177     HYPSO ( 4,2)
  2   20        0.273     HYPSO ( 5,2)
  2   21        0.510     HYPSO ( 6,2)
  2   22        0.678     HYPSO ( 7,2)
  2   23        0.747     HYPSO ( 8,2)
  2   24        0.935     HYPSO ( 9,2)
  2   25        0.994     HYPSO (10,2)
  2   26        1.000     HYPSO (11,2), Part of total area below HYPSO(11,1) = 1
  2   27        0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40        1.10      TX        Threshold temperature for snow/precip.          [C]
  2   41       -0.40      TS        Threshold temperature fo no melt              [C]
  2   42        7.80      CX        Melt index                              [mm/deg/day]
  2   43       0.050      CFR       Refreeze efficiency                           [1]
  2   44        0.08       LV        Max rel. water content in snow               [1]
  2   45        1.50      PKORR     Precipitaion correction for rain              [1]
  2   46        1.80      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47       365.0      GRADALT   Altitude for change in prec. grad.            [m]
  2   48        0.06      PGRAD1    Precipitation gradient above GRADALT          [1]
  2   49        0.02      CALB      Ageing factor for albedo                   [1/day]
  2   50        0.00      CRAD      Radiation melt component                      [1]
  2   51        1.00      CONV      Convection melt component                     [1]
  2   52        0.0       COND      Condensation melt component                   [1]
  2   60         1.20     CEVPL     lake evapotranspiration adjustment fact       [1]
  2   61         0.5      ERED      evapotranspiration red. during interception   [1]
  2   62        30.0      ICEDAY    Lake temperature time constant                [d]
  2   63       -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64       -0.80      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65        0.26      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66        1.50      CBRE      Melt increase on glacier ice                  [1]
  2   67        0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP        EP( 3)
  2   70        1.00      EP        EP( 4)
  2   71        1.30      EP        EP( 5)
  2   72        1.40      EP        EP( 6)
  2   73        1.30      EP        EP( 7)
  2   74        1.10      EP        EP( 8)
  2   75        1.00      EP        EP( 9)
```

```
 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content              [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL     [1]
 2   81        1.00     BETA       Non-linearity in soil water zone        [1]
 2   82        2.00     INFMAX     maximum infiltration capacity           [mm/day]
 2   83
 2   84
 2   85        0.20      KUZ2       Quick time constant upper zone          [1/day]
 2   86       30.00     UZ1        Threshold quick runoff                  [mm]
 2   87        0.20     KUZ1       Slow time constant upper zone           [1/day]
 2   88        1.70     PERC       Percolation to lower zone               [mm/day]
 2   89        0.01     KLZ        Time constant lower zone                [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant             [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                      [mm/day]
 2  100       66.2      LAT        Latitude                                [deg]
 2  101      -0.40      TGRAD(1)   Temperature gradient Jan                [deg/100m]
 2  102      -0.40      TGRAD(2)   Temperature gradient Feb                [deg/100m]
 2  103      -0.50      TGRAD(3)   Temperature gradient Mar                [deg/100m]
 2  104      -0.55      TGRAD(4)   Temperature gradient Apr                [deg/100m]
 2  105      -0.55      TGRAD(5)   Temperature gradient May                [deg/100m]
 2  106      -0.50      TGRAD(6)   Temperature gradient Jun                [deg/100m]
 2  107      -0.50      TGRAD(7)   Temperature gradient Jul                [deg/100m]
 2  108      -0.50      TGRAD(8)   Temperature gradient Aug                [deg/100m]
 2  109      -0.50      TGRAD(9)   Temperature gradient Sep                [deg/100m]
 2  110      -0.50      TGRAD(10)  Temperature gradient Oct                [deg/100m]
 2  111      -0.50      TGRAD(11)  Temperature gradient Nov                [deg/100m]
 2  112      -0.47      TGRAD(12)  Temperature gradient Dec                [deg/100m]
 2  113       40.0      SPDIST     Uniformly distributed snow acc          [mm]
 2  114      120.0      SMINI      Inital soil moisture content            [mm]
 2  115        0.0       UZINI      Initial upper zone content              [mm]
 2  116       30.0      LZINI      Initial lower zone content              [mm]
 2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
 2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
 2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1               [1]
 2  124        0.0      LAKE(1)    Lake area,         zone 1               [1]
 2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
 2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
 2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2               [1]
 2  128        0.0      LAKE(2)    Lake area,         zone 2               [1]
 2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
 2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
 2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3               [1]
 2  132        0.0      LAKE(3)    Lake area,         zone 3               [1]
 2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
 2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
 2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4               [1]
 2  136        0.0      LAKE(4)    Lake area,         zone 4               [1]
 2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
 2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
 2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5               [1]
 2  140        0.0      LAKE(5)    Lake area,         zone 5               [1]
 2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
 2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
 2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6               [1]
 2  144        0.0      LAKE(6)    Lake area,         zone 6               [1]
 2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
 2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
 2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7               [1]
 2  148        0.0      LAKE(7)    Lake area,         zone 7               [1]
 2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
 2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
 2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8               [1]
 2  152        0.0      LAKE(8)    Lake area,         zone 8               [1]
 2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
 2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
 2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9               [1]
 2  156        0.0      LAKE(9)    Lake area,         zone 9               [1]
 2  157          4      VEGT(1,10) Vegetation type 1, zone 10
 2  158          0      VEGT(2,10) Vegetation type 2, zone 10
 2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10              [1]
 2  160        0.0      LAKE(10)   Lake area,         zone 10              [1]
FINIS
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Stuðlaskrá fyrir Eyvindarfjarðará (skrá /os/sgh/vmgogn/HBVparam/param.eyvindarfj):

```
START  2V198
  2    0           4      PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0          .0      PWGT2
  2    0  Gjögur.290      PID3
  2    0         05.      PHOH3
  2    0         .85       PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .15      PWGT1     Weight precipitation station 1
  2    0           3      TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0          .0      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0          .0     TWGT2
  2    0  Gjögur.290      TID3
  2    0         05.      THOH3
  2    0         1.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm198          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0        78.04     AREAL     Catchment area                        [km2]
  2    4        0.000     MAGDEL    Regulation reservoirs                 [1]
  2    5       50.000     HYPSO ( 1,1), low point              [m]
  2    6      100.000     HYPSO ( 2,1)
  2    7      200.000     HYPSO ( 3,1)
  2    8      300.000     HYPSO ( 4,1)
  2    9      400.000     HYPSO ( 5,1)
  2   10      500.000     HYPSO ( 6,1)
  2   11      600.000     HYPSO ( 7,1)
  2   12      700.000     HYPSO ( 8,1)
  2   13      750.000     HYPSO ( 9,1)
  2   14      800.000     HYPSO (10,1)
  2   15      850.000     HYPSO (11,1), high point
  2   16        0.000     HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17        0.015    HYPSO ( 2,2)
  2   18        0.056     HYPSO ( 3,2)
  2   19        0.159     HYPSO ( 4,2)
  2   20        0.490     HYPSO ( 5,2)
  2   21        0.743     HYPSO ( 6,2)
  2   22        0.957     HYPSO ( 7,2)
  2   23        0.992     HYPSO ( 8,2)
  2   24        0.996     HYPSO ( 9,2)
  2   25        0.999     HYPSO (10,2)
  2   26        1.000     HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27        0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28        0.000
  2   29        0.000
  2   30        0.000
  2   31        0.000
  2   32        0.000
  2   33        0.000
  2   34        0.000
  2   35        0.000
  2   36        0.000
  2   37        0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40        1.10      TX        Threshold temperature for snow/precip.          [C]
  2   41       -0.40      TS        Threshold temperature fo no melt              [C]
  2   42        7.80      CX        Melt index                          [mm/deg/day]
  2   43       0.050      CFR       Refreeze efficiency                           [1]
  2   44       0.08        LV        Max rel. water content in snow               [1]
  2   45        1.50      PKORR     Precipitaion correction for rain              [1]
  2   46        1.80      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47       365.0      GRADALT   Altitude for change in prec. grad.            [m]
  2   48        0.06      PGRAD1    Precipitation gradient above GRADALT          [1]
  2   49        0.02      CALB      Ageing factor for albedo                   [1/day]
  2   50        0.00      CRAD      Radiation melt component                      [1]
  2   51        1.00      CONV      Convection melt component                     [1]
  2   52        0.0       COND      Condensation melt component                   [1]
  2   60         1.20     CEVPL     lake evapotranspiration adjustment fact       [1]
  2   61         0.5      ERED      evapotranspiration red. during interception   [1]
  2   62        30.0      ICEDAY    Lake temperature time constant                [d]
  2   63       -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64       -0.80      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65        0.26      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66        1.50      CBRE      Melt increase on glacier ice                  [1]
  2   67        0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP        EP( 3)
  2   70        1.00      EP        EP( 4)
  2   71        1.30      EP        EP( 5)
  2   72        1.40      EP        EP( 6)
  2   73        1.30      EP        EP( 7)
  2   74        1.10      EP        EP( 8)
  2   75        1.00      EP        EP( 9)
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```
 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content             [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL    [1]
 2   81        1.00     BETA       Non-linearity in soil water zone       [1]
 2   82        2.00     INFMAX     maximum infiltration capacity          [mm/day]
 2   83
 2   84
 2   85        0.20      KUZ2       Quick time constant upper zone         [1/day]
 2   86       30.00     UZ1        Threshold quick runoff                 [mm]
 2   87        0.20     KUZ1       Slow time constant upper zone          [1/day]
 2   88        1.70     PERC       Percolation to lower zone              [mm/day]
 2   89        0.01     KLZ        Time constant lower zone               [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant            [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                     [mm/day]
 2  100       66.2      LAT        Latitude                               [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan               [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb               [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar               [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr               [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May               [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun               [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul               [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug               [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep               [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct               [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov               [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec               [deg/100m]
 2  113        40.0     SPDIST     Uniformly distributed snow acc         [mm]
 2  114       120.0     SMINI      Inital soil moisture content           [mm]
 2  115         0.0      UZINI      Initial upper zone content             [mm]
 2  116        30.0     LZINI      Initial lower zone content             [mm]
 2  121           4     VEGT(1,1)  Vegetation type 1, zone 1
 2  122           0     VEGT(2,1)  Vegetation type 2, zone 1
 2  123         0.0     VEGA(1)    Vegetation 2 area, zone 1              [1]
 2  124         0.0     LAKE(1)    Lake area,         zone 1              [1]
 2  125           4     VEGT(1,2)  Vegetation type 1, zone 2
 2  126           0     VEGT(2,2)  Vegetation type 2, zone 2
 2  127         0.0     VEGA(2)    Vegetation 2 area, zone 2              [1]
 2  128         0.0     LAKE(2)    Lake area,         zone 2              [1]
 2  129           4     VEGT(1,3)  Vegetation type 1, zone 3
 2  130           0     VEGT(2,3)  Vegetation type 2, zone 3
 2  131         0.0     VEGA(3)    Vegetation 2 area, zone 3              [1]
 2  132         0.0     LAKE(3)    Lake area,         zone 3              [1]
 2  133           4     VEGT(1,4)  Vegetation type 1, zone 4
 2  134           0     VEGT(2,4)  Vegetation type 2, zone 4
 2  135         0.0     VEGA(4)    Vegetation 2 area, zone 4              [1]
 2  136         0.0     LAKE(4)    Lake area,         zone 4              [1]
 2  137           4     VEGT(1,5)  Vegetation type 1, zone 5
 2  138           0     VEGT(2,5)  Vegetation type 2, zone 5
 2  139         0.0     VEGA(5)    Vegetation 2 area, zone 5              [1]
 2  140         0.0     LAKE(5)    Lake area,         zone 5              [1]
 2  141           4     VEGT(1,6)  Vegetation type 1, zone 6
 2  142           0     VEGT(2,6)  Vegetation type 2, zone 6
 2  143         0.0     VEGA(6)    Vegetation 2 area, zone 6              [1]
 2  144         0.0     LAKE(6)    Lake area,         zone 6              [1]
 2  145           4     VEGT(1,7)  Vegetation type 1, zone 7
 2  146           0     VEGT(2,7)  Vegetation type 2, zone 7
 2  147         0.0     VEGA(7)    Vegetation 2 area, zone 7              [1]
 2  148         0.0     LAKE(7)    Lake area,         zone 7              [1]
 2  149           4     VEGT(1,8)  Vegetation type 1, zone 8
 2  150           0     VEGT(2,8)  Vegetation type 2, zone 8
 2  151         0.0     VEGA(8)    Vegetation 2 area, zone 8              [1]
 2  152         0.0     LAKE(8)    Lake area,         zone 8              [1]
 2  153           4     VEGT(1,9)  Vegetation type 1, zone 9
 2  154           0     VEGT(2,9)  Vegetation type 2, zone 9
 2  155         0.0     VEGA(9)    Vegetation 2 area, zone 9              [1]
 2  156         0.0     LAKE(9)    Lake area,         zone 9              [1]
 2  157           4     VEGT(1,10) Vegetation type 1, zone 10
 2  158           0     VEGT(2,10) Vegetation type 2, zone 10
 2  159         0.0     VEGA(10)   Vegetation 2 area, zone 10             [1]
 2  160         0.0     LAKE(10)   Lake area,         zone 10             [1]
FINIS
```

Stuðlaskrá fyrir Húsá. (skrá /os/sgh/vmgogn/HBVparam/param.husa):

```
START  2V198
  2    0            4     PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0          .0      PWGT2
  2    0  Gjögur.290      PID3
  2    0         05.      PHOH3
  2    0          .85      PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .15      PWGT1     Weight precipitation station 1
  2    0            3     TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0          .0      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0          .0     TWGT2
  2    0  Gjögur.290      TID3
  2    0         05.      THOH3
  2    0         1.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm198          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0       32.06     AREAL     Catchment area                          [km2]
  2    4       0.000     MAGDEL    Regulation reservoirs                    [1]
  2    5      50.000     HYPSO ( 1,1), low point                 [m]
  2    6     100.000     HYPSO ( 2,1)
  2    7     200.000     HYPSO ( 3,1)
  2    8     250.000     HYPSO ( 4,1)
  2    9     300.000     HYPSO ( 5,1)
  2   10     350.000     HYPSO ( 6,1)
  2   11     400.000     HYPSO ( 7,1)
  2   12     450.000     HYPSO ( 8,1)
  2   13     500.000     HYPSO ( 9,1)
  2   14     600.000     HYPSO (10,1)
  2   15     650.000     HYPSO (11,1), high point
  2   16       0.000     HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17       0.067     HYPSO ( 2,2)
  2   18       0.211     HYPSO ( 3,2)
  2   19       0.323     HYPSO ( 4,2)
  2   20       0.420     HYPSO ( 5,2)
  2   21       0.519     HYPSO ( 6,2)
  2   22       0.625     HYPSO ( 7,2)
  2   23       0.824     HYPSO ( 8,2)
  2   24       0.893     HYPSO ( 9,2)
  2   25       0.993     HYPSO (10,2)
  2   26       1.000     HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27       0.000     BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28       0.000
  2   29       0.000
  2   30       0.000
  2   31       0.000
  2   32       0.000
  2   33       0.000
  2   34       0.000
  2   35       0.000
  2   36       0.000
  2   37       0.000     BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0      NDAG      Day no for conversion of glacier snow to ice
  2   40       1.10      TX        Threshold temperature for snow/precip.          [C]
  2   41      -0.40      TS        Threshold temperature fo no melt                [C]
  2   42       7.80      CX        Melt index                              [mm/deg/day]
  2   43      0.050      CFR       Refreeze efficiency                             [1]
  2   44       0.08       LV        Max rel. water content in snow                 [1]
  2   45       1.50      PKORR     Precipitaion correction for rain                [1]
  2   46       1.80      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47       365.0     GRADALT   Altitude for change in prec. grad.              [m]
  2   48       0.06      PGRAD1    Precipitation gradient above GRADALT            [1]
  2   49       0.02      CALB      Ageing factor for albedo                  [1/day]
  2   50       0.00      CRAD      Radiation melt component                        [1]
  2   51       1.00      CONV      Convection melt component                       [1]
  2   52        0.0      COND      Condensation melt component                     [1]
  2   60        1.20     CEVPL     lake evapotranspiration adjustment fact         [1]
  2   61        0.5      ERED      evapotranspiration red. during interception     [1]
  2   62       30.0      ICEDAY    Lake temperature time constant                  [d]
  2   63      -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64      -0.80      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65       0.26      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66       1.50      CBRE      Melt increase on glacier ice                    [1]
  2   67       0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68       0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69       0.70      EP        EP( 3)
  2   70       1.00      EP        EP( 4)
  2   71       1.30      EP        EP( 5)
  2   72       1.40      EP        EP( 6)
  2   73       1.30      EP        EP( 7)
  2   74       1.10      EP        EP( 8)
  2   75       1.00      EP        EP( 9)
  2   76       0.90      EP        EP(10)
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 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec     [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content             [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL    [1]
 2   81        1.00     BETA       Non-linearity in soil water zone       [1]
 2   82        2.00     INFMAX     maximum infiltration capacity          [mm/day]
 2   83
 2   84
 2   85        0.20      KUZ2       Quick time constant upper zone         [1/day]
 2   86       30.00     UZ1        Threshold quick runoff                 [mm]
 2   87        0.20     KUZ1       Slow time constant upper zone          [1/day]
 2   88        1.70     PERC       Percolation to lower zone              [mm/day]
 2   89        0.01     KLZ        Time constant lower zone               [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant            [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                     [mm/day]
 2  100       66.2      LAT        Latitude                               [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan               [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb               [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar               [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr               [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May               [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun               [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul               [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug               [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep               [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct               [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov               [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec               [deg/100m]
 2  113        40.0     SPDIST     Uniformly distributed snow acc         [mm]
 2  114       120.0     SMINI      Inital soil moisture content           [mm]
 2  115         0.0      UZINI      Initial upper zone content             [mm]
 2  116        30.0     LZINI      Initial lower zone content             [mm]
 2  121           4     VEGT(1,1)  Vegetation type 1, zone 1
 2  122           0     VEGT(2,1)  Vegetation type 2, zone 1
 2  123         0.0     VEGA(1)    Vegetation 2 area, zone 1              [1]
 2  124         0.0     LAKE(1)    Lake area,         zone 1              [1]
 2  125           4     VEGT(1,2)  Vegetation type 1, zone 2
 2  126           0     VEGT(2,2)  Vegetation type 2, zone 2
 2  127         0.0     VEGA(2)    Vegetation 2 area, zone 2              [1]
 2  128         0.0     LAKE(2)    Lake area,         zone 2              [1]
 2  129           4     VEGT(1,3)  Vegetation type 1, zone 3
 2  130           0     VEGT(2,3)  Vegetation type 2, zone 3
 2  131         0.0     VEGA(3)    Vegetation 2 area, zone 3              [1]
 2  132         0.0     LAKE(3)    Lake area,         zone 3              [1]
 2  133           4     VEGT(1,4)  Vegetation type 1, zone 4
 2  134           0     VEGT(2,4)  Vegetation type 2, zone 4
 2  135         0.0     VEGA(4)    Vegetation 2 area, zone 4              [1]
 2  136         0.0     LAKE(4)    Lake area,         zone 4              [1]
 2  137           4     VEGT(1,5)  Vegetation type 1, zone 5
 2  138           0     VEGT(2,5)  Vegetation type 2, zone 5
 2  139         0.0     VEGA(5)    Vegetation 2 area, zone 5              [1]
 2  140         0.0     LAKE(5)    Lake area,         zone 5              [1]
 2  141           4     VEGT(1,6)  Vegetation type 1, zone 6
 2  142           0     VEGT(2,6)  Vegetation type 2, zone 6
 2  143         0.0     VEGA(6)    Vegetation 2 area, zone 6              [1]
 2  144         0.0     LAKE(6)    Lake area,         zone 6              [1]
 2  145           4     VEGT(1,7)  Vegetation type 1, zone 7
 2  146           0     VEGT(2,7)  Vegetation type 2, zone 7
 2  147         0.0     VEGA(7)    Vegetation 2 area, zone 7              [1]
 2  148         0.0     LAKE(7)    Lake area,         zone 7              [1]
 2  149           4     VEGT(1,8)  Vegetation type 1, zone 8
 2  150           0     VEGT(2,8)  Vegetation type 2, zone 8
 2  151         0.0     VEGA(8)    Vegetation 2 area, zone 8              [1]
 2  152         0.0     LAKE(8)    Lake area,         zone 8              [1]
 2  153           4     VEGT(1,9)  Vegetation type 1, zone 9
 2  154           0     VEGT(2,9)  Vegetation type 2, zone 9
 2  155         0.0     VEGA(9)    Vegetation 2 area, zone 9              [1]
 2  156         0.0     LAKE(9)    Lake area,         zone 9              [1]
 2  157           4     VEGT(1,10) Vegetation type 1, zone 10
 2  158           0     VEGT(2,10) Vegetation type 2, zone 10
 2  159         0.0     VEGA(10)   Vegetation 2 area, zone 10             [1]
 2  160         0.0     LAKE(10)   Lake area,         zone 10             [1]
FINIS
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Stuðlaskrá fyrir Reykjafjarðará. (skrá /os/sgh/vmgogn/HBVparam/param.reykjafj):

```
START  2V198
  2    0            4     PNO       Number of precipitation stations
  2    0  Galtarv.250     PID1      Identification for precip station 1
  2    0         20.      PHOH1     Altitude precip station 1
  2    0          .0     PWGT1     Weight precipitation station 1
  2    0  Æðey.260        PID2
  2    0         05.      PHOH2
  2    0          .0      PWGT2
  2    0  Gjögur.290      PID3
  2    0         05.      PHOH3
  2    0          .85      PWGT3
  2    0  Hraun á Sk.352 PID1      Identification for precip station 1
  2    0         03.      PHOH1     Altitude precip station 1
  2    0         .15      PWGT1     Weight precipitation station 1
  2    0            3     TNO       Number of temperature stations
  2    0  Galtarv.250     TID1      Identification for temp station 1
  2    0         20.      THOH1     Altitude temp station 1
  2    0          .0      TWGT1     Weight temp station 1
  2    0  Æðey.260        TID2
  2    0         05.      THOH2
  2    0          .0     TWGT2
  2    0  Gjögur.290      TID3
  2    0         05.      THOH3
  2    0         1.0      TWGT3
  2    0           1      QNO       Number of discharge stations
  2    0  vhm198          QID       Identification for discharge station
  2    0          1.0     QWGT      Scaling factor for discharge
  2    0       20.57      AREAL     Catchment area                    [km2]
  2    4       0.000      MAGDEL    Regulation reservoirs             [1]
  2    5      45.000      HYPSO ( 1,1), low point            [m]
  2    6     100.000      HYPSO ( 2,1)
  2    7     200.000      HYPSO ( 3,1)
  2    8     300.000      HYPSO ( 4,1)
  2    9     350.000      HYPSO ( 5,1)
  2   10     400.000      HYPSO ( 6,1)
  2   11     450.000      HYPSO ( 7,1)
  2   12     500.000      HYPSO ( 8,1)
  2   13     550.000      HYPSO ( 9,1)
  2   14     600.000      HYPSO (10,1)
  2   15     700.000      HYPSO (11,1), high point
  2   16       0.000      HYPSO ( 1,2), Part of total area below HYPSO (1,1) = 0
  2   17       0.098      HYPSO ( 2,2)
  2   18       0.219      HYPSO ( 3,2)
  2   19       0.383      HYPSO ( 4,2)
  2   20       0.476      HYPSO ( 5,2)
  2   21       0.581      HYPSO ( 6,2)
  2   22       0.719      HYPSO ( 7,2)
  2   23       0.782      HYPSO ( 8,2)
  2   24       0.864      HYPSO ( 9,2)
  2   25       0.949      HYPSO (10,2)
  2   26       1.000      HYPSO (11,2), Part of total area below HYPSO (11,1) = 1
  2   27       0.000      BREPRO( 1), Glacier area, part of total area, below HYPSO( 1,1) (=0.0)
  2   28       0.000
  2   29       0.000
  2   30       0.000
  2   31       0.000
  2   32       0.000
  2   33       0.000
  2   34       0.000
  2   35       0.000
  2   36       0.000
  2   37       0.000      BREPRO(11), Glacier area, part of total area, below HYPSO(11,1)
  2   39      270.0       NDAG      Day no for conversion of glacier snow to ice
  2   40        1.10      TX        Threshold temperature for snow/precip.          [C]
  2   41       -0.40      TS        Threshold temperature fo no melt              [C]
  2   42        7.80      CX        Melt index                          [mm/deg/day]
  2   43       0.050      CFR       Refreeze efficiency                           [1]
  2   44        0.08       LV        Max rel. water content in snow               [1]
  2   45        1.50      PKORR     Precipitaion correction for rain              [1]
  2   46        1.80      SKORR     Additional precipitation corection for snow at gauge [1]
  2   47       365.0      GRADALT   Altitude for change in prec. grad.            [m]
  2   48        0.06      PGRAD1    Precipitation gradient above GRADALT          [1]
  2   49        0.02      CALB      Ageing factor for albedo                   [1/day]
  2   50        0.00      CRAD      Radiation melt component                      [1]
  2   51        1.00      CONV      Convection melt component                     [1]
  2   52         0.0      COND      Condensation melt component                   [1]
  2   60        1.20      CEVPL     lake evapotranspiration adjustment fact       [1]
  2   61         0.5      ERED      evapotranspiration red. during interception   [1]
  2   62        30.0      ICEDAY    Lake temperature time constant                [d]
  2   63       -0.60      TTGRAD    Temperature gradient for days without precip [deg/100 m]
  2   64       -0.80      TVGRAD    Temperature gradient for days with precip    [deg/100 m]
  2   65        0.26      PGRAD     Precipitation altitude gradient              [1/100 m]
  2   66        1.50      CBRE      Melt increase on glacier ice                  [1]
  2   67        0.70      EP        EP( 1), Pot evapotranspiration, Jan    [mm/day] or [1]
  2   68        0.70      EP        EP( 2), Pot evapotranspiration, Feb    [mm/day] or [1]
  2   69        0.70      EP        EP( 3)
  2   70        1.00      EP        EP( 4)
  2   71        1.30      EP        EP( 5)
  2   72        1.40      EP        EP( 6)
  2   73        1.30      EP        EP( 7)
  2   74        1.10      EP        EP( 8)
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 2   75        1.00     EP         EP( 9)
 2   76        0.90     EP         EP(10)
 2   77        0.70     EP         EP(11)
 2   78        0.70     EP         EP(12)), Pot evapotranspiration, Dec    [mm/day] or [1]
 2   79      150.00     FC         Maximum soil water content             [mm]
 2   80        0.70     FCDEL      Pot.evapotr when content = FC*FCDEL    [1]
 2   81        1.00     BETA       Non-linearity in soil water zone       [1]
 2   82        2.00     INFMAX     maximum infiltration capacity          [mm/day]
 2   83
 2   84
 2   85        0.20      KUZ2       Quick time constant upper zone         [1/day]
 2   86       30.00     UZ1        Threshold quick runoff                 [mm]
 2   87        0.20     KUZ1       Slow time constant upper zone          [1/day]
 2   88        1.70     PERC       Percolation to lower zone              [mm/day]
 2   89        0.01     KLZ        Time constant lower zone               [1/day]
 2   90        0.00     ROUT       (1), Routing constant (lake area, km2)
 2   91        0.00     ROUT       (2), Routing constant (rating curve const)
 2   92        0.00     ROUT       (3), Routing constant (rating curve zero)
 2   93        0.00     ROUT       (4), Routing constant (rating curve exp)
 2   94        0.00     ROUT       (5), Routing constant (drained area ratio)
 2   95        0.00     DECAY      (1), Feedback constant
 2   96        0.00     DECAY      (2), Feedback constant
 2   97        0.00     DECAY      (3), Feedback constant
 2   98        0.30     CE         Evapotranspiration constant            [mm/deg/day]
 2   99        0.0      DRAW       "draw up" constant                     [mm/day]
 2  100       66.2      LAT        Latitude                               [deg]
 2  101       -0.40     TGRAD(1)   Temperature gradient Jan               [deg/100m]
 2  102       -0.40     TGRAD(2)   Temperature gradient Feb               [deg/100m]
 2  103       -0.50     TGRAD(3)   Temperature gradient Mar               [deg/100m]
 2  104       -0.55     TGRAD(4)   Temperature gradient Apr               [deg/100m]
 2  105       -0.55     TGRAD(5)   Temperature gradient May               [deg/100m]
 2  106       -0.50     TGRAD(6)   Temperature gradient Jun               [deg/100m]
 2  107       -0.50     TGRAD(7)   Temperature gradient Jul               [deg/100m]
 2  108       -0.50     TGRAD(8)   Temperature gradient Aug               [deg/100m]
 2  109       -0.50     TGRAD(9)   Temperature gradient Sep               [deg/100m]
 2  110       -0.50     TGRAD(10)  Temperature gradient Oct               [deg/100m]
 2  111       -0.50     TGRAD(11)  Temperature gradient Nov               [deg/100m]
 2  112       -0.47     TGRAD(12)  Temperature gradient Dec               [deg/100m]
 2  113       40.0      SPDIST     Uniformly distributed snow acc         [mm]
 2  114      120.0      SMINI      Inital soil moisture content           [mm]
 2  115        0.0       UZINI      Initial upper zone content             [mm]
 2  116       30.0      LZINI      Initial lower zone content             [mm]
 2  121          4      VEGT(1,1)  Vegetation type 1, zone 1
 2  122          0      VEGT(2,1)  Vegetation type 2, zone 1
 2  123        0.0      VEGA(1)    Vegetation 2 area, zone 1              [1]
 2  124        0.0      LAKE(1)    Lake area,         zone 1              [1]
 2  125          4      VEGT(1,2)  Vegetation type 1, zone 2
 2  126          0      VEGT(2,2)  Vegetation type 2, zone 2
 2  127        0.0      VEGA(2)    Vegetation 2 area, zone 2              [1]
 2  128        0.0      LAKE(2)    Lake area,         zone 2              [1]
 2  129          4      VEGT(1,3)  Vegetation type 1, zone 3
 2  130          0      VEGT(2,3)  Vegetation type 2, zone 3
 2  131        0.0      VEGA(3)    Vegetation 2 area, zone 3              [1]
 2  132        0.0      LAKE(3)    Lake area,         zone 3              [1]
 2  133          4      VEGT(1,4)  Vegetation type 1, zone 4
 2  134          0      VEGT(2,4)  Vegetation type 2, zone 4
 2  135        0.0      VEGA(4)    Vegetation 2 area, zone 4              [1]
 2  136        0.0      LAKE(4)    Lake area,         zone 4              [1]
 2  137          4      VEGT(1,5)  Vegetation type 1, zone 5
 2  138          0      VEGT(2,5)  Vegetation type 2, zone 5
 2  139        0.0      VEGA(5)    Vegetation 2 area, zone 5              [1]
 2  140        0.0      LAKE(5)    Lake area,         zone 5              [1]
 2  141          4      VEGT(1,6)  Vegetation type 1, zone 6
 2  142          0      VEGT(2,6)  Vegetation type 2, zone 6
 2  143        0.0      VEGA(6)    Vegetation 2 area, zone 6              [1]
 2  144        0.0      LAKE(6)    Lake area,         zone 6              [1]
 2  145          4      VEGT(1,7)  Vegetation type 1, zone 7
 2  146          0      VEGT(2,7)  Vegetation type 2, zone 7
 2  147        0.0      VEGA(7)    Vegetation 2 area, zone 7              [1]
 2  148        0.0      LAKE(7)    Lake area,         zone 7              [1]
 2  149          4      VEGT(1,8)  Vegetation type 1, zone 8
 2  150          0      VEGT(2,8)  Vegetation type 2, zone 8
 2  151        0.0      VEGA(8)    Vegetation 2 area, zone 8              [1]
 2  152        0.0      LAKE(8)    Lake area,         zone 8              [1]
 2  153          4      VEGT(1,9)  Vegetation type 1, zone 9
 2  154          0      VEGT(2,9)  Vegetation type 2, zone 9
 2  155        0.0      VEGA(9)    Vegetation 2 area, zone 9              [1]
 2  156        0.0      LAKE(9)    Lake area,         zone 9              [1]
 2  157          4      VEGT(1,10) Vegetation type 1, zone 10
 2  158          0      VEGT(2,10) Vegetation type 2, zone 10
 2  159        0.0      VEGA(10)   Vegetation 2 area, zone 10             [1]
 2  160        0.0      LAKE(10)   Lake area,         zone 10             [1]
FINIS
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