



# WRMIS User Manual

## ENTITLEMENTS AND DELIVERIES

**DEVELOPMENT OF WATER RESOURCES  
MANAGEMENT INFORMATION SYSTEM (WRMIS)  
AND DECISION SUPPORT SYSTEM (DSS)**

**NESPAK**

**Version 1.0**

**April 18, 2017**



## Revision History

Version	Date	By	Summary of Changes
1.0	18-April-17	NESPAK	Initial Draft



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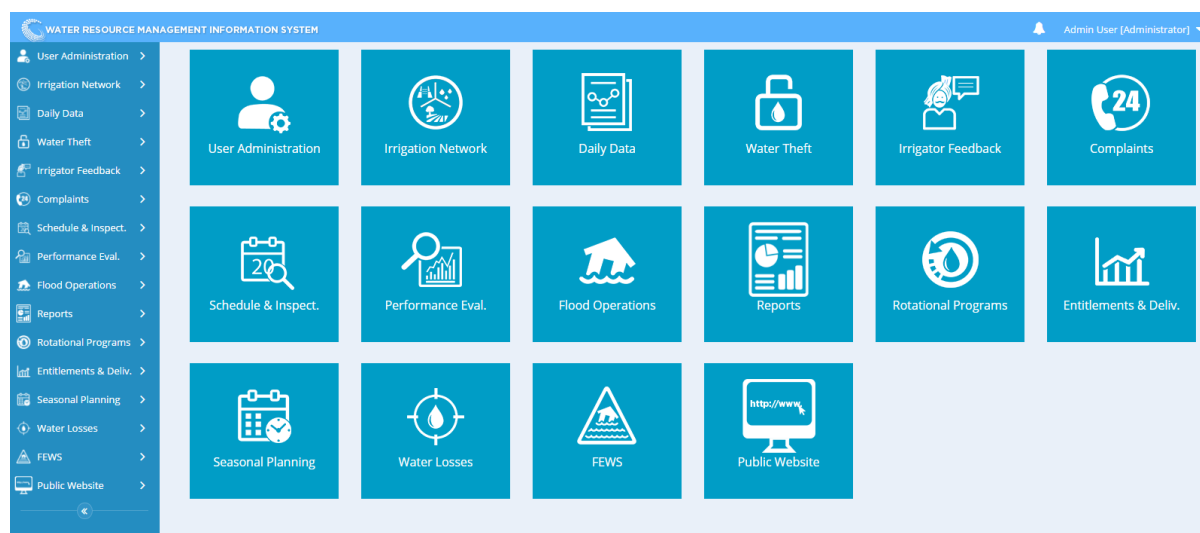
## 1. Entitlement And Deliveries

This module consists of two Commands i.e. Indus command and Jhelum Command. Each command consists of number of channels. Entitlement deal with the quantity of water needs to provide every channel according to their needs and record. Deliveries deal with the ratio of quantity of water provided to every channel

**Business User:** Data Analyst, PMIU Chief, Admin

**Pre-Requisite:** Entitlements Role and Rights should be assigned to respective user correctly.

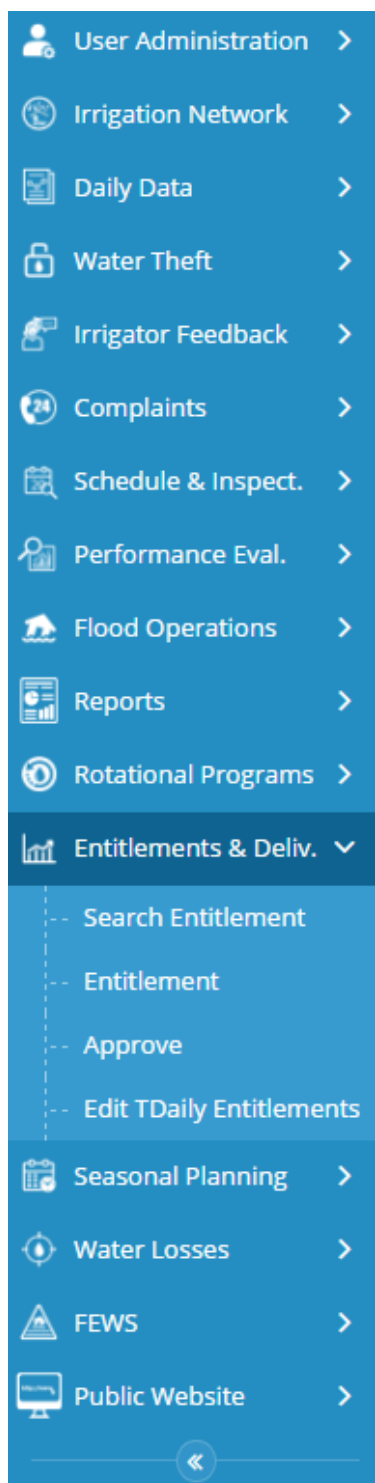
**Activate Users:** Data Analyst, PMIU Chief, Admin



- Click on Entitlements & Deliveries present on left menu of screen
- System redirects Entitlements & Deliveries main screen.



## How to Access: Main Menu -> Entitlements & Deliveries



## 1.1 Search Entitlement

Entitlements and Deliveries

Search Entitlement

Command
Jhelum Chenab Command

Canal System
Central Bari Doab Canal

Branch Canal
Select

Minor
Select

Season
Rabi

Main Canal
Select

Distributary
Select

Sub Minor
Select

Year
Select

Search

Channel Name	Channel Type	Flow Type	Season	Year	Entitlement (MAF)	Delivery (MAF)	Action
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2016-2017	0.593		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2015-2016	0.527		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2014-2015	0.756		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2013-2014	0.659		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2012-2013	0.467		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2011-2012	0.691		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2010-2011	0.666		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2009-2010	0.205		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2008-2009	0.467		
Central Bari Doab Canal	Main Canal	Perennial	Rabi	2007-2008	0.572		

1 2

- Click on Search Entitlement & Deliveries through Search Entitlements present on left menu of screen
- System redirects user to Entitlements search main screen.

### Command

Command

- Select Command from Dropdown

### Canal System

Canal System

- Select Canal system from Dropdown



### Branch Canal

Branch Canal

- Select Branch Canal from Dropdown

### Minor

Minor

- Select Minor from Dropdown

### Season

Season

- Select Season from Dropdown

### Main Canal

Main Canal

- Select Main Canal from Dropdown

### Distributary

Distributary

- Select Distributary from Dropdown

### Sub Minor

Sub Minor

- Select Sub Minor from Dropdown

### Year

Year

- Select Year from Dropdown





















### Search

**Search**

- Click on search button , System checks all mandatory fields
- System shows relevant details based on selection of year.

### Search Result



Channel Name	Channel Type	Flow Type	Season	Year	Entitlement (MAF)	Delivery (MAF)	Action
Abbassia Canal	Main Canal	Perennial	Rabi	2016-2017	0.153		 
Abbassia Canal	Main Canal	Perennial	Rabi	2015-2016	0.223	0.136	 
Abbassia Canal	Main Canal	Perennial	Rabi	2014-2015	0.220	0.197	 
Abbassia Canal	Main Canal	Perennial	Rabi	2013-2014	0.220	0.194	 
Abbassia Canal	Main Canal	Perennial	Rabi	2012-2013	0.163	0.169	 
Abbassia Canal	Main Canal	Perennial	Rabi	2011-2012	0.204	0.182	 
Abbassia Canal	Main Canal	Perennial	Rabi	2010-2011	0.203	0.203	 
Abbassia Canal	Main Canal	Perennial	Rabi	2009-2010	0.036	0.147	 
Abbassia Canal	Main Canal	Perennial	Rabi	2008-2009	0.137	0.164	 
Abbassia Canal	Main Canal	Perennial	Rabi	2007-2008	0.163	0.173	 

### **Actions against retrieved data**



- Click on 'View' icon to view entitlements.



- Click on 'Print' icon to print entitlements

### **View Entitlements**

- After clicking on view icon, System redirects the user to view entitlements screen



## Entitlements and Deliveries

### View Entitlements

#### Entitlement and Actual Distribution of Abbassia Canal Rabi 2016-2017 (MAF)

Average System Usage 1977-1982 (MAF): 0.207  
Punjab Para(2) Rabi Share (MAF): 0.207  
Entitlement for Rabi 2016-2017 (MAF): 0.153  
% Change w.r.t 1977-1982: -26.087  
Design Discharge (Cusecs): 1394

Ten Day	Entitlement (Cusec)	Deliveries (Cusec)	Difference (Cusec)	Deliveries (MAF)	Accumulative Deliveries (MAF)	Balance Entitlement (MAF)
Oct1	700	0	-700	0.000	0.000	0.153
Oct2	700	0	-700	0.000	0.000	0.153
Oct3	600	0	-600	0.000	0.000	0.153
Nov1	500	0	-500	0.000	0.000	0.153
Nov2	400	0	-400	0.000	0.000	0.153
Nov3	500	0	-500	0.000	0.000	0.153
Dec1	500	0	-500	0.000	0.000	0.153
Dec2	400	0	-400	0.000	0.000	0.153
Dec3	200	0	-200	0.000	0.000	0.153
Jan1	100	0	-100	0.000	0.000	0.153
Jan2	300	0	-300	0.000	0.000	0.153
Jan3	300	0	-300	0.000	0.000	0.153
Feb1	300	0	-300	0.000	0.000	0.153
Feb2	400	0	-400	0.000	0.000	0.153
Feb3	400	0	-400	0.000	0.000	0.153
Mar1	300	0	-300	0.000	0.000	0.153
Mar2	400	0	-400	0.000	0.000	0.153
Mar3	500	0	-500	0.000	0.000	0.153
<b>Total</b>	<b>0.153</b>	<b>0.000</b>	<b>-0.151</b>	<b>0.000</b>	<b>0.000</b>	<b>0.153</b>

Back

### Back

Back

- Click on Back button.
- System redirects user to Entitlements search main screen.

### Print Entitlements

- Click on print icon.
- System prints the Entitlements.



**Programme Monitoring & Implementation Unit (PMIU)**

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**Entitlement and Actual Distribution of Eastern Sadiqia Canal Rabi 2016-2017 (MAF)**

Average System Usage 1977-1982 (MAF): 1.438

Punjab Para(2) Rabi Share (MAF): 1.438

Entitlement for Rabi 2016-2017 (MAF): 1.272

% Change w.r.t 1977-1982: -11.544

Design Discharge (Cusecs): 6820

Ten Daily	Entitlement (Cusec)	Deliveries (Cusec)	Difference (Cusec)	Deliveries (MAF)	Accumulative Deliveries (MAF)	Balance Entitlement (MAF)
Oct1	4500	0	-4500	0.000	0.000	1.272
Oct2	4400	0	-4400	0.000	0.000	1.272
Oct3	3800	0	-3800	0.000	0.000	1.272
Nov1	4400	0	-4400	0.000	0.000	1.272
Nov2	4600	0	-4600	0.000	0.000	1.272
Nov3	4600	0	-4600	0.000	0.000	1.272
Dec1	4500	0	-4500	0.000	0.000	1.272
Dec2	4200	0	-4200	0.000	0.000	1.272
Dec3	3400	0	-3400	0.000	0.000	1.272
Jan1	0	0	0	0.000	0.000	1.272
Jan2	1000	0	-1000	0.000	0.000	1.272
Jan3	2100	0	-2100	0.000	0.000	1.272
Feb1	3200	0	-3200	0.000	0.000	1.272
Feb2	4000	0	-4000	0.000	0.000	1.272
Feb3	4200	0	-4200	0.000	0.000	1.272
Mar1	4000	0	-4000	0.000	0.000	1.272
Mar2	3500	0	-3500	0.000	0.000	1.272
Mar3	3300	0	-3300	0.000	0.000	1.272
<b>Total</b>	<b>1.272</b>	<b>0.000</b>	<b>-1.269</b>	<b>0.000</b>	<b>0.000</b>	<b>1.272</b>

Report By: Admin User [Administrator]

Report Time: 19-Apr-2017 10:17 AM

NESPAK | WRMIS - System Generated Report

Page 1 of 1

## 1.2 Add and Edit Seasonal Entitlements

- After clicking on Entitlement from left menu, system redirects user to Seasonal entitlements main screen.

### Entitlements and Deliveries

Edit Entitlements

Command
Indus Command
Scenario
Maximum

Indus Command Entitlement for Early Kharif 2017 on 1977-1982 basis and Late Kharif 2017 on 1977-1982 basis have been generated on 18-Apr-2017 by Admin User

**Indus Command Entitlement for Kharif 2017**

Average System Usage Early Kharif 1977-1982 (MAF):	5.822	Average System Usage Late Kharif 1977-1982 (MAF):	11.671
Punjab Para(2) Early Kharif Share (MAF):	5.822	Punjab Para(2) Late Kharif Share (MAF):	11.671
Entitlement for Early Kharif 2017 (MAF):	5.35	Entitlement for Late Kharif 2017 (MAF):	11.248
% Change in Early Kharif w.r.t 1977-1982:	-8.11	% Change in Late Kharif w.r.t 1977-1982:	-3.62

Channel Name	EK Average 5-Year (MAF)	EK Average 10-Year (MAF)	EK 77-82 (MAF)	Early Kharif 2017 (MAF)	LK Average 5-Year (MAF)	LK Average 10-Year (MAF)	LK 77-82 (MAF)	Late Kharif 2017 (MAF)
Haveli Main Line	0.095	0.094	0.127	0.117	0.172	0.172	0.224	0.216
Sidhnai Canal	0.433	0.456	0.472	0.434	0.862	0.870	0.867	0.836
Rangpur canal	0.169	0.185	0.139	0.128	0.445	0.467	0.295	0.284
Punjab Main Line	0.956	1.022	0.969	0.891	2.227	2.224	2.100	2.024
Abbassia Canal	0.124	0.134	0.117	0.107	0.240	0.251	0.220	0.212
Thal Canal Main Line Upper	0.893	0.887	0.922	0.847	1.576	1.632	1.445	1.392
Pakpattan Canal Lower	0.174	0.181	0.181	0.166	0.298	0.311	0.291	0.28
Malsi Canal	0.387	0.393	0.407	0.374	0.929	0.934	0.935	0.901
Lower Bahawal Canal	0.421	0.443	0.394	0.362	0.918	0.914	0.830	0.8
Muzaffargarh Canal	0.535	0.557	0.605	0.556	1.451	1.443	1.423	1.371
D.G Khan Canal	0.614	0.655	0.681	0.625	1.572	1.593	1.436	1.384
CRBC-III	0.183	0.190	0.149	0.137	0.368	0.378	0.396	0.382
<b>Total</b>	<b>4.984</b>	<b>5.197</b>	<b>5.163</b>	<b>4.744</b>	<b>11.058</b>	<b>11.189</b>	<b>10.462</b>	<b>10.082</b>

Save

### Command

Command Jhelum Chenab Command

- Select Command from Dropdown

### Scenario

Canal System Central Bari Doab Canal

- Select Scenario from Dropdown

### Save

Save

- Click on save button.

- System save details in database and generate entitlements up to sub minor level of selected command.

### 1.3 Edit T-Daily Entitlements

- After clicking on Edit T-Daily Entitlements from left panel, System redirects the user to Edit T-Daily Entitlements screen. User can edit Ten dailies entitlements of main canals.

**Entitlements and Deliveries**

**Edit TDaily Entitlements**

Command:  Scenario: Maximum

**Indus Command Entitlement for Kharif 2017**

Average System Usage Early Kharif 1977-1982 (MAF):	5.822	Average System Usage Late Kharif 1977-1982 (MAF):	11.671
Punjab Para(2) Early Kharif Share (MAF):	5.822	Punjab Para(2) Late Kharif Share (MAF):	11.671
Entitlement for Early Kharif 2017 (MAF):	5.350	Entitlement for Late Kharif 2017 (MAF):	11.248
% Change in Early Kharif w.r.t 1977-1982:	-8.11	% Change in Late Kharif w.r.t 1977-1982:	-3.62

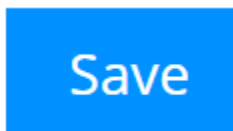
TenDay	HAV	SID	RGP	PNJD	ABS	THAL	LPC	MC	LBC	MZG	DGK	CRBCIII	GTC	Total
Apr1	600	2100	0	3500	600	5500	1300	400	2000	2100	2600	1200	2400	0.480
Apr2	600	1800	600	4100	500	5900	1200	600	1700	1700	2300	700	3100	0.500
Apr3	800	3100	1000	6200	700	5900	1000	2200	1900	3200	3900	500	4500	0.694
May1	900	3400	1100	6300	800	6100	1200	4000	2400	4300	4900	600	5000	0.810
May2	900	3600	1200	7400	800	6200	1200	3500	3200	5100	5500	1000	5100	0.887
May3	900	3700	1200	7900	800	6200	1200	3900	3200	5300	5600	1200	5100	1.007
Jun1	1000	3800	1300	8700	900	6200	1200	4000	3400	5700	6200	1600	5000	0.968
<b>Total</b>	<b>0.116</b>	<b>0.433</b>	<b>0.128</b>	<b>0.891</b>	<b>0.107</b>	<b>0.847</b>	<b>0.167</b>	<b>0.373</b>	<b>0.361</b>	<b>0.556</b>	<b>0.625</b>	<b>0.138</b>	<b>0.604</b>	<b>5.346</b>

#### Command

Command:

- Select Command from Dropdown

#### Save



- Click on save button.
- System saves edited details in database.

## 1.4 Approve Entitlement

- After clicking on Approve Entitlements from left panel, System redirects the user to Approve Entitlements screen

### Entitlements and Deliveries

Approve Entitlement

Command: Jhelum Chenab Command

Canal System: Central Bari Doab Canal

Branch Canal: Lahore Branch of BRBD Link.

Minor: Select

Season: Kharif

Main Canal: Select

Distributary: Select

Sub Minor: Select

Year: 2017

Search
Approve

**Entitlement and Actual Distribution of Lahore Branch of BRBD Link. Kharif 2017 (AF)**

Entitlement for Kharif 2017 (AF): 0.000

Design Discharge: 402.53

Ten Day	Entitlement (Cusec)	Deliveries (Cusec)	Difference (Cusec)	Deliveries (AF)	Accumulative Deliveries (AF)	Balance Entitlement (AF)
Apr1	0	0	0	0.000	0.000	0.000
Apr2	0					
Apr3	0					
May1	0					
May2	0					
May3	0					
Jun1	0					
Jun2	0					
Jun3	0					
Jul1	0					
Jul2	0					
Jul3	0					
Aug1	0					
Aug2	0					
Aug3	0					
Sep1	0					
Sep2	0					
Sep3	0					
Total	0.000	0.000	0.000	0.000	0.000	0.000

### Command

Command: Jhelum Chenab Command

- Select Command from Dropdown

### Canal System

Canal System: Central Bari Doab Canal

- Select Canal system from Dropdown

### Branch Canal

Branch Canal: Lahore Branch of BRBD Link.

- Select Branch Canal from Dropdown

### Minor

Minor

- Select Minor from Dropdown

### Season

Season

- Select Season from Dropdown

### Main Canal

Main Canal

- Select Main Canal from Dropdown

### Distributary

Distributary

- Select Distributary from Dropdown

### Sub Minor

Sub Minor

- Select Sub Minor from Dropdown

### Year

Year

- Select Year from Dropdown

### Search

**Search**

- Click on search button , System checks all mandatory fields
- System shows relevant details based on selection criteria.

### Search Result



Entitlement and Actual Distribution of Lahore Branch of BRBD Link. Kharif 2017 (AF)

Entitlement for Kharif 2017 (AF):  
Design Discharge:

0.000  
402.53

Ten Day	Entitlement (Cusec)	Deliveries (Cusec)	Difference (Cusec)	Deliveries (AF)	Accumulative Deliveries (AF)	Balance Entitlement (AF)
Apr1	0	0	0	0.000	0.000	0.000
Apr2	0					
Apr3	0					
May1	0					
May2	0					
May3	0					
Jun1	0					
Jun2	0					
Jun3	0					
Jul1	0					
Jul2	0					
Jul3	0					
Aug1	0					
Aug2	0					
Aug3	0					
Sep1	0					
Sep2	0					
Sep3	0					
<b>Total</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

Approve

Approve

- Click on approve button, System approves seasonal entitlement and displays it at public website.