Web-based HIDENsity
Climate Database Maintenance.

State Climatology Office
DNR Waters

January 2003

High DENsity precipitation networks

- 1:144 sq. mi. (or denser) vs. 1:625 sq. mi. for Nat'l Weather Serv.
- Some counties at target density since mid to late 1970s.
- Mostly SWCD and DNR but also Emergency Management, for instance.
- All data is available on-line via the 'web'.

Other High DENsity data

- snowdepth and snowfall are currently being archived (Jan 2003)

Data maintenance
- REQUIRES Microsoft IE 4.0 or later for web browser.
- 4 'screens/dialogs'
    - 'sign-in' with username/password
    - browse/choose observer IDs and monthly data
    - daily data form
    - observer info ('index') information

'Sign-in'
- on-line editor name must be in editor database
    - **DO NOT SHARE your username/password with others**
        - (have clients use the 'public' version of the browser)
- contact SCO by phone or e-mail for changes or 1st time
    - editor 'owns' a specific set of observer IDs
    - can edit data or observer info for 'own'ed IDs

Browse/choose (all versions)

The edit login will determine whether the user is an 'administrator' and should have ability to edit data for many observers or that the user is an 'observer' and can edit data for one (or a very small number) of observation sites. For both types several features are common to the 'Browse/choose' page that is shown:

- Many settings are 'remembered' between sessions in 'cookies'. That is, when the page is shown again on another day, you will not have to choose everything from scratch; your settings from the last time that you were working will be restored.
    - 'parameters to edit' controls which variables will show on the 'daily edit form'. Use 'control-click' to 'turn on' any parameter

    - e.g. will cause columns of daily for precipitation, snow fall, and snow depth to show when a daily data form is shown.

- e-mail can be sent to the State Climatology Office
    - request 'ownership' of an existing ID
    - new observer ID
    - modify a prexisting ID
        - reason for change
            - e.g. WAS 'wrong' OR e.g. observer moved, OR etc.
    - problems with 'how it works': be as specific as possible, e.g. (your) username, 'working on … with monthly table …', end month of table and width in months, 'what went wrong or not as expected', what you pressed or set, etc.

Browse/choose (observer version)


```
HIDENsity table of monthly values - Microsoft Internet Explorer       _ □ ×
File   Edit   View   Favorites   Tools   Help
 ⇦          ➡          ⊗          ⟳          ⌂          ◉          ✳          🌐          ▤
Back      Forward      Stop      Refresh      Home      Search    Favorites    History     Mail
Address  http://134.84.160.49/HIDENsityEdit/hMchoseID.asp?edtO=JZANDLO&edtP=RAYM  ⏎ Go
```

State Climatology Office

Data Archives Maintenance

Examine and edit using monthly forms of daily data for observer
```
1 43N 24W 4 ZANDLO      ▾
```

variables to edit:
(use control-click to choose multiple items)
```
precip            ▲
snow fall
snow dep (10ths)
water eqv         ▼
```

```
   edit Nov 2002
   edit Dec 2002
```

```
   edit observer info
```

```
   do something else
```

e-mail to State Climatology Office

The observer ID list near the top of the form is used to choose the ID for which data will be entered. Generally only one ID will be in the list. The 'variables to edit' should be set if they are different from the last edit session (or editing is being done for the first time). The 'edit [date]' buttons, corresponding to the current month and 'last' month, will cause the respective 'daily edit forms' to be shown. The 'edit observer info' will cause a form to appear where observer information such as phone number or address can be updated.

Browse/choose (admin version)

HIDENsity table of monthly values - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Size Print Edit

Address http://climate.umn.edu/HIDENsityEdit/hMchose.asp

Editing High Density data

CTRS	Observer	Aux ID	Net	Oct02	Nov02	Dec02	
15 147N 37w 20	BAGLEY	1161	DNR	1.33	.44+	+	top
15 147N 38w 6	JOHNSN R		SWCD	1.09	.55		up
15 148N 37w 9	THOMPSON		SWCD	.90	.53		
15 149N 36w 12	WIDERSKI		SWCD	*			
16 59N 3w 6	NORTHSHO	8232	DNRO		+	+	
16 59N 4w 31	TEMPERAN	259	DNRB		+	+	down
16 60N 3w 11	LUTSEN 3	214918	NWS	4.57	1.05		bottom

find county [   ]

Choose an unshaded observation or ID to edit by clicking on it.
Sort by ID element by clicking in header line.

update table
3 ▼ months wide ending with 2002 ▼ Dec ▼
7 ▼ lines in monthly values table

Show IDs only IF ...
☑ data exists for ⊙ ANY month ○ LAST month
☐ INDEX has been used in last 24 months
☐ INDEX network is ☐ NOT Dept Nat Res ▼

precip
snow fall
snow dep (10ths)
water eqv ▼ edit variables

e-mail to State Climatology Office

Trusted sites

- 'Editing …' at top of table for valid username, otherwise 'Browse …'
- data up to 6 months old can be edited on-line

Browse/choose (admin version, cont.)

- Table
  - contents
    - Observer ID
      - C T R S
      - Name
      - Network (sponsor)
    - monthly data (up to 6 months wide)
      - partial months indicated by '*'
    - edit status
      - Grey: CANNOT be edited (isn't 'owned')
      - White: CAN be edited

- Controls
  - update table button
    - highlighted if user has changed a table aspect but the table does not yet show the results
  - number of months and last month (in table)
  - number of rows
  - 'navigate' table
    - mouse 'top' (or 'Home' key)
    - mouse 'up' (or 'PageUp' key)
    - mouse 'down' (or 'PageDown' key)
    - mouse 'bottom' (or 'End' key)
  - sort order
    - click on 'element' in table 'header' line to sort
      - county (and T R S)
      - observer name
      - network
    - locate to [county|name|net]
      - using text box and 'find' button
      - positions to roughly the middle of the table
  - Single-click on data or ID to edit (another 'form' will appear)

- Filters
  - used to limit how much information is shown in table
    - check box to 'turn on'
  - 'data exists' for a given observer
  - observer ID has been used recently
  - observer belongs (or not) to a specific network

daily edit form

Nov02 39 160N 31W 2 BA...

39 160N 31W 2 BAUDETTE
Baudette DNR Forestry
(LAKE OF THE WOODS)
network: DNR 1311

November 2002

	pre	snow	snodep
1	0		
2	0		
3	0		
4	0		
5	t		
6	0		
7	0		
8	0		
9	0		
10	0		
11	0		
12	.28		
13	0		

Nov02 39 160N 31W 2 BA...

	pre	snow	snodep
24	.06		
25	t		
26	t		
27	.02		3.5
28	0		
29	0		
30	0		
tot	52		
time	8	8	8

cylinder ▼ gage type
?? ▼ top dia (in)
?? ▼ max depth (in)
☐ board for snow

[gage.time FROM index]

[update AND exit]
[update only] [exit]

- contents
  - observer ID
    - includes textual county and township
  - daily lines
    - weekend dates in different color
  - monthly total
    - automatic (NO manual override possible)
  - time-of-observation
  - gage info (NEW → some info NOT on paper forms now)
    - time of observation
    - gage type
    - gage diameter, depth (NEW)
    - snow board used (NEW)
- controls
  - 'gage,time info from index' button
    - retrieve gage information from 'index' and fill it into the current daily data record
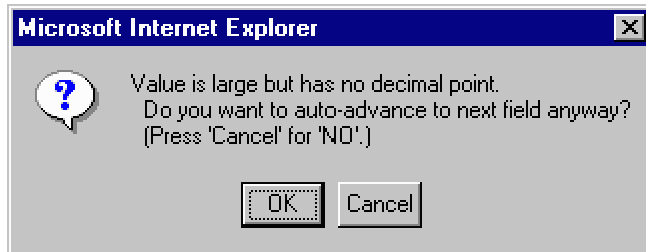
daily edit form (cont.)

- controls (cont.)
  - 'update and exit' button
    - put information on form into database and close the current daily data form
  - 'update only'
    - put information on form into database but do NOT close the daily form
  - 'exit'
    - close the daily data form without saving anything to the database
    - if changes to the daily form were made, this option will cause a message to pop-up asking whether the window (the form) should be closed (any changes would NOT be written to the database)
- daily data editing
  - keypad-only special characters (primarily for precip and snow)
    - '/' is for 'missing day' (any variable)
      - shows ' ' (blank) for a daily 'value'
      - used for days when gage was not deployed or otherwise not collecting
    - '*' is for 'trace'
      - shows 't" for daily value
      - used for days with a 'trace' (some, but less than .005 inch)
    - '-' is for 'accumulation day'
      - shows '|' for a daily 'value' on form
      - used for days when gage was collecting but not observed
    - '+' is for 'zero day'
      - shows '0' for a daily value
      - shortcut to typing zeros
  - estimation flags
    - toggle on/off with each press for current day (where the cursor is)
    - 'e' for 'generic' estimate
    - 's' for 'precipitation estimated by dividing snowfall by 10'.
  - Auto-advance of day (cursor moves to next day) behavior
    - any keypad-only special character is pressed
    - a 2nd digit is pressed after pressing a decimal point
- automatic monthly total
  - monthly total can NOT be manually edited. If any daily value is modified before saving the form's data, the monthly total will be automatically recalculated.
- e-mail to State Climatology Office
  - problems with 'how it works': be as specific as possible, e.g. (your) username, 'working on observer xyz …. in month …', 'what went wrong or not as expected', what you pressed or set, etc.
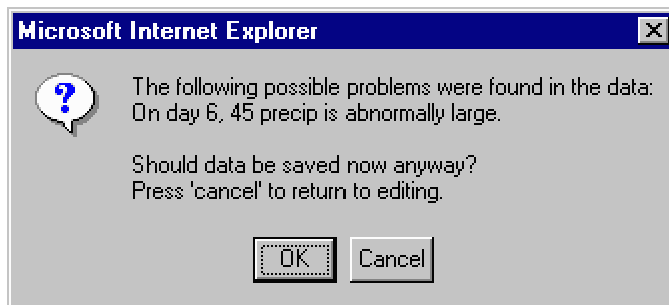
daily edit form (cont.)

- **'cautionary' messages**
  - general actions: check punched value against paper form, if correct press 'OK' and pending action (e.g. 'day advance' or 'save') will be completed. Otherwise, if changes are needed, press 'cancel' and pending action will not occur so that corrections may be made.

Microsoft Internet Explorer ☒

? Value is large but has no decimal point.
Do you want to auto-advance to next field anyway?
(Press 'Cancel' for 'NO'.)

[OK] [Cancel]

  - a key that causes 'auto-advance' has been pressed but the pending value is a whole number of inches (e.g. 2) (and is therefore somewhat unusual)

Microsoft Internet Explorer ☒

? The following possible problems were found in the data:
On day 6, 45 precip is abnormally large.

Should data be saved now anyway?
Press 'cancel' to return to editing.

[OK] [Cancel]

  - on requesting that a save be done, an unusual daily value is greater than some climatological threshold is found
  - other messages that may occur at 'on save' during the months of October through March (where snow fall could be mistaken for 'melted' precipitation) are:
    - 'Are multilples of 1.00 snow?' if ANY such values occur
    - 'Are multiples of .10 or .25 snow?' if more than one such value is present

daily edit form (cont.)

- **'cautionary' messages (cont.)**

Microsoft Internet Explorer	×
⚠ Are you sure you want to navigate away from this page?
*** data was MODIFIED but NOT SAVED ***
Press OK to continue, or Cancel to stay on the current page.
[OK] [Cancel]

- some changes that were made to the form contents were detected but an 'exit only' was requested. 'OK' will cause the exit to proceed BUT the changes WILL NOT be saved. To save, choose 'cancel' and then press one of the 'save' buttons.

observer information ('index') form

```
┌─────────────────────────────────────────────────────────────────────────┐
│ 🔲 Edit HIDENsity index information - Microsoft Internet Explorer  _ ☐ ✕ │
├─────────────────────────────────────────────────────────────────────────┤
│                                                                       ▲   │
│  7 106N 27W 9 DEWITZ D      [  413510 , 4872474 utm X/Y  ]                 │
│                                                                           │
│  ID and 'non-personal' characteristics                                    │
│  [        ] auxilliary ID [DEAN DE_WITZ           ] long station name      │
│  [Soil & Water ▼] net type [-none-        ▼] 2nd net type                 │
│  [unknown ▼] gage [?? ▼] top dia (in) [?? ▼] max depth (in) ☐ board for snow│
│  [?? ▼] time of observation [      ] altitude (feet)                      │
│                                                                           │
│  name, etc.                                                               │
│  [DEAN            ] first & m.i. [DE_WITZ          ] last                  │
│  [        ] title [                    ] institution                      │
│                                                                           │
│  address, etc.                                                            │
│  [15462 550TH AVE        ] address line 1                                 │
│  [                       ] address line 2                                 │
│  [GOOD THUNDER   ] city [MN ▼] [56037   ] zip                             │
│  [507-278-3665  ] phone(home) [          ] phone(work)                    │
│                                                                           │
│  [  update and exit  ] [exit] e-mail SCO                                  │
│                                                                       ▼   │
└─────────────────────────────────────────────────────────────────────────┘
```
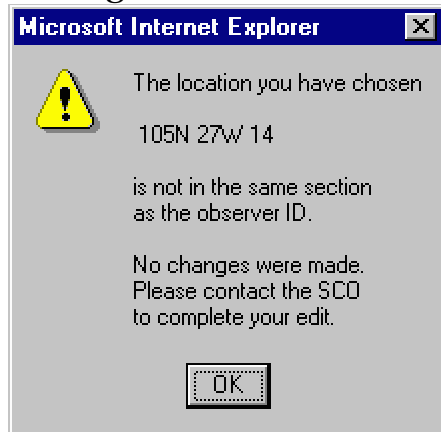
observer information ('index') form (cont.)

- contents
  - observer ID (CTRS name)
  - auxilliary ID
    - used by some networks, e.g. NWS, Mosquito
  - 'long' name
    - up to 28c description of observing site
  - network (main or sponsor)
    - e.g. SWCD
  - network (affiliate)
    - e.g. DNR; a state park using SWCD green forms
  - gage type
    - as indicated on paper data form
  - gage diameter (NEW)
  - gage depth (NEW)
  - board for snow (NEW)
  - time of observation
  - altitude
  - name, etc. and address, etc

observer information ('index') form (cont.)

- controls
  - utm (zone 15) X,Y
    - pressing the button will start the 'Minnesota Location' page where the precise location of the observer can be set. (This action is intended for 'fine tuning' the location, NOT for station 'moves' or changes of location of more than about ½ mile.)
    - **messages**

      - Using this online 'observer information' form, a location CAN NOT be modified to a township-range-section that is different from the values given in the 'observer ID' at the top of the form. The action CAN be completed by the State Climatology Office. Please call or e-mail your request.
  - update and exit
    - update the 'index' with information from the form before before closing the file
  - exit

- e-mail to State Climatology Office
  - problems with 'how it works': be as specific as possible, e.g. (your) username, 'working on observer xyz …', 'what went wrong or not as expected', what you pressed or set, etc.

Minnesota Location Selector

- used by 'index' form and various 'retrieval' applications
- can be used as a converter between the 3 coordinate systems and/or the 'place name' selector
    - after typing in any different coordinate value AND clicking in another text area, the button to 'update targer' above the 'zoom in' button is highlighted

Minnesota Location Selector (cont.)

- highest zoom includes many place names and township lines

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