



Observation Wells

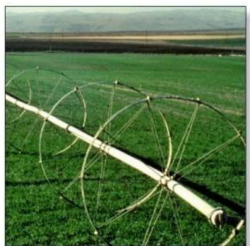
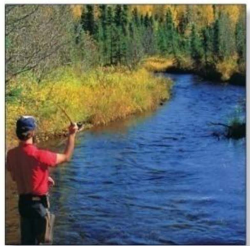
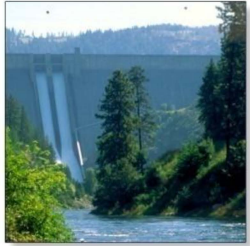
Presented by Allan Wylie, IDWR

Date August 12, 2014



Outline

- Need for aquifer water-level data
- Sources of water level data
- Wood River Valley Water-level Database

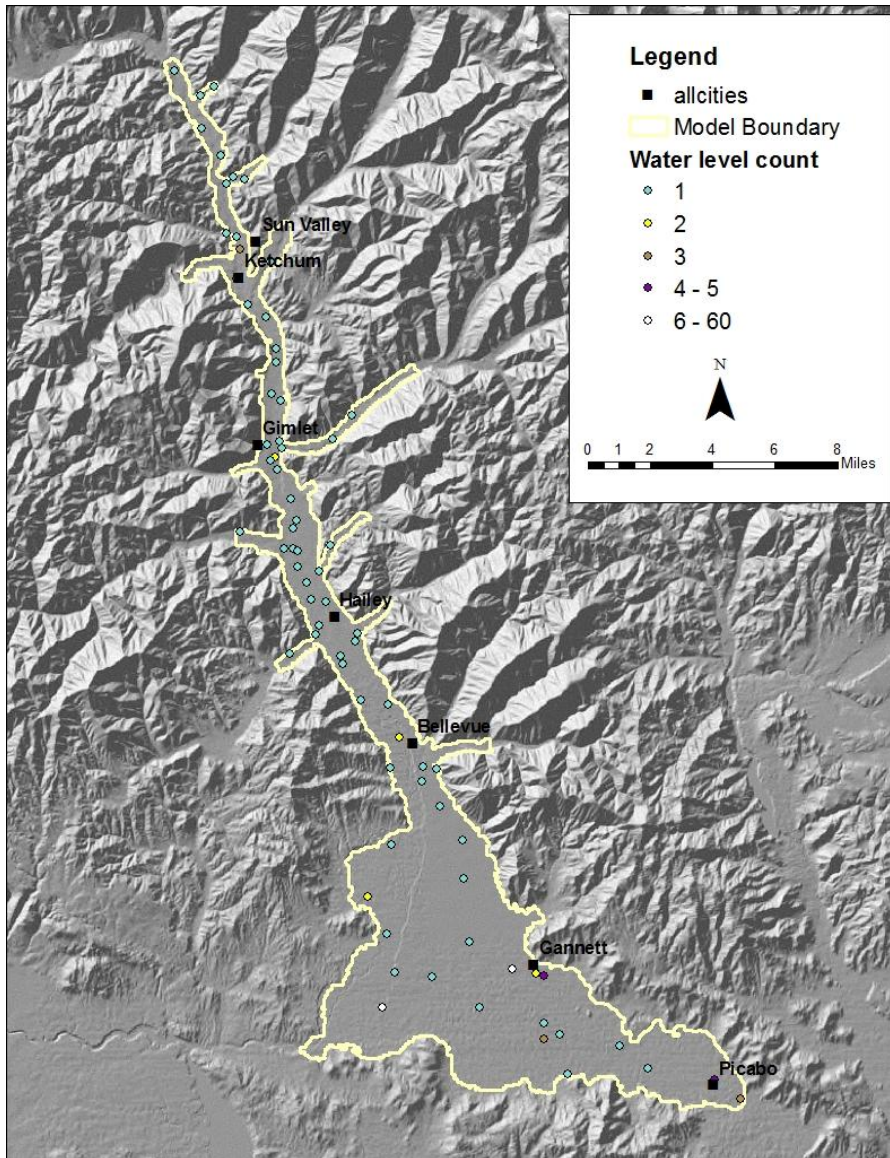


The Need for Water-level Data

- Ground water model calibration involves matching model output with field observations.
 - We need field observations
 - River gains and losses
 - Water table elevations measured in wells

Sources of Water-level Data

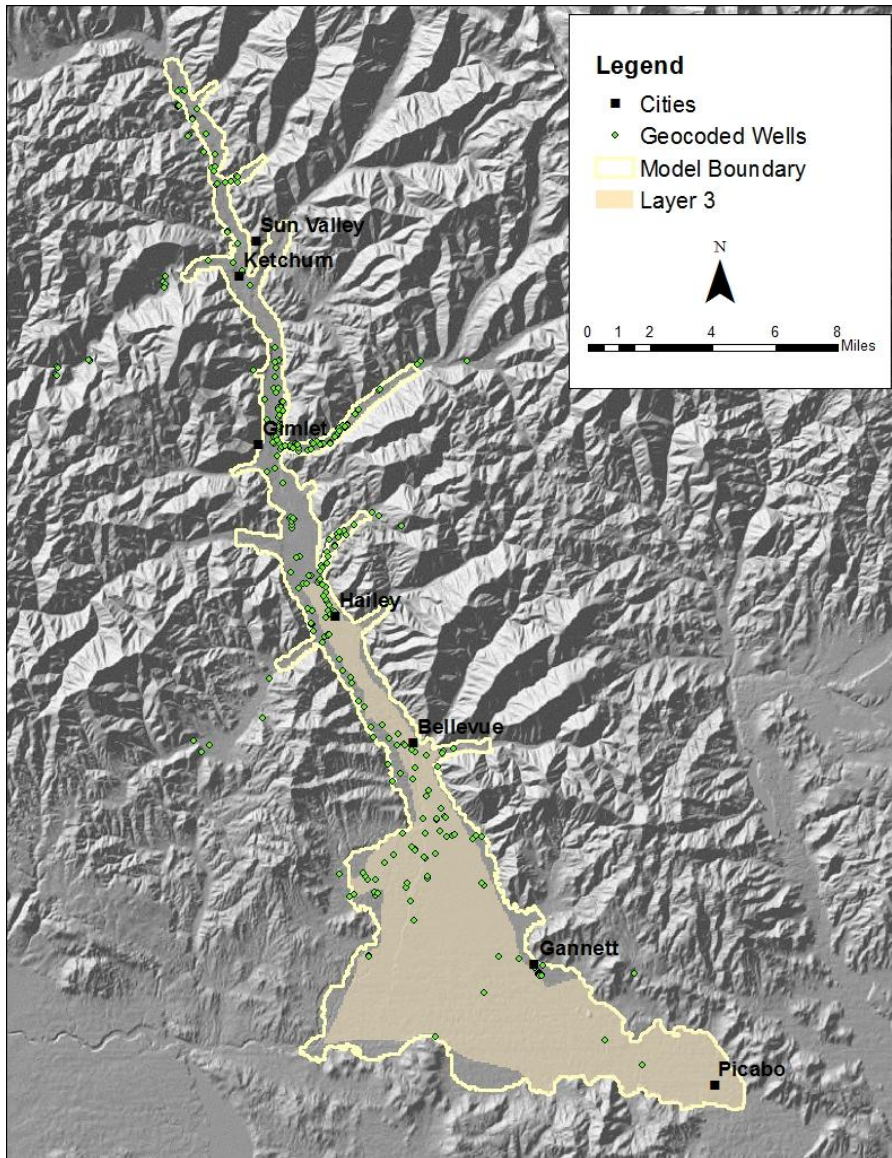
- USGS aquifer water-level database
 - National Water Information System (NWIS)
 - Over 850,000 records nation wide
- IDWR hydrologic database
 - Data collected by the USGS in Idaho
 - Data collected by the IDWR
 - Data collected for the IDWR
- Well driller reports
 - Data drillers are required to report to IDWR upon completion of a well included depth to water



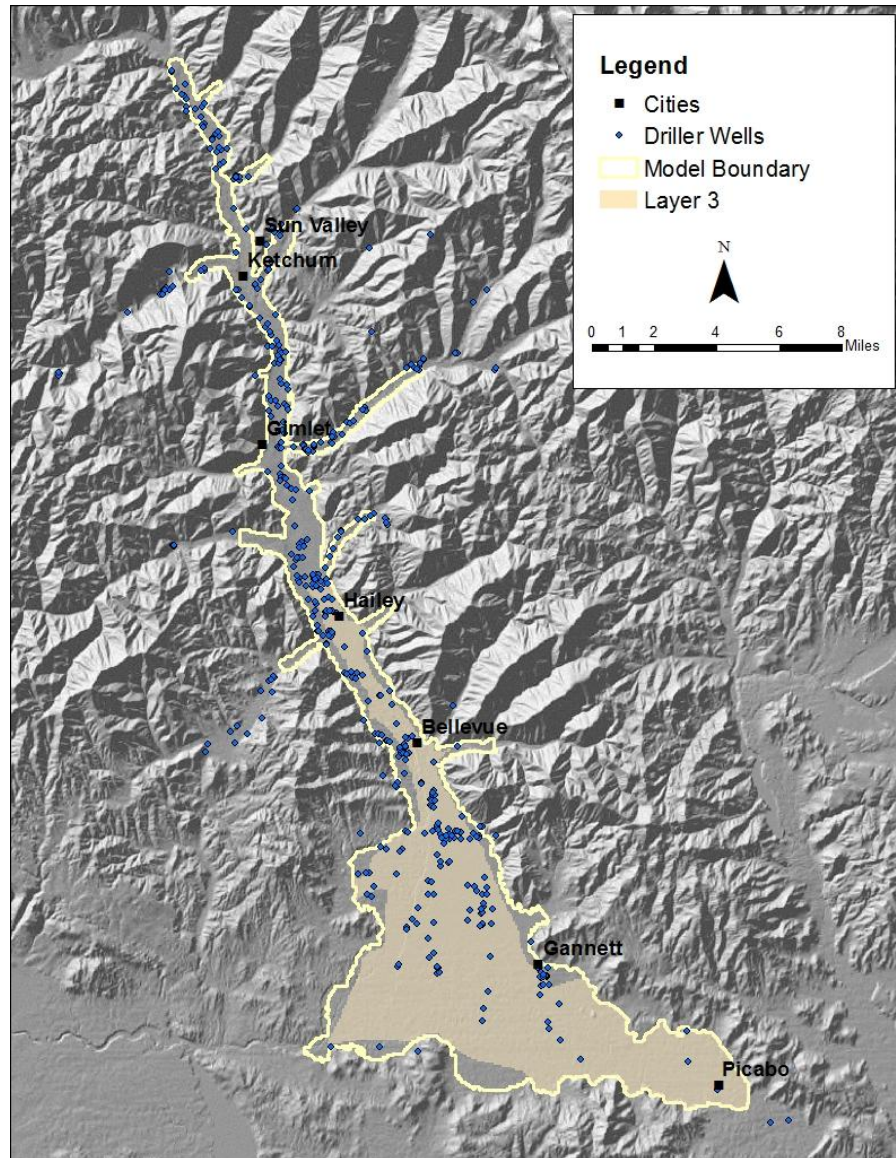
- 76 wells with 214 observations
- 120 in two wells
- 14 wells with more than 1 water-level
- 94 observations dispersed amongst 74 other wells
- Since download in June
 - Jim thinks there should be 98 wells
 - We have found other observation wells
 - We are making sure all measured wells are GPSed and updated in database.
 - Both the number of wells and the number of observations will increase
 - Significant percentage of the observations were collected by the USGS in Oct 2006

Additional water-level data are needed

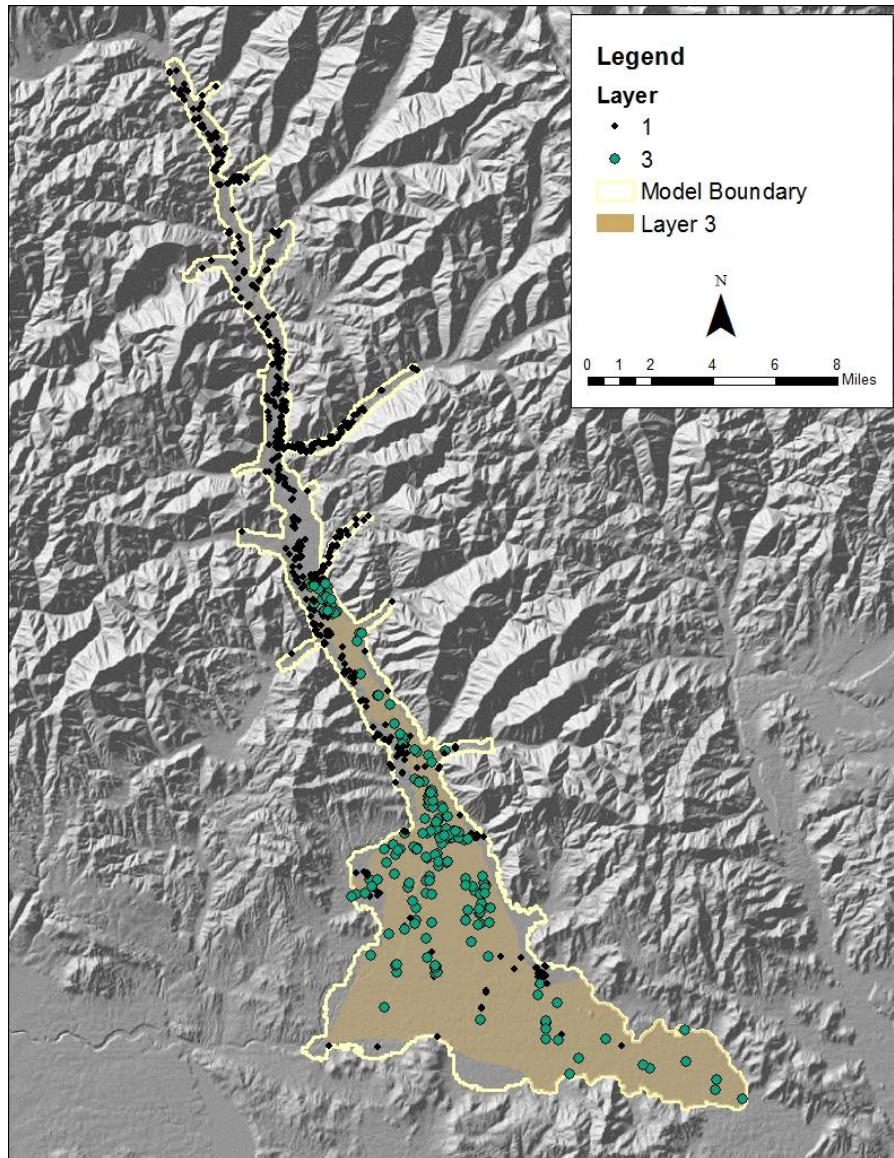
- Bartolino and Adkins (2012) evaluated 2,500 well driller reports to construct the bedrock surface map.
- Quality logs with good locations were selected
- Not all of these wells were drilled during the calibration period
 - Water-level data from these wells could be used to augment the observation well data



- Geocoded well logs
 - Geocoded = finding geographic coordinates from data such as street addresses
 - 290 wells
 - 78 greater than 100 ft (30.5 m) in the area with 3 layers



- Driller located well logs
 - 501 wells
 - 168 greater than 100 ft (30.5 m) in the area with 3 layers



- Layer assignments
 - 501 wells
 - 168 greater than 100 ft (30.5 m) in the area with 3 layers

Wood River Model Water-levels

Criteria	Number of Observations
Observation Well Water-Levels	214
Geocoded Driller Reports	272
Driller Located Driller Reports	428
Total	914
1/1/1995 - 1/1/2000	308
1/1/2000 - 1/1/2005	361
1/1/2005 - 1/1/2010	245
Total	914

WoodRiverWells : Database (Access 2007) - Microsoft Access

Security Warning: Certain content in the database has been disabled

Obs Well Data	ID	SiteID	WellNumber	PestName	MethodDrill	TotalDepth	OpeningMir	OpeningMa	Completion
	1	45a7d1e5-bf99-4e46-90b8-a3ab8ec68b03	01N 18E 01ACA2		1 Air Rotary	143			11/20/15
	2	fa3f7a0a-dc2c-45ad-a96e-3f1431e7a583	01N 18E 14ACD1		2 Cable Tool	132	100	132	8/10/15
	3	9dd848e7-89c4-4594-bb8c-d69f0355cb1a	01N 18E 27AAA2		3 Air Rotary	124			12/18/15
	4	0b26e16b-77eb-4cb4-8fe5-18555dc7a32f	01N 18E 35ACB1		4 Cable Tool	131			4/30/15
	5	1957901e-ddea-4251-9943-78476674d313	01N 19E 07BAC1		5 Cable Tool	103			5/30/15
	6	2f13f1a8-67de-46b4-8018-8ac5610fb260	01N 19E 18ADA1		6 Cable Tool	200	55	200	3/28/15
	7	deb7f392-916e-4a01-9875-9408fbc82ed4	01N 19E 20CBB1		7 Cable Tool	200	51	200	5/10/15
	8	5937b33b-7a5b-4263-82f8-07206ec2f2e7	01N 19E 32CBA1		8 Cable Tool	127	40	127	7/15/15
	9	202a9cbb-e454-4de7-9eac-e0b6dbad483c	01S 18E 01CDC2		9 Cable Tool	304			12/1/15
	10	23510703-3bd4-4c0f-bcec-9addb93367d9	01S 18E 14AAB1		10 Cable Tool	126			9/1/15
	11	bc580aca-ed3d-4049-8160-59271b8d2151	01S 19E 03CCB2		11 Cable Tool	51.67	25	35	7/23/15
	12	2cc87d93-fa44-4c85-9434-14a06e7dd04f	01S 19E 03DDC3		12 Air Rotary	68	65	67	8/31/15
	868		01S 19E 06ADD1		77	60			
	13	894892a8-8049-43c3-ab84-74bc5e7a2485	01S 19E 07BAA2		13 Cable Tool	47	30	43	10/1/15
	14	011e759e-fa45-403e-98ad-75e61da77fb3	01S 19E 11BBB1		14 Dug	87	47	87	1/1/15
	15	644705b0-8ea8-4e5d-870a-6527724781f0	01S 19E 14CBB1		15 Cable Tool	166.2			
	16	bdfo2bfa-51be-43a7-8dc2-f1de9088206a	01S 19E 14DCC1		16 Cable Tool	47			6/1/15
	17	83502fb0-d786-424a-a6ad-311f1b4a14fb	01S 19E 17AAA2		17 Air Rotary	67			12/5/20
	18	b0b6d41c-2ff1-4661-b653-9c4fb6e8d771	01S 19E 22AAA1		18 Cable Tool	150			7/29/15
	19	9b9fecfd-9102-4823-825a-1568e9739381	01S 19E 26AAC1		19 Cable Tool	267	17	267	11/12/15
	20	084d0ca6-f42e-4291-a5a2-1fbfb7137ad2	01S 20E 19BDA1		20 Cable Tool	98	11	98	10/2/15
	21	524a1979-c881-455a-9e30-903743b86d2c	01S 20E 20CDD1		21 Cable Tool	180	71	180	11/20/15
	22	da51ef57-6a5b-4b9f-91b6-e1ef51c170dd	01S 20E 26CDC1		22 Cable Tool	180	108	180	7/10/15
	23	6b3211f8-dcba-4597-8c7e-43a8fe83c1f0	01S 20E 27BDA1		23 Cable Tool	140	92	140	8/12/15
	24	50b273ac-371d-4008-9510-445cb564194c	02N 18E 04CBB1		24 Cable Tool	37			8/6/15
	25	5d7f3374-ea0c-4fa9-b8cb-131247bf334b	02N 18E 04DBB1		25 Air Rotary	105			10/10/15
	26	9151225d-f394-48d4-a646-6181a46022ae	02N 18E 05AAA3		26 Cable Tool	101			7/26/15
	27	19215287-d0df-4a4d-acc8-3c3fb4250cd55	02N 18E 09BDC1		27 Cable Tool	150	50	150	1/27/15
	28	909301a4-d0f6-4d06-bc09-51fce0297279	02N 18E 09CAC1		28 Cable Tool	50	39	49	9/22/15
	29	63cbb12d-da00-409b-a50f-35793298b459	02N 18E 10DBC1		29 Air Rotary	174	150	170	8/12/20
	30	4771e88c-91b8-4d13-ab91-9ffd9d6bff42	02N 18E 10DCB1		30 Cable Tool	104	65	90	11/29/15
	31	56e10fcc-4c70-4dff-9c3f-227dfa87c3dd	02N 18E 15BCC1		31				
	32	cd1e1c67-6de4-463a-9980-7c47894780a1	02N 18E 15CBB1		32 Air Rotary	80	30	80	5/15/20
	33	2b8e7696-94af-4382-a20d-d399162e03cc	02N 18E 17BDA1		33 Cable Tool	110	43	110	1/25/15
	34	5e45a2ec-3073-45a5-911f-06f18ea9c3bc	02N 18E 22DBB1		34				1/1/15
	35	68cae707-92e0-4fb9-9458-d2b0a380725c	02N 18E 23DCC1		35 Cable Tool	148			10/13/15
	36	27c07436-3ac4-42e4-a592-9d3bd20af76d	02N 18E 26DDD1		36 Air Rotary	140	60	82	4/3/15
	37	c659b2c4-28e5-4909-b257-03f708e67275	02N 18F 35DCD1		37 Cable Tool	46	71	46	4/28/15

Datasheet View | Record: 1 of 869 | No Filter | Search | Num Lock

WoodRiverWells : Database (Access 2007) - Microsoft Access

Home Create External Data Database Tools Design

View Run Select Make Table Append Update Crosstab Delete Union Pass-Through Data Definition Show Table Builder Return: All

Security Warning Certain content in the database has been disabled Options...

All Tables

- Obs Well Data
 - Obs Well Data : Table
 - SiteSampleFile
 - SteadyStateWaterLevels
 - WellCoordFile
 - WellListFile
- Obs Water Levels
 - Obs Water Levels : Table
 - SiteSampleFile
 - SteadyStateWaterLevels
 - WellListFile
- MetadataObsWellData
 - MetadataObsWellData : Table
- MetadataObsWaterLevels
 - MetadataObsWaterLevels : Ta...
- MetadataWellCoordFile
 - MetadataWellCoordFile : Table

Obs Well Data

- ID
- SiteID
- WellNumber
- PestName
- MethodDrilled
- TotalDepth

Obs Water Levels

- ID
- WellNumber
- MeasurementDate
- WaterLevelBelowLSD
- StatusName
- MethodName

Field: PestName MeasurementDate Elevation: (Avg([Obs Well Data].[Altitude]-[Obs Water Levels].[WaterLevelBelowLSD]))/3.28083

Table: Obs Well Data Obs Water Levels

Total: Group By First Expression

Sort: Show: Criteria: or:

Form View Num Lock

WoodRiverWells : Database (Access 2007) - Microsoft Access

Security Warning: Certain content in the database has been disabled. Options...

Table Name	Description
SiteID	Unique identifier within the IDWR hydrologic database
WellNumber	For the Observation Wells = Township, Range, Section, QQQ, for geocoded wells 1000001-5000000, for driller located wells > 5000001
PestName	The well identifier used by the program PEST. Observation wells 1-1000, geocoded driller report water levels 1001-5000, driller located driller reports >
MethodDrill	The drilling method.
Total Depth	The depth at which drilling stopped (ft)
OpeningMin	The top of the screened interval (ft)
Opening Max	The bottom of the screened interval (ft)
CompletionDate	Date on which the well drilling and construction stopped
WCWellID	Well Construction Well Identifier
Altitude	Land Surface elevation (ft)
AltMethod	Method of obtaining the land surface elevation
XIDTM	easting in the IDTM coordinate system (meters)
YIDTM	northin in the IDTM coordinate system (meters)
XYMethod	method of obtaining the easting and northing
CountyName	Idaho county
TwpRge	Township and Range the well is located in
SiteName	A local name for the well
WLCOUNT	the number of water level observations collected in the well
WLDateMin	the date of the minimum water level observation
WLDateMax	the date of the maximum water level observation
WLMin	the minimum water level (ft below land surface)
WLMax	the maximum water level (ft below land surface)
*	

Record: 1 of 22 | No Filter | Search

Datasheet View | Num Lock

Database with 'current' water-level data

- Go to <ftp://ftp1.idaho.gov>
- Login using the account name `idwrngen` and the password `Rg7d952O` (capital O, not the number 0)
- Click "View" then click "Open FTP Site in Windows Explorer" This will open a new window.
- Log in again using the same user name and Password
- Click "Outgoing" to get files from IDWR. Look for "WoodRiverWells_07312014.zip"
- Drag "WoodRiverWells_07312014.zip" from FTP site onto your desktop.
- Unzip and enjoy.

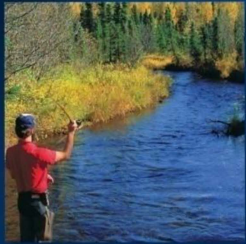
FTP directory /Outgoing/ at ftp1.idaho.gov

To view this FTP site in File Explorer: press Alt, click View, and then click **Open FTP Site in File Explorer**.

[Up to higher level directory](#)

04/27/2014	05:41PM	Directory	Alaska
05/08/2014	02:14PM	Directory	Alison
07/24/2014	04:41PM	Directory	AmyCassel
05/22/2014	06:14PM	Directory	Basin 01 Refill
06/03/2014	02:10PM	Directory	Basin 63 Refill
04/14/2014	05:35PM	Directory	Data Accmp 4-11-14 Order
04/28/2014	01:42PM	Directory	ESPA IrrigatedLands
05/16/2014	01:53PM	Directory	ForChnckBrendecke
06/04/2014	04:12PM	Directory	ForJasonFisher
04/21/2014	07:48PM	Directory	ForSaraArkle
04/02/2014	10:58PM	Directory	Galloway
04/29/2014	07:45PM	Directory	LandCover Vegetation
04/01/2014	12:49PM	Directory	Lori
04/22/2014	03:54PM	Directory	NAIP2013
07/30/2014	06:32PM	Directory	NFarmer
05/29/2014	04:05PM	Directory	PRATT CREEK
07/11/2014	04:47PM	Directory	Stream Channel
05/01/2014	03:56PM	Directory	ThousandSprings
05/16/2014	06:07PM	181,808,682	Tucker Springs 2014 PIR.zip
04/10/2014	09:33PM	4,114,152	Vulnerability.zip.zip
06/23/2014	11:36PM	Directory	WD34
07/21/2014	02:06PM	28,180,264	WR Applications.zip
07/31/2014	06:52PM	184,342	WoodRiverWells_07312014.zip

Would you like to make Internet Explorer your default browser?



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