



Development of Rivers, lakes and ponds cadastre of The Republic of Lithuania

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Inventory of water resources

- Collection of information about water objects dates as early as XII-XIII centuries (chronicles, writings, letters)
- More in deep and scientific collection of data of water resources started because of irrigation systems development;
 - Lithuanian river cadaster – 1959
 - Studies of Institute of energy ~1969
 - State inventory of ponds – 1998
- B. Gailiušis, J. Jablonskis, M. Kovalenkoviėnė. Lithuanian rivers. Hydrography and run-off. (2001)
 - most comprehensive publication about rivers (geography, hydrology).

Inventory of water resources of The Republic of Lithuania

- List of national significance internal waters 1998 (inventory numbers, names, area...)
- Government Decree of rivers, lakes and ponds cadastre (2000)
- Official list of rivers and ponds – 2001 (unique codes, names, basic geographical information)
- Official list of lakes – 2003 (unique codes, names, basic geographical information)
- These official state lists are required to follow in questions connected with:
 - usage of water objects;
 - building / urbanization requirements;
 - ships / boats usage;
 - other environmental requirements.

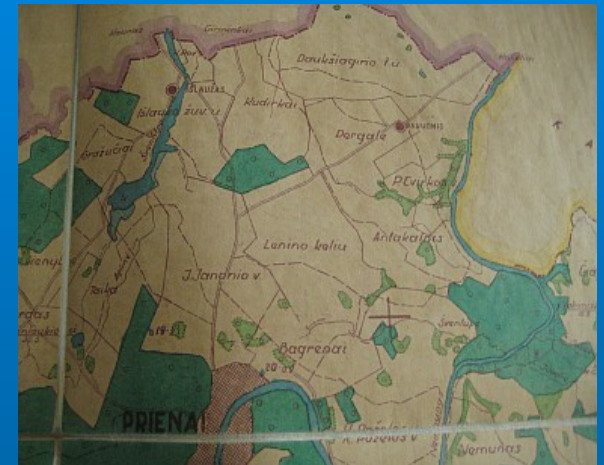
Development of official lists of water objects



- B. Gailiušis, J. Jablonskis, M. Kovalenkoviene (2001). *Lithuanian rivers. Hydrography and run-off.*

Major source of information on geography, names, methodology for nameless water objects

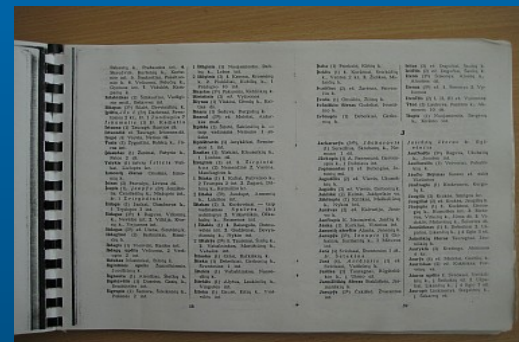
- Old maps



- Official state inventory lists for ponds, lakes

Draugystės tvenkiniai		Paviršiaus plotas		Tilpumas		Gylis		Klasifikacija	
№	Vieta	ha	m ²	m ³	m	1	2	3	4
1
2
3
4
5
6
7
8
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11
12
13
14
15
16
17
18
19
20

- Index of names



Problems which occurred during usage of official lists of water objects

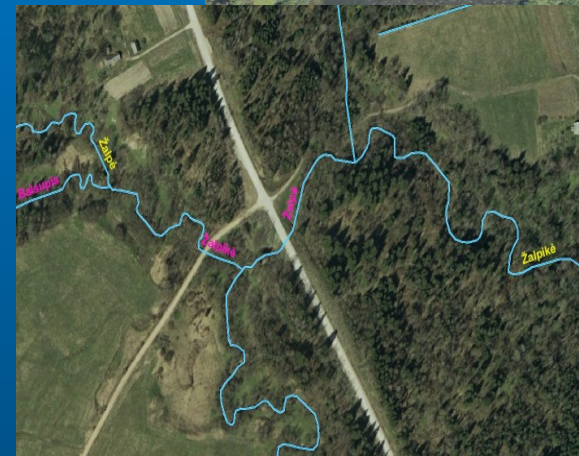
Names in lists of water objects differ from names in other recourses:

- in same widely used maps;
- in indexes of names;
- official geo-data bases;
- engineers, scientist, local people;

Difficulties of identification of water objects, hence implication of environmental requirements.

There is no common and accepted methodology of name selection in cases of different names in different sources.

Large amount of excellent work carried out in the National Lithuanian Language Commission in solving problems.



Development of Rivers, lakes and ponds cadastre of The Republic of Lithuania

Official modern State cadastre of Rivers, lakes and reservoirs started as node of National Spatial Data Infrastructure – „Surface Water Objects GIS“.

Environmental Protection Agency, is responsible for the Water Cadastre information management.



Rivers, lakes and ponds cadastre of The Republic of Lithuania

Surface Water Objects GIS

Rivers, lakes and ponds cadastre of The Republic of Lithuania

Water quality monitoring data base

Water basin management information data base

And other information about Surface water (such as extraction and discharge points).

The screenshot shows a GIS interface with a map of a water body. A data table overlay is visible, titled "UPIŲ, EŽERŲ IR TVENKINIŲ KADASTRAS" (Cadastral Register of Rivers, Lakes and Ponds). The table contains various fields for identifying and describing water bodies, including their names, categories, and specific characteristics.

**Aplinkos Apsaugos Agentūra
UPIŲ, EŽERŲ IR TVENKINIŲ KADASTRAS**

Kadastriniai duomenys apie ežerą (tvenkinį, dirbtinį vandens telkinį)

Bendrieji duomenys	
Pavadinimas	
Kategorija	
Identifikavimo kodas	
Savivaldybės (-ių) pavadinimas (-ai)	
Nuosavybė (valstybės/savivaldybės/privati)	
Savininkas (fizinio asmens vardas , pavardė , gyvenamoji vieta / juridinio asmens pavadinimas , buveinės adresas)	
Valdytojas (fizinio asmens vardas , pavardė , gyvenamoji vieta / juridinio asmens pavadinimas , buveinės adresas)	
registravimo data	
Išregistravimo data	
Duomenų (rašymo /keitimo) datos	
Upės baseino rajono pavadinimas	
Upės baseino pavadinimas	
Upės pabaserio pavadinimas	
Specifiniai duomenys	
Ežero kvadrato numeris ir ežero numeris kvadrate	
Geografinės koordinatės LKS 94 (x, y)	
Morfometriniai duomenys:	
Baseino plotas (km ²)	
Vandens lygio altitudė (NPL arba VVL)	
Vidutinis plotis (km)	
Kranto linijos ilgis (km)	
Didžiausias vandens gylis (m)	
Vidutinis vandens gylis (m)	
Vandens tūris (tūkst. m ³)	
Naudingas vandens tūris (tūkst. m ³)	

Rivers, lakes and ponds cadastre of The Republic of Lithuania

In Rivers, lakes and ponds cadastre of The Republic of Lithuania will be collected information about:

Rivers – length > 3 km,
or water catchment area > 5 km²;

Lakes – area > 0,5 ha;

Ponds – area > 0,5 ha.

System will be partially functional
by the end of **2010**.

Expected full functionality by **2013**.

	Essential information	Optional information
1	Code	River, chanel axis
2	Name	Shore-line
3	Category	Center coordinates
4	Municipality	Parent river name
5	River, chanel axis	Parent river code
6	Registration date	Water cathment area

	Essential information	Optional information
1	Code	Shore line
2	Name	Center coordinates
3	Category	Parent river name
4	Municipality	Parent water object code
5	Registration date	Water cathment area
6		Island names
7		Empty out river names
8		Center coordinates
9		Water level altitude
10		Water cathment area
11		surface area
12		water monitorint station
13		Hydroplant

Thank You!

