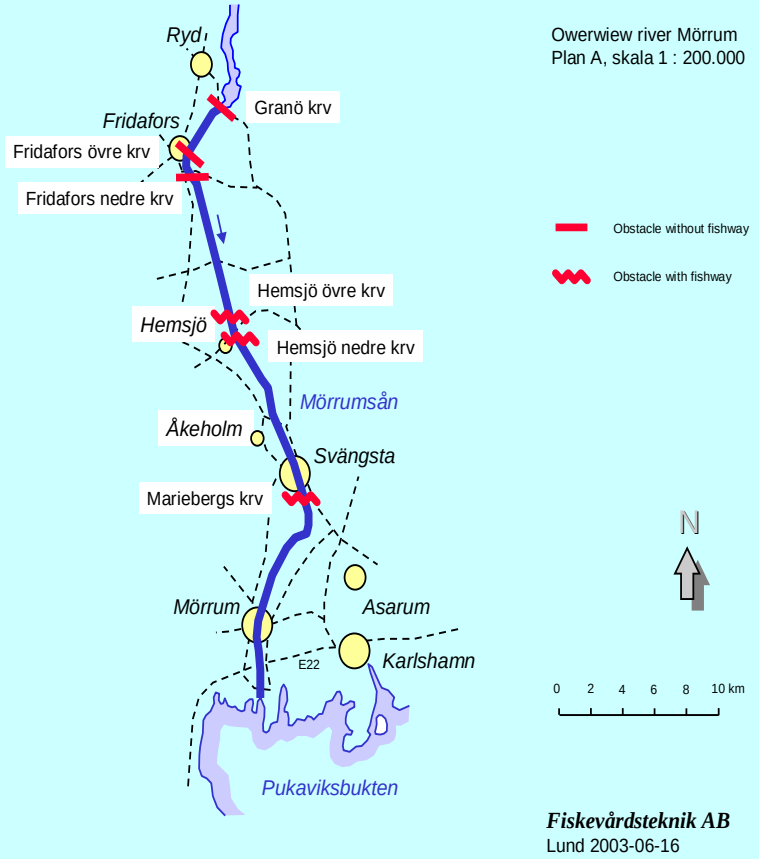
Removal of Marieberg hydropower plant, river Mörrumsån

Fish-market Luleå 20160823-20160825

River Mörrum

Plant	Altitude (m)	Inst. capacity (MW)	Annual generation (GWh)	Capacity (m3/s)
Granö	18,5	8,8	31,5	50
Fridafors övre	7,3	1,2	7,5	25
Fridafors nedre	6	1,8	8,5	40
Hemsjö övre	15	3,6	15,5	28
Hemsjö nedre	11,5	1,8	10,4	20
Marieberg	5	0,9	5	24



Removal of Marieberg hydropower plant

Common project between Uniper, the county board of Blekinge, the Swedish Agency for Marine and Water Management, Sveaskog and the community of Karlshamn

Photo Mats Hebrand

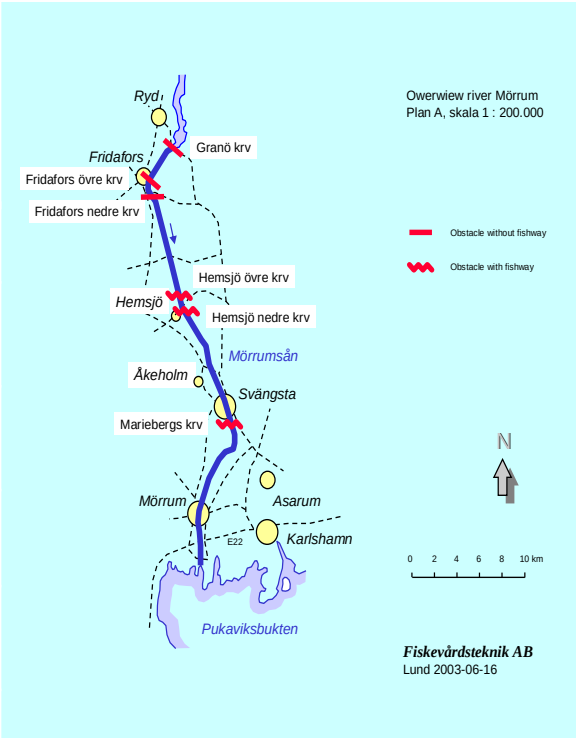
Why a total removal?

- River Mörrum a prioritized river in the National Strategy for HP
- Limited loss of renewable energy
- N2000-area
- Red-listed and endangered species s.a.
  - Atlantic Salmon (Salmo salar)
  - Eel (Anguilla anguilla)
  - Pearl mussel (Margaritifera margaritifera)
  - Thick shelled river mussel (Unio crassius)
  - Kingfisher (Alcedo atthis)
  - Otter (Lutra lutra)

Why a total removal?

Present and potential number of returning spawning salmon per river-section with different enhancement scenarios

Barrier	Present situation	Fish ways FFS&Granö + min flow 2,3 m3/s	Fish ways FFS&Granö + min flow 9,5 m3/s	Removal Marieberg	Removal Marieberg + Fish ways FFS&Granö + min flow 2,3 m3/s
Marieberg	191-293	191-293	191-293	740-862	740-862
Hemsjö nedre	34-83	34-83	34-83	64-98	64-98
Hemsjö övre	190-750	190-750	190-750	368-885	368-885
Fridafors nedre	-	0-4	0-4	-	0-5
Granö	-	0-6	0-6	-	0-8
Total	**415-1126**	**418-1203**	**418-1211**	**1171-1845**	**1182-1937**



What will we do?

Photo Mats Hebrand

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What will the consequences be?

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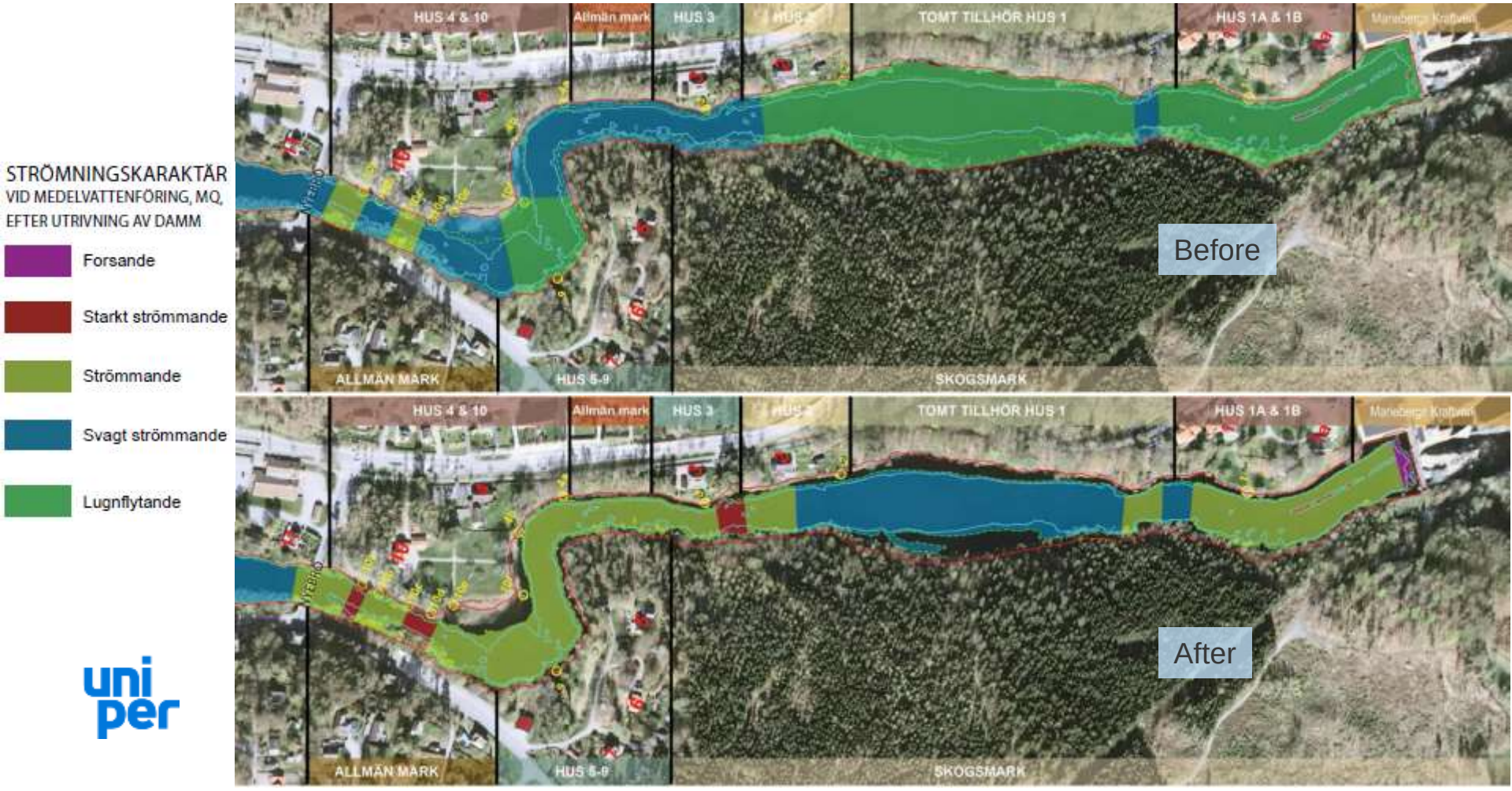
- Changed/lower water-surfaces
- More rapids and streams
- Increased spawning- and reproduction-areas for salmonids
- Free connectivity for all species
- Loss of renewable energy



What will the consequences be?

Time-schedule

What	When
Dialogue with neighbours, NGO´s and	2015 - 2016
Analysis of environmental and technical consequences and risks	Spring 2016
Application to the environmental court	Fall 2016
Negociation environmental court	Winter 2017
Permission	Spring/summer 2017
Dam removal	Summer 2018